DOWNTOWN SPECIFIC PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT APPENDICES | FEBRUARY 1, 2019 | SCH# 2001032014

THE CITY OF PLEASANTON

Appendix A

NOTICE OF PREPARATION AND SCOPING COMMENTS

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NOTICE OF PREPARATION AND PUBLIC HEARING

Program Environmental Impact Report

Pleasanton Downtown Specific Plan Update

Date: March 9, 2018

To: Reviewing agencies; interested parties and organizations

From: Ellen Clark, Planning Manager

Subject Notice of Preparation of a Draft Environmental Impact Report for the Pleasanton Downtown Specific Plan Update and Notice of Public Scoping Meetings on Tuesday, March 27, 2018, and Wednesday, March 28, 2018

The City of Pleasanton (City) is preparing an update to the City's Downtown Specific Plan. The City has determined that an Environmental Impact Report (EIR) will be necessary to evaluate environmental impacts of the project, pursuant to the California Environmental Quality Act (CEQA). In compliance with CEQA, the City will be the Lead Agency and will prepare the EIR. Attached are the project description, maps of the Planning Area and regional context, and preliminary identification of environmental issues to be analyzed given probable environmental effects of the proposed Downtown Specific Plan.

The City requests your careful review and consideration of this notice, and is soliciting comments regarding the scope and content of the EIR from public agencies and private organizations and individuals. Note that the EIR may be used by public agencies when considering permitting or other approvals. Comments and responses to this notice must be submitted in writing to the Lead Agency Contact (see below) by the close of business on Monday, April 9, 2018. Please indicate a contact person for your agency or organization in your response. Comments may also be provided at the **EIR public scoping meetings**, scheduled as part of the regular meetings of the Downtown Specific Plan Update Task Force (**Tuesday, March 27, 2018; 6:30 p.m.**), and the Planning Commission (**Wednesday, March 28, 2018; 7:00 p.m.**). Both meetings will take place in the City Council Chamber located at 200 Old Bernal Avenue, Pleasanton, California, 94566.

Public Review Period: March 9 to April 9, 2018

For questions regarding this notice or the scoping meetings, please contact the Lead Agency Contact person:

Shweta Bonn, Senior Planner
City of Pleasanton, Community Development Department
P.O. Box 520, Pleasanton, CA 94566
E-mail: sbonn@cityofpleasantonca.gov
Phone: 925-931-5611 | Fax: 952-931-5483

1 Project Contact Information

Project Title	Pleasanton Downtown Specific Plan Update
Lead Agency Name	City of Pleasanton
Contact Person	Shweta Bonn, Senior Planner
Address	City of Pleasanton, Community Development Department P.O. Box 520 Pleasanton, CA 94566
Phone	925-931-5611
E-mail	sbonn@cityofpleasantonca.gov
Project Sponsor Name and Address (same as lead agency)	City of Pleasanton P.O. Box 520 Pleasanton, CA 94566

2 Project Location

PLANNING AREA LOCATION AND BOUNDARIES
Pleasanton is located in Alameda County, one of nine Bay Area counties bordering the San Francisco Bay (Figure 1). At the subregional level, Pleasanton is a part of the Tri-Valley area, along with unincorporated portions of Alameda and Contra Costa Counties, the Town of Danville, and the cities of Dublin, Livermore, and San Ramon.

The 307-acre Pleasanton Downtown Specific Plan planning area is generally situated in the central portion of the city (Figure 2). The Planning Area is approximately bounded by the Alameda County Fairgrounds to the west, the Arroyo del Valle and Altamont Corridor Express (ACE) tracks to the north, a generally straight-line projection of Second and Third streets to the east, and Bernal Avenue to the south (Figure 3).

PLANNING AREA CHARACTERISTICS
The key distinguishing characteristics of the downtown planning area are its historic quality and small-town scale. Turn-of-the-century to 1950s-era single-family homes and commercial buildings dominate the landscape and create a sense of history and community that is treasured by the citizens of Pleasanton and visitors alike. Downtown is bisected in a north/south direction by Main Street. The ACE tracks and Alameda County Transportation Corridor tend to segment areas of the downtown to the west and east, respectively. The Arroyo del Valle and its protected open space riparian buffer averages approximately 200 feet in width and flows in a westerly direction along the northern portion of the planning area, eventually draining off-site into the Arroyo de la Laguna. The terrain of the planning area is generally flat with a gradual upslope beginning east of Second Street. The only undeveloped natural area is the Arroyo del Valle.

Existing land uses (and land use designations in the General Plan, the 2002 Downtown Specific Plan, and zoning designations) within Downtown generally include and allow for a variety of commercial uses, varying densities of residential uses, and parks/open space.

3 Project Description

BACKGROUND
Pleasanton's first Downtown Specific Plan (DSP) was adopted in 1989 and was comprehensively updated in 2002. Subsequently in 2016, the City Council authorized a further update to the DSP to address recent changes and opportunities in the downtown area. Many of the policies in the 2002 Plan remain relevant and will be retained. The scope of the current DSP update is targeted in nature, focusing primarily on a vision for the Civic Center area, transitions between downtown land uses, and improvements to the public realm.

A key component of the DSP update is consideration of alternative land uses for approximately 13-acres of City-owned properties that are the current site of City offices, the Pleasanton Public Library, the Police Station, and other municipal uses. In late 2016, the City Council accepted the Pleasanton Civic Center/Library Master Plan, which envisions the civic center and library at a new location across Bernal Avenue to the southwest, at Bernal Community Park. Approval of the proposed relocation of the civic center and library is subject to vote of the people and is therefore not yet final. In the event that relocation is approved, the DSP update will provide a vision and a conceptual land use plan for the redevelopment of the approximately nine-acre existing civic center property and an adjacent four-acre vacant City-owned property, developed with input from the community.

PLANNING PROCESS
The DSP update process began in late 2016. The City and professional services team began the process by preparing existing conditions memoranda on existing land use, urban design, streetscape and mobility, and economic conditions in downtown Pleasanton. Community members were invited to participate in the planning process from the initial visioning stage through the development of alternatives. From March through November 2017, City staff solicited public feedback on visions and alternatives through mailed materials, a community workshop, the project website (www.ptowndtown.org), two online surveys, and City staff-led small group and pop-up meetings.

Throughout the update process, City staff and the professional services team have met regularly with a 10-member Task Force consisting of City Council members, Planning Commissioners, representatives from Pleasanton Downtown Association and the City's Economic Vitality Committee, and at-large members appointed by City Council. The Task Force has provided guidance on the Plan's vision, options and alternatives for key streets, new uses for the existing civic center site, regulations for ground floor uses, a "base" land use plan, and corresponding set of strategies, and draft plan policies.

The Task Force will continue to provide guidance on preparation of the draft plan, and will ultimately recommend a draft plan to City Council for consideration.

PROJECT PURPOSE AND DESCRIPTION
The DSP is the city's guide for development in downtown Pleasanton, establishing policies and programs related to land use, circulation, infrastructure, historic preservation, urban design, economic development, and the environment. The overarching objective of the DSP remains improving the viability of downtown while preserving its small-town character and scale. However, in order to address changes and opportunities downtown, the following objectives have been established for the DSP Update:

- Provide clear and consistent policy guidance;
- Provide a framework for new development on significant opportunity sites, particularly the existing civic center site;
- Ensure consistency and integration with recent and ongoing planning efforts;
- Achieve the most desirable mix of land uses, including residential, retail, and office throughout the downtown area, including ground floor uses along Main Street;
- Ensure a high-quality, well-designed public realm;
- Improve connections from Main Street to side streets; and
- Improve the mobility of cars, buses, bicycles, and pedestrians in the downtown area.

With the active involvement of the community and the DSP Task Force, a base plan was developed and presented to City Council. The base plan was reviewed by the City Council on December 19, 2017, and revised in response to its comments. The Task Force reviewed the revised base plan on January 23, 2018. Its key features include:

- A conceptual land use plan that includes a mix of housing, commercial, visitor-oriented and open space uses to provide a vision for the 13-acre cluster of City-owned properties, should the civic center and library relocation be approved by voters;
- Two new mixed-use land use designations to complement the range of residential, commercial, public, and open space uses currently in the DSP, including a pedestrian-oriented *Mixed Use Downtown* designation and a lower intensity *Mixed Use Transitional* designation with operating characteristics that would be more compatible and appropriate for adjacent residential uses (generally, development intensities specified in the DSP update would remain within the existing envelope identified by the City of Pleasanton General Plan, current DSP, and Zoning Ordinance);
- Streetscape improvements to Peters Avenue for the inclusion of bicycle facilities;
- Pedestrian and bicycle connections from First Street to the Alameda Transportation Corridor;
- Strategic relocation of street trees along Main Street to create additional space for pedestrians and outdoor dining;
- Closure of Division Street between Main Street and Railroad Avenue to vehicular traffic to allow for dedicated pedestrian use; and
- Incorporation of enhanced materials and amenities into the streetscape where appropriate (such as colored pavers, signs, plantings, and benches).

Additional information about the Downtown Specific Plan update process, background, and supporting documents are available at www.ptowndtown.org.

4 Environmental Impact Report

The EIR will fulfill CEQA requirements for environmental review of the updated Downtown Specific Plan. The City determined that an EIR is necessary for the DSP update following preliminary review of the project; as such, no initial study has been prepared or is required,

pursuant to CEQA Guidelines Section 15063(a). The EIR will provide a programmatic environmental assessment of the potential consequences of implementing the draft Downtown Specific Plan update. It will discuss how land use and circulation changes, and implementation of other proposed DSP policies could potentially affect the environment, identify significant impacts, and recommend measures to mitigate those impacts. The EIR will also: evaluate potential cumulative and growth-inducing effects of the draft DSP update; consider and analyze alternatives to the draft DSP update; and identify the environmentally superior alternative.

The assessment of environmental impacts will utilize the most current guidelines for CEQA and for each issue area, including greenhouse gas emissions/global climate change. Community members can provide input at two different phases in the EIR process: in response to this Notice of Preparation (where comments are solicited on the scope of the EIR), and to the Draft EIR itself when that document is released.

POTENTIAL ENVIRONMENTAL IMPACTS TO BE CONSIDERED
The environmental factors listed below have the potential to be affected by the updated DSP and will be analyzed in the EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural, Tribal, and Historic Resources
- Energy, Climate Change, and Greenhouse Gas Emissions
- Geology and Seismicity
- Hazards and Hazardous Materials
- Hydrology, Drainage, and Water Quality
- Land Use, Population, and Housing
- Noise and Vibration
- Public Services and Recreation
- Traffic and Transportation
- Utilities and Service Systems

The EIR will evaluate whether the updated Downtown Specific Plan may potentially result in one or more significant environmental effects related to the above topics.

EFFECTS FOUND NOT TO BE SIGNIFICANT
CEQA allows environmental effects for which there is no likelihood of a significant impact to be "scoped out" of the EIR analysis. The following effects have been determined not to be significant, as outlined below. Full documentation of the factual basis for this determination will be included in the EIR. Unless specific comments are received during the NOP public comment period that indicate a potential for the project to result in significant impacts, these less than significant effects will be addressed briefly in the EIR and "scoped out."

Based on characteristics of the planning area, the following two topic areas will be included in the *Effects Found Not to Be Significant* section of the EIR: agriculture and forestry, and mineral resources. No agricultural activities or activities related to mineral resources occur within the planning area boundaries, and none of the properties are designated for agricultural use or as relevant for mineral resources by the City of Pleasanton General Plan or Zoning Ordinance, or by the State of California. These conditions preclude the possibility of impacts on agricultural and forestry or mineral resources; therefore, these issues will not be analyzed further by the EIR.

ALTERNATIVES

CEQA requires that an EIR analyze a range of alternatives to the proposed project that "include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts" (CEQA Guidelines Section 15126.6 (d)(2)). The alternatives discussion must also include an evaluation of the *No Project* alternative to allow decision-makers to compare the impacts of approving the Proposed Project against the impacts of not approving it.

Staff will provide options for alternatives for public discussion at the scheduled scoping meetings.

Figure 1

Regional Location

Figure 2
Citywide Context

Figure 3

Planning Area

ITEM 1: SUMMARY OF MEETING #12

Summary of Downtown Specific Plan Update Task Force Meeting #12

Tuesday, March 27, 2018

Task Force Members Present

1	Jerry Thorne, Mayor (Chair)	**2**	Jerry Pentin, City Council Alternate
3	Justin Brown, Planning Commission	**4**	Herb Ritter, Planning Commission
5	Laura Olson, Pleasanton Downtown Association	**6**	Dirk Christiansen, Pleasanton Downtown Association
7	Steve Baker, Economic Vitality Committee	**8**	Jan Batcheller, At-Large
9	Jim Merryman, At-Large	**10**	Teri Pohl, At-large

City of Pleasanton Staff

1	Gerry Beaudin, Director of Community Development	**2**	Ellen Clark, Planning Manager
3	Shweta Bonn, Senior Planner	**4**	Brian Dolan, Assistant City Manager
5	Pamela Ott, Director of Economic Development	**6**	Mike Tassano, City Traffic Engineer
7	Kendall Granucci, Office Manager		

Professional Staff

1	Andrew Hill, Dyett & Bhatia	**2**	Katharine Pan, Dyett & Bhatia

1. Welcome and Prior Meeting Summary Notes

A. Welcome and Agenda Overview.

The Mayor called the meeting to order and staff provided an overview of the agenda.

B. Review and Approval of Meeting #11 Summary.

The Task Force voted to approve the Meeting #11 Summary. *Ten in favor; zero opposed.*

2. Public Comment

A. Correspondence.

The Task Force acknowledged correspondence was received.

B. Meeting Open to the Public.

Members of the public were given the opportunity to comment on items not on the agenda. There were no comments at this time.

3. Introduction to Proposed Land Use Designation Modifications

A. Presentation and Preliminary Discussion of Proposed Land Use Designations

Staff introduced the proposed land use designation modifications as described in the agenda report. The key points outlined were: PUD Zoning, Office specific plan land use designation, and non-conforming uses and structures. Staff described the proposed land use designation modifications and boundaries as shown on the maps provided in the agenda report.

B. Task Force Direction, Comments, and Questions

The Task Force asked clarifying questions regarding the proposed land use designations. Staff responded:

- The goal of the exercise is to bring the general plan, specific plan, and zoning into conformance, using the general plan for guidance.
- Individual conversations with property owners subject to the legal non-conforming designation have not taken place but widespread outreach has occurred.
- Provided a definition of “legal non-conforming” and clarified that legal non-conforming uses would be allowed to operate as such until it is discontinued, when a conforming use would need to occupy the space.
- Clarified that the current residential zoning areas would not be rezoned to a different use (i.e. retail), but rather the residential zoning density may change. For example, the zoning may change to support higher density as allowed in the General Plan. Neighborhood outreach will be conducted for properties identified on Map B prior to making changes, and thus these modifications are implementation items.

Task Force members expressed opposition to leaving the Office zoning designation in the plan for only three properties. It was suggested the zoning be amended whereby those properties would become legal non-conforming uses. Staff elaborated on its rationale for the three buildings to retain the Office specific plan land use designation because they are new buildings, therefore not likely to change in the lifecycle of this specific plan, and the Office designation would allow them to

make changes such as an addition which would otherwise trigger them to come into conformance if they were legal non-conforming.

C. Public Comments and Questions

Members of the public were given the opportunity to comment on items not on the agenda. There were no comments at this time.

4. Review Draft Redlined Plan, Part 1 and Provide Direction

A. Begin Review Draft Redlined Plan, Part 1 and Provide Direction

Staff introduced the initial set of redline chapters from the Specific Plan, inclusive of the Planning Area Context and Historic Preservation chapters, as described in the agenda report. The current chapters are inconsistent when it comes to goals, organization of policies, and implementation measures. The Historic Preservation chapter was updated most recently, and while only limited changes to the Historic Preservation chapter are proposed, it was reorganized to include goals, policies, and implementation programs. Furthermore, staff recognized the chapters are being individually reviewed at this time, but that they may be combined when the final draft is reviewed.

Key changes included:

- In the Planning Area chapter remove reference to Alameda County ownership of the transportation corridor;
- In the Historic Preservation chapter, review for accuracy the suggested changes received from a member of the public related to the history of the city in the introductory text.

B. Task Force Direction, Comments, and Questions

In response to a question from the Task Force, staff clarified: the word “program” was removed from the specific plan; “policies” are outlined within the specific plan document; and “guidelines” are provided as stand-alone documents. Policies usually include more directive requirements, whereas guidelines offer more general guidance on how to achieve a desired objective or outcome.

The Task Force questioned the commitment to the Historic Preservation Implementation Program No. 5 and whether it should remain in the plan. Staff requested the Task Force provide guidance, noting City Council will ultimately decide if the program is retained because it relies on the General Fund.

C. Public Comments and Questions

Members of the public were given the opportunity to comment. No comments were made.

5. Public Scoping Session and Notice of Preparation for Environmental Impact Report

A. Public Scoping Session and Notice of Preparation for Environmental Impact Report

Staff provided opening remarks, explaining the purpose of the Environmental Impact Report (EIR), to address environmental impacts; and the reason for the EIR, to address changes in California Environmental Quality Act (CEQA) rules, regulations, and standards which have changed since the last EIR was prepared in 2002. Staff recognized comments from Task Force members and members of the public concerned with the timing and scope of the EIR analysis, specifically with regard to the Bernal property/Civic Center Master Plan. Staff explained that the City Council endorsed the concept of the Civic Center Master Plan on the premise the Downtown Specific Plan Update (showing the preferred alternative land use for the existing Civic Center site) and EIR for both sites would be made available to the public prior to a vote on the relocation of the Civic Center. The EIR for the Downtown Specific Plan Update will include environmental review of the Bernal site in the cumulative scenario.

Andrew Hill, Dyett and Bhatia, outlined the CEQA process, scope, and alternatives, as described in the agenda report.

B. Task Force Direction, Comments, and Questions

In response to questions from the Task Force, staff explained the concept of the "tent" or envelope of development analyzed in the program EIR, wherein the environmental impacts across the specific plan area as a whole will be analyzed on a program level rather than a detailed, project=-specific level. Staff clarified, individual projects within the scope of the overall program are subsequently submitted and reviewed using the program-level EIR; if the project is significantly different than the EIR anticipated, or new significant impacts would result, then a supplemental environmental analysis or technical studies (i.e. traffic study) would be required. Furthermore, if after the EIR is certified the City Council makes a substantial change to the specific plan, a supplemental environmental review or addendum may be required.

The Task Force requested the following be taken into consideration for the EIR:

- ACE expansion and/or relocation and parking, including moving the ACE station to Bernal property
-
    - *Staff replied ACE projects are not in the City's purview and no projects are proposed at this time. If ACE proposes a project, such as relocation, they will conduct their own EIR and the City will have an opportunity to comment on that document.*
- Noise and vibration from railroad/quiet train crossings
- Parking/transportation network
    - *Staff informed Task Force that parking is not an environmental impact as defined by CEQA. Parking is being addressed by staff as a City*

Council work plan priority item, and can be considered as a policy item as part of the approval of the Specific Plan update.

- Sunol train to downtown (supported by one member, strongly opposed by two members)
    - *Staff responded, the Downtown Specific Plan contains policy language removing the Sunol train from consideration.*

- Support for alternative which considers Peters Avenue connecting to Bernal Avenue.
- Support for alternatives that consider additional/alternative parking locations

C. Public Comments and Questions

Members of the public were given the opportunity to comment. Comments included:

- Resident offered support for comments regarding ACE train parking and noise
- Resident asked how many alternatives would be considered. Staff responded: no project, project, and two alternatives.

6. Task Force Check-In

A. Task Force Members Comment on Planning Process To-date

In response to questions regarding timing from the Task Force, staff offered to provide an updated schedule; generally speaking, staff anticipates a draft of the Downtown Specific Plan will be ready by the end of 2018 allowing for adoption in early 2019, and for the Civic Center Master Plan to be placed on the November 2019 ballot.

Staff responded to a question from a Task Force member related to traffic cameras on First Street.

In response to a question from the Task Force about public/private partnerships, staff clarified no discussions have taken place regarding the land use designations, however, staff is discussing such partnerships with regard to the Downtown Parking Strategy.

7. Brief Announcements from Task Force and Staff, Summary and Next Steps

A. Summary of the Meeting and Review of Next Meeting Topics

Staff provided an overview of the Task Force's progress and upcoming schedule.

The meeting was adjourned at 8 p.m.

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
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Email: nahc@nahc.ca.gov
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April 3, 2018

Shweta Bonn
City of Pleasanton Planning and Community Development
PO Box 520
Pleasanton, CA 94566

RE: SCH#2001032014 Pleasanton Downtown Specific Plan, Alameda County

Dear Shweta,

The Native American Heritage Commission has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
   d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
    a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.
        ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        i. Protecting the cultural character and integrity of the resource.
        ii. Protecting the traditional use of the resource.
        iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have been already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
   a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
   b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
   a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
   b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
   c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions, please contact me at my email address: frank.lienert@nahc.ca.gov

Sincerely,

Frank Lienert
Associate Governmental Program Analyst

cc: State Clearinghouse

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7
100 NORTH CANYONS PARKWAY • LIVERMORE, CA 94551 • PHONE (925) 454-5000 • FAX (925) 454-5727

April 6, 2018

Shweta Bonn, Senior Planner
City of Pleasanton, Community Development Department
P.O. Box 520
Pleasanton, CA 94566
Sent by e-mail to: sbonn@cityofpleasantonca.gov

Re: *Comments on Pleasanton Downtown Specific Plan Update NOP*

Dear Ms. Bonn,

Zone 7 Water Agency (Zone 7, or Zone 7 of the Alameda County Flood Control and Water Conservation District) has reviewed the referenced document in the context of Zone 7's mission to provide water supply, flood protection, and groundwater and stream management within the Livermore-Amador Valley. Following are our comments for your consideration:

1. **Groundwater Wells.** Our records indicate there are 24 water wells and two cathodic protection wells in the project area at the approximate locations shown on the enclosed Well Location map. Please notify Zone 7 immediately if any other wells exist in the project area. All well locations should be field verified and noted on the plans. A Zone 7 drilling permit is needed for any water well or soil boring work that may be planned for this project. The Zone 7 well permit application and permit fee schedule can be downloaded from our website: www.zone7water.com, or requested by email sent to wellpermits@zone7water.com. Additional information can be obtained by contacting Michelle Parent at (925) 454-5077.

2. **Contamination cases.** Our records indicate there are 10 closed contamination cases, one open contamination case, and 14 non-information cases in the DSP project area. The one open case and 14 non-information cases are part of the RWQCB's ongoing dry cleaner investigation; the RWQCB started the investigation to try to identify potential sources of tetrachlorethene (PCE), a chemical used in dry cleaning, detected in groundwater. More information is available on the SWRCB's GeoTracker website http://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=pleasanton%2C+ca.

3. **Flood Control Engineering**. Zone 7 owns portions of the Arroyo Valle within the proposed Specific Plan Area, primarily between Del Valle Parkway and Main Street, as well as east of 1st Street. Zone 7 requests the opportunity to review any proposals for development/redevelopment that are located along Arroyo Valle to ensure property owners are aware of, and are following, applicable guidelines. Further, larger setbacks from Arroyo del Valle for future development/redevelopment may be more in line with the City's implementation of Complete Streets. Zone 7 staff are available to meet with the City to help evaluate the condition of the stream banks for setback considerations.

4. **Development Impact Fee.** New development and the expansion of existing development may impose a burden on the existing flood protection and storm drainage infrastructure within the Zone 7 service area. Developments creating new impervious areas within the Livermore-Amador Valley are subject to the assessment of the Development Impact Fee for Flood Protection and Storm Water Drainage. These fees are collected for Zone 7 by the local governing agency: 1) upon approval of final map for public improvements creating new impervious areas; and/or 2) upon issuance of a building or use permit required for site improvements creating new impervious areas. Fees are dependent on whether post-project impervious area conditions are greater than pre-project conditions and/or whether fees have previously been paid. Please refer to Zone 7's Flood Protection & Storm Water Drainage Development Impact Fee Ordinance and additional information at: http://www.zone7water.com/permits-a-fees .

We appreciate the opportunity to comment on this project. If you have any questions on this letter, please feel free to contact me at (925) 454-5005 or via email at erank@zone7water.com .

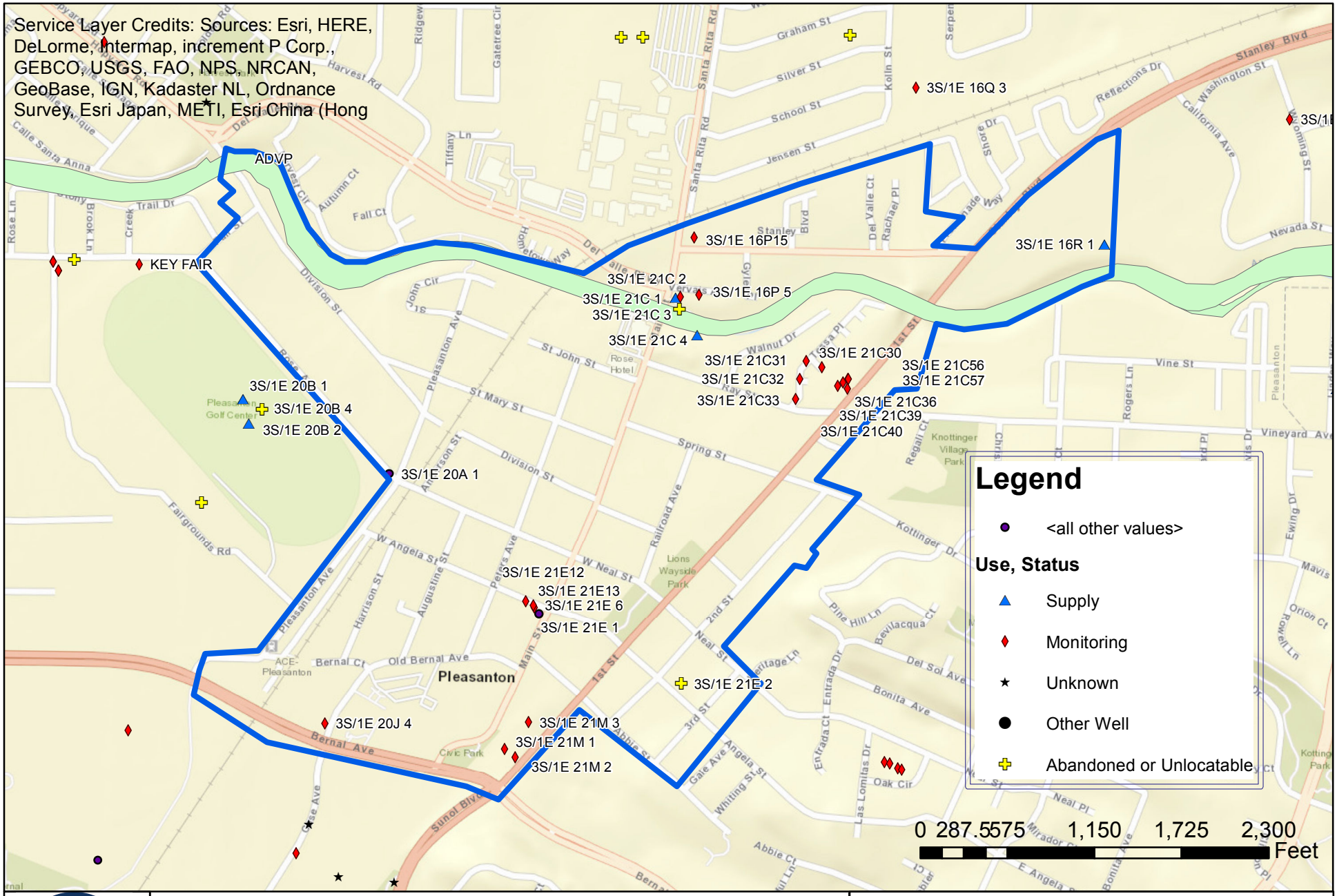
Sincerely,

Elke Rank

Elke Rank

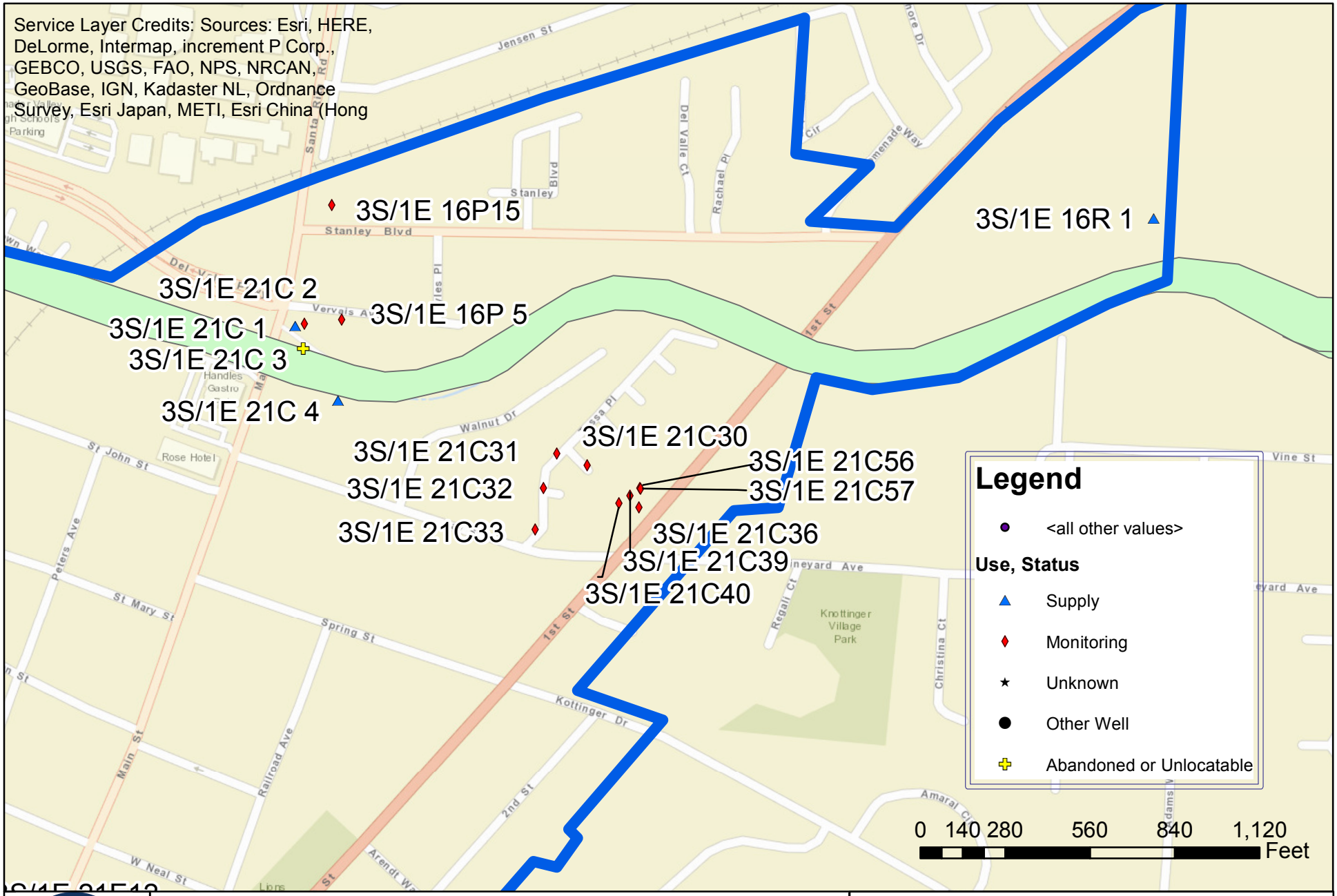
cc: Carol Mahoney, Amparo Flores, Matt Katen, Joe Seto, file

Attachment 1. Well map
Attachment 2. Well table



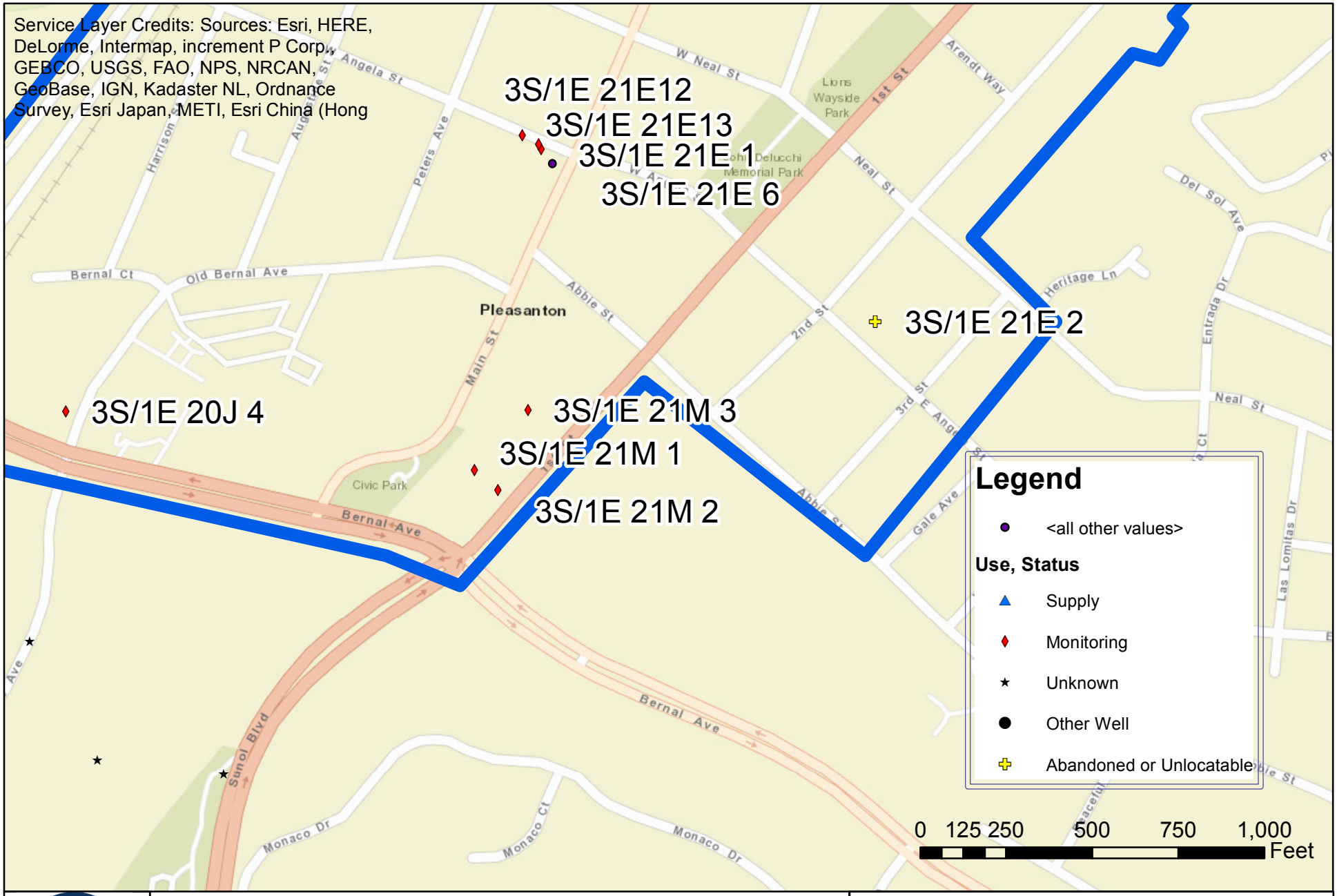
ZONE 7 WATER AGENCY
100 North Canyons Parkway, Livermore, CA

Pleasanton Downtown Planning Area Well Map



ZONE 7 WATER AGENCY
100 North Canyons Parkway, Livermore, CA

Pleasanton Downtown Planning Area
North Well Map



ZONE 7 WATER AGENCY
100 North Canyons Parkway, Livermore, CA

Pleasanton Downtown Planning Area
South Well Map

Well_number	Use	Address	City	Location	Purpose	Basin	Status	Compl Date	Permit #	Driller	Category	SubCategory
3S/1E 16P 5	monitor	4254 VERVAIS AVE.	Pleasanton	<Null>	<Null>	Amador	active	7/13/1976	0	USGS HEW	well-static	monitor
3S/1E 16P15	monitor	1024 MAIN ST	Pleasanton	<Null>	<Null>	Amador	unknown	1/31/1992	92029	ALTON	well-static	monitor
3S/1E 16R 1	supply	3780 Stanley Blvd	Pleasanton	<Null>	<Null>	Amador	unknown	6/29/1948	0	GIBSON DRILLING	well-supply	supply
3S/1E 20A 1	cathode	ROSE AVE & PLEASANTON AVE	Pleasanton	<Null>	<Null>	Amador	unknown	3/10/1976	7642	PITCHER DRILLING	well-other	cathode
3S/1E 20J 4	monitor	OLD BERNAL AVE & BERNAL AVE	Pleasanton	<Null>	<Null>	Bernal	active	10/29/1975	0	USGS HEW	well-static	monitor
3S/1E 21C 1	supply	VERVAIS AVE	Pleasanton	<Null>	<Null>	Amador	unknown	<Null>	0	<Null>	well-supply	supply
3S/1E 21C 2	monitor	MAIN & DEL VALLE PARKWAY	Pleasanton	<Null>	<Null>	Amador	unknown	<Null>	0	<Null>	well-static	monitor
3S/1E 21C 3	monitor	MAIN & DEL VALLE PARKWAY	Pleasanton	<Null>	<Null>	Amador	unlocatabl	<Null>	0	<Null>	well-static	monitor
3S/1E 21C 4	supply	<Null>	<Null>	<Null>	<Null>	Amador	unknown	<Null>	0	<Null>	well-static	unknown
3S/1E 21C30	monitor	BENJAMIN CT	Pleasanton	<Null>	<Null>	Amador	unknown	<Null>	25118	TRC	well-static	monitor
3S/1E 21C31	monitor	TESSA PL & BENJAMIN CT	Pleasanton	<Null>	<Null>	Amador	unknown	<Null>	25119	TRC	well-static	monitor
3S/1E 21C32	monitor	TESSA PL & JAY CT	Pleasanton	<Null>	<Null>	Amador	unknown	<Null>	25120	TRC	well-static	monitor
3S/1E 21C33	monitor	TESSA PL & RAY ST	Pleasanton	<Null>	<Null>	Amador	unknown	<Null>	25121	TRC	well-static	monitor
3S/1E 21C36	monitor	4191 FIRST ST	Pleasanton	FIRST ST & RAY ST	GROUNDWATER MONITORING	<Null>	unknown	<Null>	29030	DELTA CONSULTANTS	well-static	monitor
3S/1E 21C39	monitor	4191 FIRST ST	Pleasanton	FIRST ST & RAY ST	GROUNDWATER MONITORING	<Null>	unknown	<Null>	29030	DELTA CONSULTANTS	well-static	monitor
3S/1E 21C40	monitor	4191 FIRST ST	Pleasanton	FIRST ST & RAY ST	GROUNDWATER MONITORING	<Null>	unknown	<Null>	29030	DELTA CONSULTANTS	well-static	monitor
3S/1E 21C56	monitor	4191 FIRST ST	Pleasanton	FIRST ST & RAY ST	<Null>	AmWest	unknown	4/7/2010	2010016	DELTA CONSULTANTS	well-static	monitor
3S/1E 21C57	monitor	4191 FIRST ST	Pleasanton	FIRST ST & RAY ST	<Null>	AmWest	unknown	4/7/2010	2010016	DELTA CONSULTANTS	well-static	monitor
3S/1E 21E 1	cathode	349 MAIN ST	Pleasanton	<Null>	<Null>	Amador	unknown	<Null>	0	<Null>	well-other	cathode
3S/1E 21E 2	supply	4558 - 2ND STREET	Pleasanton	<Null>	<Null>	<Null>	abandonec	<Null>	0	<Null>	well-static	unknown
3S/1E 21E 6	monitor	<Null>	<Null>	<Null>	<Null>	Amador	unknown	<Null>	0	<Null>	well-static	unknown
3S/1E 21E12	monitor	349 MAIN ST	Pleasanton	<Null>	<Null>	Amador	unknown	<Null>	0	<Null>	well-static	monitor
3S/1E 21E13	monitor	349 MAIN ST	Pleasanton	<Null>	<Null>	Amador	unknown	3/7/1991	0	APPLIED GEOSYSTEMS	well-static	monitor
3S/1E 21M 1	monitor	4725 FIRST STREET	Pleasanton	<Null>	<Null>	Amador	unknown	6/10/1992	92294	KLEINFELDER	well-static	monitor
3S/1E 21M 2	monitor	4725 FIRST STREET	Pleasanton	<Null>	<Null>	Amador	unknown	6/10/1992	92294	KLEINFELDER	well-static	monitor
3S/1E 21M 3	monitor	4725 FIRST STREET, PLEASANTON	Pleasanton	<Null>	<Null>	Amador	unknown	6/10/1992	92294	KLEINFELDER	well-static	monitor
ADVP	surface	ARROYO VALLE AT PLEASANTON	Pleasanton	Harvest Circle near Del Valle Pkwy	Lower reach of Arroyo Valle	Amador	active	<Null>	<Null>	<Null>	surface	recorder

ALAMEDA
County Transportation Commission
1111 Broadway, Suite 800, Oakland, CA 94607 • 510.208.7400 • www.AlamedaCTC.org

April 9, 2018

Shweta Bonn
Senior Planner
City of Pleasanton, Community Development Department
P.O. Box 520
Pleasanton, CA 94566

SUBJECT: Response to the Notice of Preparation (NOP) and Public Hearing for a Program Environmental Impact Report (EIR) for the Pleasanton Downtown Specific Plan Update

Dear Ms. Bonn,

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of the Program Environmental Impact Report (EIR) for the Pleasanton Downtown Specific Plan. The 307-acre planning area is located in central Pleasanton and bounded by the Alameda County Fairgrounds to the west, the Arroyo del Valle and Altamont Corridor Express tracks to the north, Second and Third streets to the east, and Bernal Avenue to the south. Existing land uses generally include commercial and residential uses of varying densities, with some parks and open space. The proposed plan includes: a mix of housing, commercial, and open space uses on a 13-acre cluster of city-owned properties, two new mixed-use land-use designations, streetscape improvements for Peters Avenue including new bicycle facilities, pedestrian and bicycle connections from First Street to the Alameda Transportation Corridor, relocation of street trees, closure of Division Street between Main Street and Railroad Avenue to vehicular traffic, and streetscape enhancements.

The Alameda County Transportation Commission (Alameda CTC) respectfully submits the following comments:

Basis for Congestion Management Program (CMP) Review

- It appears that the proposed project may generate at least 100 p.m. peak hour trips over existing conditions, and therefore the CMP Land Use Analysis Program requires the City to conduct a transportation impact analysis of the project. For information on the CMP, please visit: http://www.alamedactc.org/app_pages/view/5224

Use of Countywide Travel Demand Model

- The Alameda Countywide Travel Demand Model should be used for CMP Land Use Analysis purposes. The CMP requires local jurisdictions to conduct travel model runs themselves or through a consultant. The City of Pleasanton and the Alameda CTC signed a Countywide Model Agreement on May 25, 2009. Before the model can be used for this project, a letter must be submitted to the Alameda CTC requesting use of the model and describing the project. A copy of a sample letter agreement is available upon request. The most current version of the Alameda CTC Countywide Travel Demand Model was updated in December 2015. The countywide model

is being updated to include the Plan Bay Area 2040 assumptions. The updated model will be available in early May, 2018.

Impacts

- The EIR should address all potential impacts of the project on the Metropolitan Transportation System (MTS) roadway network.
  - MTS roadway facilities in the project area include: I-580 (including both the general purpose and express lanes), I-680, SR-84, Sunol Boulevard, and Santa Rita Road.
  - For the purposes of CMP Land Use Analysis, the Highway Capacity Manual 2010 freeway and urban streets methodologies are the preferred methodologies to study vehicle delay impacts.
  - The Alameda CTC has *not* adopted any policy for determining a threshold of significance for Level of Service for the Land Use Analysis Program of the CMP. Professional judgment should be applied to determine the significance of project impacts (Please see chapter 6 of the 2017 CMP for more information).

- The EIR should address potential impacts of the project on Metropolitan Transportation System (MTS) transit operators.
  - MTS transit operators potentially affected by the project include: Altamont Corridor Express, the Livermore-Amador Valley Transit Authority (LAVTA/Wheels), San Francisco Bay Area Rapid Transit (BART).
  - Transit impacts for consideration include the effects of project vehicle traffic on mixed flow transit operations, transit capacity, transit access/egress, need for future transit service, and consistency with adopted plans. See Appendix J of the 2017 CMP document for more details.

- The EIR should address potential impacts of the project to cyclists on the Countywide Bicycle Network.
  - Countywide bicycle facilities in the project area include: Sunol Blvd, Bernal Avenue, Santa Rita Road, First Street, Main Street, and the existing and proposed segments of the Arroyo del Valle bike path.
  - Bicycle related impacts to consider include effects of vehicle traffic on bicyclist conditions, site development and roadway improvements, and consistency with adopted plans. See Appendix J of the 2017 CMP document for more details.

- The EIR should address potential impacts of the project to pedestrians in Pedestrian Plan Areas of Countywide Significance as defined by the Countywide Pedestrian Plan.
  - The Project overlaps with an Area of Countywide Pedestrian Significance:
    - The planning area contains both the Pleasanton ACE Station and the Wheels First/Neal Street Transfer Point
    - Planning area overlaps with the Downtown Pleasanton Central Business District
  - Pedestrian related impacts to consider include effects of vehicle traffic on pedestrian conditions, site development and roadway improvements, and consistency with adopted plans. See Appendix J of the 2017 CMP document for more details.

Mitigation Measures

- Alameda CTC policy regarding mitigation measures is that to be considered adequate they must be:
  - Adequate to sustain CMP roadway and transit service standards;
  - Fully funded; and
  - Consistent with project funding priorities established in the Capital Improvement Program of the CMP, the Countywide Transportation Plan (CTP), and the Regional Transportation Plan (RTP) or the federal Transportation Improvement Program, if the agency relies on state or federal funds programmed by Alameda CTC.

- The EIR should discuss the adequacy of proposed mitigation measure according to the criteria above. In particular, the EIR should detail when proposed roadway or transit route improvements are expected to be completed, how they will be funded, and the effect on service standards if only the funded portions of these mitigation measures are built prior to Project completion. The EIR should also address the issue of transit funding as a mitigation measure in the context of the Alameda CTC mitigation measure criteria discussed above.

- Jurisdictions are encouraged to discuss multimodal tradeoffs associated with mitigation measures that involve changes in roadway geometry, intersection control, or other changes to the transportation network. This analysis should identify whether the mitigation will result in an improvement, degradation, or no change in conditions for automobiles, transit, bicyclists, and pedestrians. The HCM 2010 MMLOS methodology is encouraged as a tool to evaluate these tradeoffs, but project sponsors may use other methodologies as appropriate for particular contexts or types of mitigations.

- The EIR should consider the use of TDM measures, in conjunction with roadway and transit improvements, as a means of attaining acceptable levels of service. Whenever possible, mechanisms that encourage ridesharing, flextime, transit, bicycling, telecommuting and other means of reducing peak hour traffic trips should be considered. The Alameda CTC CMP Menu of TDM Measures and TDM Checklist may be useful during the review of the development proposal and analysis of TDM mitigation measures (See Appendices F and G of the 2017 CMP).

Thank you for the opportunity to comment on this NOP. Please contact me at (510) 208-7426 or Chris G. Marks, Associate Transportation Planner at (510) 208-7453, if you have any questions.

Sincerely,

Saravana Suthanthira
Principal Transportation Planner

cc: Chris G. Marks, Associate Transportation Planner

April 9, 2018

GTS # 04-ALA-2018-00258
GTS ID: 9843

Shweta Bonn
Pleasanton Planning Division
200 Old Bernal Ave
Pleasanton, CA 94566

Pleasanton Downtown Specific Plan Update – Notice of Preparation of a Draft Environmental Impact Report (NOP of a DEIR)

Dear Ms. Bonn:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Pleasanton Downtown Specific Plan Update. In tandem with the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy (SCS), Caltrans' mission signals a modernization of our approach to mitigate impacts to the State Transportation Network (STN). Caltrans' *Strategic Management Plan 2015-2020* aims to reduce Vehicle Miles Traveled (VMT) by tripling bicycle and doubling both pedestrian and transit travel by 2020. Our comments are based on the NOP.

Project Understanding

The overarching objective of the Downtown Specific Plan Task force remains improving the viability of downtown while preserving its small-town character and scale. The Downtown Specific Plan (DSP) update includes residential, retail, and office mixed uses throughout the downtown area, and includes plans to utilize ground floor space along Main Street. The conceptual land use plan includes a mix of housing, commercial, visitor-oriented, and open space uses to provide a vision for the city-owned, 13-acre portion of the planning area should the civic center and library relocation be approved by voters in November of 2019. The plan includes two new mixed-use land use designations: a pedestrian oriented Mixed-Use Downtown and a lower intensity Mixed-Use Transitional designation. Lastly, the plan will account for streetscape improvements and increase pedestrian and bicycle connections.

Vehicle Trip Reduction

From Caltrans' *Smart Mobility 2010: A Call to Action for the New Decade*, the project site is identified as **Place Type 4d: Suburban Communities (Neighborhoods)** where location efficiency factors, such as community design, are weak to moderate and regional accessibility

varies. Given the place type and size of the project, it should include a robust Transportation Demand Management (TDM) Program to reduce VMT and greenhouse gas emissions. Such measures will be critical to facilitate efficient transportation access to and from downtown so as to reduce transportation impacts associated with the project. The measures listed below will promote smart mobility and reduce regional VMT.

- Project design to encourage walking, bicycling and transit access;
- Transit and trip planning resources such as a commute information kiosk;
- Real-time transit information system;
- Transit subsidies on an ongoing basis;
- Ten percent vehicle parking reductions;
- Charging stations and designated parking spaces for electric vehicles;
- Carpool and clean-fuel parking spaces;
- Designated parking spaces for a car share program;
- Unbundled parking;
- Showers, changing rooms and clothing lockers for employees that commute via active transportation;
- Emergency Ride Home program;
- Employee transportation coordinator;
- Secured bicycle storage facilities;
- Fix-it bicycle repair station(s);
- Bicycle route mapping resources;
- Participation/Formation in/of a Transportation Management Association (TMA) in partnership with other employers in the area to alleviate congestion; and
- Aggressive trip reduction targets with Lead Agency monitoring and enforcement.

Transportation Demand Management programs should be documented with annual monitoring reports by an onsite TDM coordinator to demonstrate effectiveness. If the project does not achieve the VMT reduction goals, the reports should also include next steps to take to achieve those targets. Also, reducing parking supply can encourage active forms of transportation, reduce regional VMT, and lessen future transportation impacts on State facilities. These smart growth approaches are consistent with the MTC's Regional Transportation Plan/SCS goals and would meet Caltrans Strategic Management Plan sustainability goals.

For additional TDM options, please refer to the Federal Highway Administration's *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8). The reference is: www.ops.fhwa.dot.gov/publications/fhwahop12035/fhwahop12035.pdf.

Transportation Impact Fees for Specific Plans

Caltrans fully endorses the suggestions to improve pedestrian accommodations and increase transit connectivity as stated by Callander Associates in the May 2017 *Existing Conditions*

Memo on Streetscape Mobility Analysis. Caltrans suggests the city implement fees to fund multimodal improvement projects. This can be achieved through identifying project-generated travel demand and estimating the costs of public transportation improvements necessitated by the proposed project; viable funding sources such as development and/or transportation impact fees should also be identified. We encourage a sufficient allocation of fair share contributions toward multi-modal and regional transit improvements to fully mitigate cumulative impacts to regional transportation. We also strongly support measures to increase sustainable mode shares, thereby reducing VMT.

The City should also ensure that a capital improvement plan identifying the cost of needed improvements, funding sources, and a scheduled plan for implementation is prepared along with the environmental document. Caltrans welcomes the opportunity to work with the City and local partners to secure the funding for needed mitigation. Traffic mitigation- or cooperative agreements are examples of such measures.

Lead Agency

As the Lead Agency, the City of Pleasanton is responsible for all project mitigation, including any needed improvements to the STN. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

Thank you again for including Caltrans in the environmental review process. Should you have any questions regarding this letter, please contact Jerry Cheung at 510-286-5562 or jerry.cheung@dot.ca.gov.

Sincerely,

PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

Dublin San Ramon Services District
Water, wastewater, recycled water

7051 Dublin Boulevard
Dublin, CA 94568-3018

phone (925) 828-0515
fax (925) 829-1180
www.dsrsd.com

April 9, 2018

City of Pleasanton Community Development Department
P.O. Box 520
Pleasanton, CA 94566
Attn: Shweta Bonn, Senior Planner

Subject: Comments on Notice of Preparation of Environmental Impact Report
Pleasanton Downtown Specific Plan Update

Dear Ms. Bonn:

Thank you for providing Dublin San Ramon Services District (DSRSD) the opportunity to review and comment on the Notice of Preparation of the Environmental Impact Report for the Pleasanton Downtown Specific Plan Update. DSRSD will be impacted by changes in Pleasanton's downtown area insofar as DSRSD operates the wastewater treatment plant that receives and processes the wastewater for the City of Pleasanton. On page 5 of the notice, the section "Potential Environmental Impacts to be Considered" points out that the utilities and service systems are among the environmental factors that could be affected by the updated Downtown Specific Plan.

DSRSD and the City of Pleasanton have coordinated the treatment of wastewater from Pleasanton, Dublin and southern San Ramon through the DSRSD–operated wastewater treatment plant located at 7399 Johnson Drive for many years. DSRSD treats Pleasanton's wastewater delivered to the treatment plant, creates recycled water to be used for irrigation from the wastewater, and sells recycled water for irrigation to Pleasanton from the treatment plant. We anticipate that changes to the Downtown Specific Plan could affect the process only through volumetric changes in the wastewater flowing to the treatment plant. That change should be relatively minor considering the changes to the downtown area envisioned in this DSP. However, DSRSD will remain interested and involved in the environmental impact review for the Downtown Specific Plan to monitor any potential changes to the flow of wastewater from Pleasanton to be treated at the wastewater treatment plant.

Questions regarding these comments should be directed to me at (925)8875-2253 or kolodzie@dsrsd.com.

Sincerely,

Stanley Kolodzie
Associate Engineer

SK/ST
cc: Rhodora Biagtan, Principal Engineer
Ryan Pendergraft, Junior Engineer
Bonifacio Duenas, Engineering Tech/GIS Specialist II
Roper Macaraeg, Engineering Tech/GIS Specialist I

PLEASANTON CHAMBER of COMMERCE

April 9, 2018

To: Shweta Bonn, Senior Planner, City of Pleasanton

FR: Scott Raty, President/CEO, Pleasanton Chamber of Commerce

RE: Program EIR for the Downtown Specific Plan Update (DSPU)

We recognize the value in conducting a Program EIR that evaluates impacts for the most intense potential land uses identified by the DSP Task Force; any future changes to those uses, would likely be to a lesser degree, and therefore fully covered under CEQA, resulting in a more efficient, streamlined processing for actual future projects.

Unfortunately, the Downtown Specific Plan Update (thus far) and the proposed EIR are significantly limited to the current civic center site, and woefully lacking in conceptual land-use alternatives elsewhere in downtown thereby defeating, to a great extent, the stated purpose of this program EIR.

For example, the exclusion of conceptual alternatives on the PUSD property, an opportunity site of even greater size and potential than the current civic center, will in the future require substantially more time and expense for environmental analysis should the District "opt-in" at a later date. While we realize City staff initially invited PUSD to participate and they declined due to other priorities, this would have been the time to demonstrate leadership and explore the substantial taxpayer benefits to be achieved through economies of scale and greater efficiencies in a jointly occupied civic center.

Similarly, the exclusion of additional, more intense conceptual land-uses elsewhere in downtown, including public parking structures north of the current civic center site, would not only require significant additional environmental review and substantial cost, but by their omission at this time, it could stifle important opportunities to improve public access to properties ripe for private sector investment; properties that would contribute greatly to the future economic viability of retail, dining and entertainment venues in downtown for residents and visitors to enjoy for generations to come.

Specific to the Program EIR we ask that you evaluate how a range of land-use options on the current civic center site will impact traffic circulation and public access to current and future retail, dining and entertainment establishments throughout the downtown. We also ask that the EIR compare the same

www.pleasanton.org
777 Peters Avenue • Pleasanton, CA 94566 • Phone: (925) 846-5858 • Fax: (925) 846-9697

impacts for all of downtown if a public parking structure was constructed on the municipal parking lot west of Main Street and between St. Mary's and Division streets. This location is adjacent to many existing retail and dining establishments, the Museum on Main and more central to the Firehouse Arts Center. It is also farther away from the ACE train station and therefore less likely to be impacted by ACE Train commuters than the lone, proposed civic center parking structure.

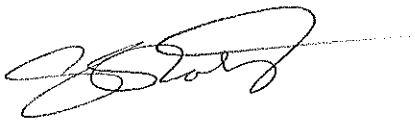
We ask for comprehensive circulation and parking models comparing existing spaces for existing uses, proposed spaces for proposed uses and the net effects on public circulation and access to locations throughout all of downtown as called for in the City's first stated and foremost objective in task force documents and on the City website:

> "The most desirable mix of land uses, including residential, retail, and office uses throughout the Downtown Specific Plan area, including ground floor uses along Main Street that encourage pedestrian activity and strengthen the economic base and vitality of Downtown Pleasanton."

We ask that the EIR include analysis of concepts for more intense mixed-uses on private as well as public sites in the vicinity of Spring Street and Railroad Avenue near the Firehouse Arts Center where more intense mixed uses of two and in some cases three stories could enhance the economic viability of downtown.

In closing, if this program EIR is truly specific to downtown Pleasanton for purposes of stakeholders making the most informed decisions possible about the future of downtown, it will need to include conceptual land-uses on opportunity sites throughout all of downtown and not be limited in scope to the current civic center site.

Thank you for this opportunity to comment.



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Appendix B

TRIBAL CORRESPONDENCE

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February 12, 2018

Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

Re: Tribal Consultation List Request

To Whom It May Concern:

Dyett & Bhatia has been contracted by the City of Pleasanton to assist with the preparation of its Downtown Specific Plan update. The resulting document will guide future development of Pleasanton's Downtown area. The attached maps show the project Planning Area, as marked on USGS 7.5' Quadrangles for Dublin and Livermore. Figures 1 and 2 show the Dublin and Livermore Quadrangles, respectively, with rectangles indicating the locations of the Planning Area in each Quadrangle. Figure 3 zooms in on the Planning Area boundaries.

We write to make a Tribal Consultation List Request to facilitate involvement of interested Native American tribes in the planning process, and are seeking contact information for tribes listed on the SB 18 Consultation List and the AB 52 Consultation List. We are also requesting a search of the Sacred Lands File for sites within the Planning Area. Please provide the requested information to katharine@dyettandbhatia.com. If you need any further information, please call (415-956-4300 ext. 11) or email. Thank you.

Sincerely,

Katharine Pan
Associate
Dyett & Bhatia Urban and Regional Planners

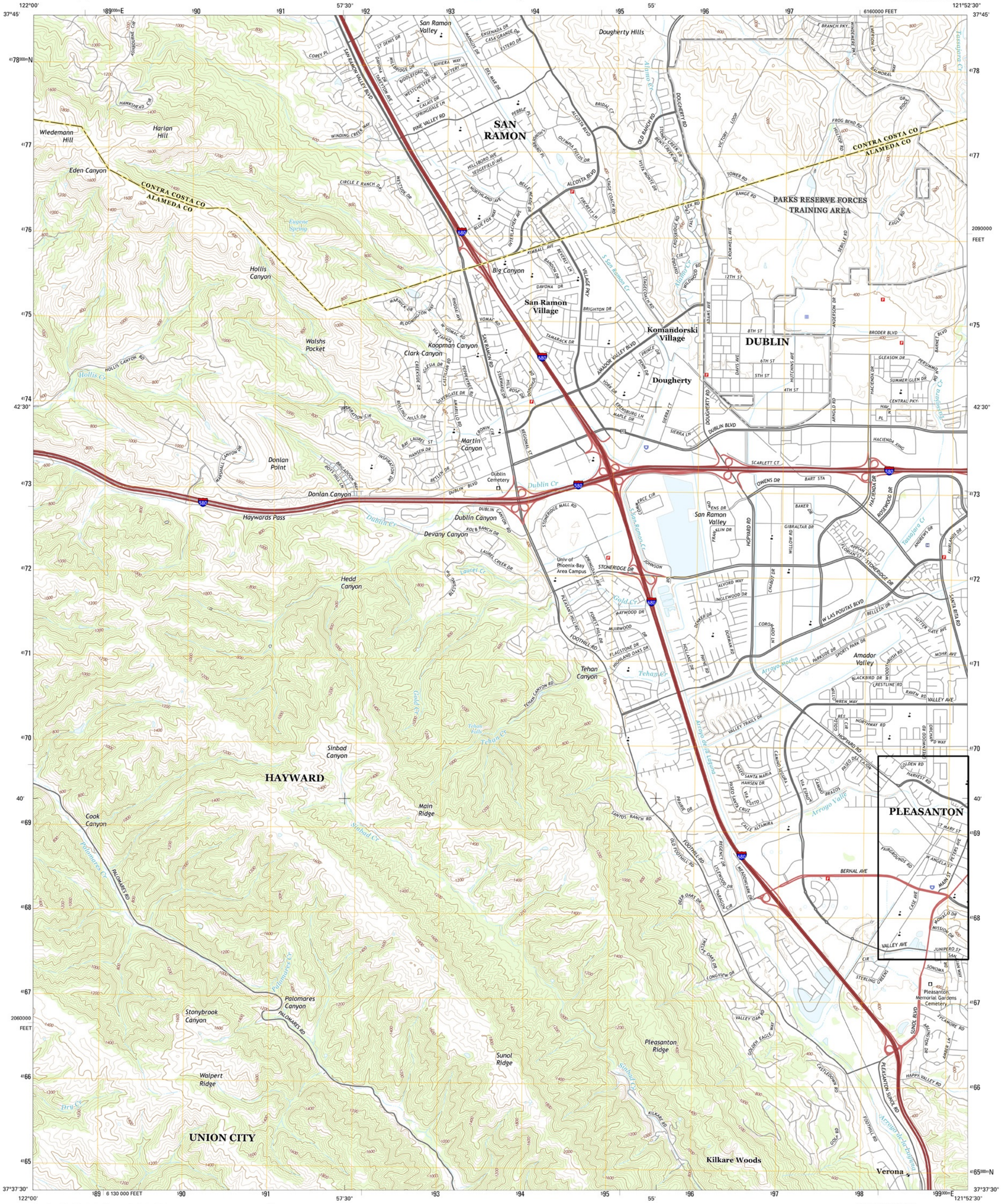
Figure 1

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

DUBLIN QUADRANGLE
CALIFORNIA
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid: Universal Transverse Mercator, Zone 10S
10 000-foot ticks: California Coordinate System of 1983 (zone 3)

This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery	NAIP, May 2012
Roads	HERE, ©2013 - 2014
Names	GNIS, 2015
Hydrography	National Hydrography Dataset, 2012
Contours	National Elevation Dataset, 2012
Boundaries	Multiple sources; see metadata file 1972 - 2015
Public Land Survey System	BLM, 2011

MN 13° 42' 243 MILS
GN 0° 39' 12 MILS
UTM GRID AND 2015 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
EG
Grid Zone Designation
10S

SCALE 1:24 000
1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 40 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

CALIFORNIA
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES
1 Las Trampas Ridge
2 Diablo
3 Tassajara
4 Hayward
5 Livermore
6 Newark
7 Niles
8 La Costa Valley

DUBLIN, CA
2015

NSN 7643016356184
NGA REF NO. USGSX24K12899

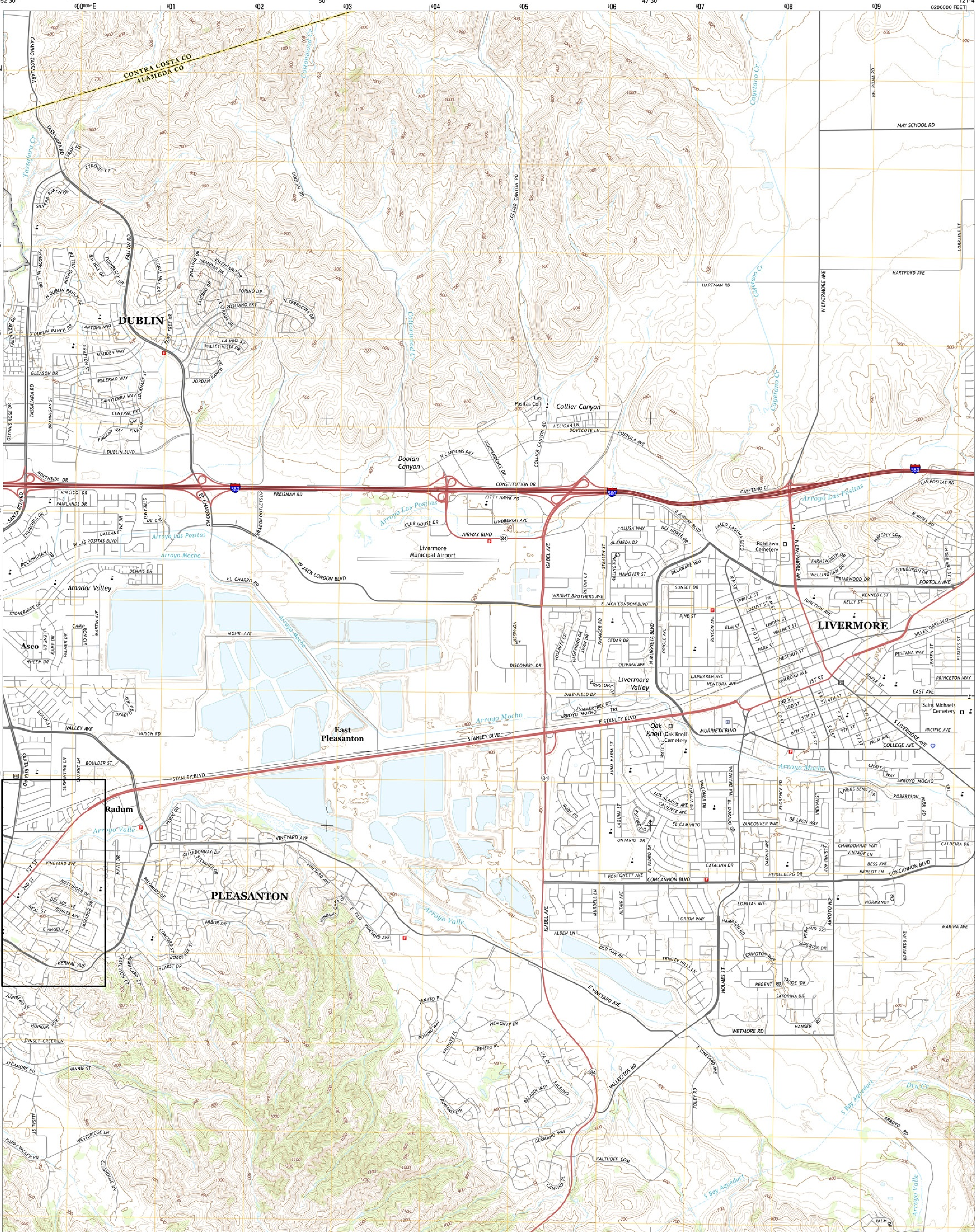
USGS
science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map
US Topo

Figure 2

LIVERMORE QUADRANGLE
CALIFORNIA
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
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Boundaries....Multiple sources; see metadata file 1972 - 2015
Public Land Survey System....BLM, 2011

MN
GN
13° 40´
243 MILS
0° 44´
13 MILS
UTM GRID AND 2015 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000-m Square ID
EG | FG
Grid Zone Designation
10S

SCALE 1:24 000

KILOMETERS 1 0.5 0 1 2
METERS 1000 500 0 1000 2000
MILES 1 0.5 0 1
FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

CALIFORNIA
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

1 Diablo
2 Tassajara
3 Byron Hot Springs
4 Dublin
5 Altamont
6 Niles
7 La Costa Valley
8 Mendenhall Springs

ADJOINING QUADRANGLES

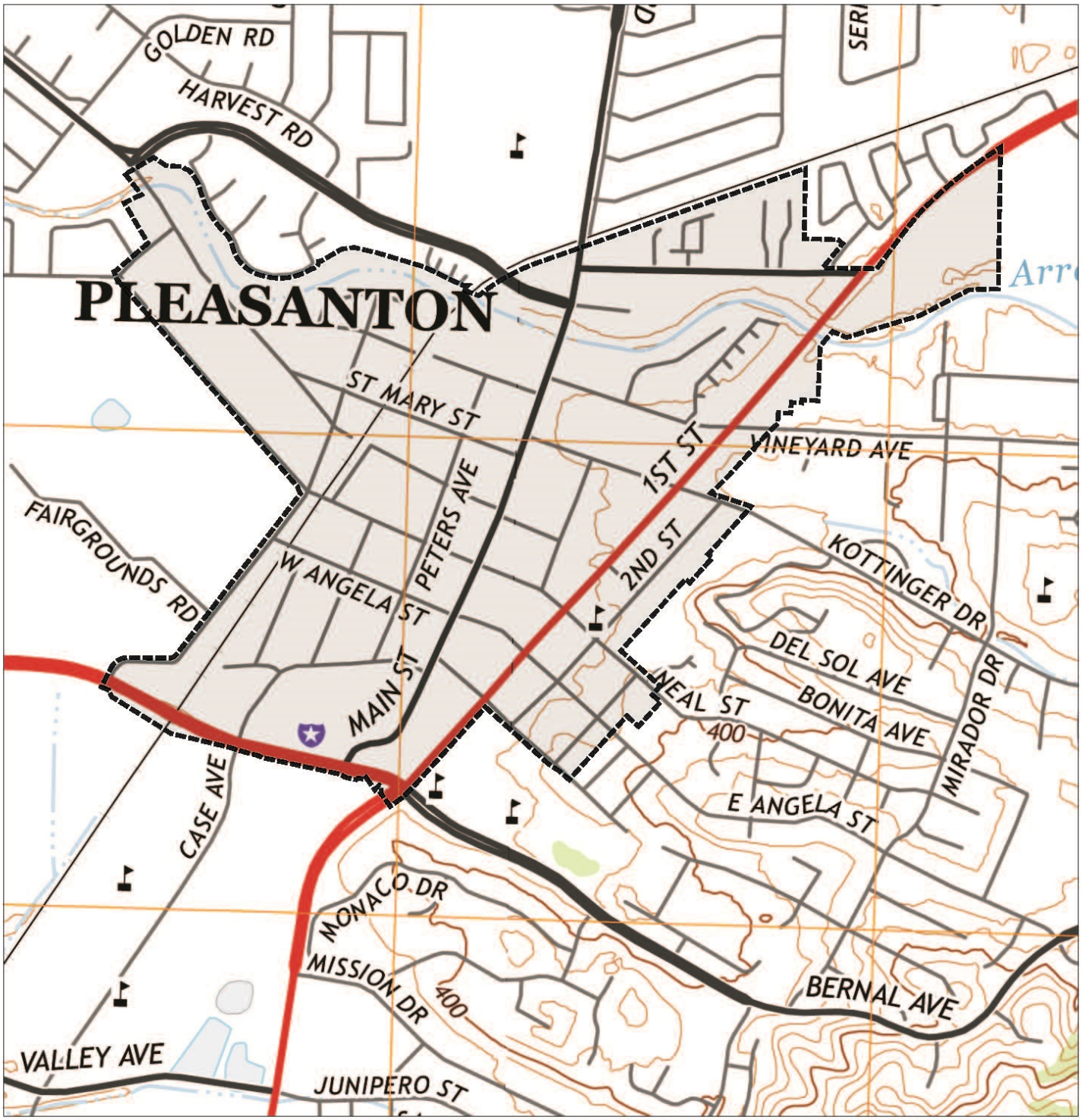
ROAD CLASSIFICATION

Expressway	Local Connector
Secondary Hwy	Local Road
Ramp	4WD
Interstate Route	US Route
State Route	

LIVERMORE, CA
2015

NSN. 7643016356890
NGA REF NO. USGSX24K26114

Figure 3



Downtown Specific Plan Boundary

Local Government Tribal Consultation List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

☒ **CEQA Tribal Consultation List (AB 52)** – ***Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2***

☒ **General Plan (SB 18)** - ***Per Government Code § 65352.3.***

Local Action Type:

___ **General Plan** ___ **General Plan Element** ___ **General Plan Amendment**

☒ **Specific Plan** ___ **Specific Plan Amendment** ___ **Pre-planning Outreach Activity**

Required Information

Project Title: City of Pleasanton Downtown Specific Plan Update

Local Government/Lead Agency: City of Pleasanton

Contact Person: Shweta Bonn

Street Address: P.O. Box 520

City: Pleasanton **Zip:** 94566

Phone: 925-931-5611 **Fax:** 925-931-5483

Email: sbonn@cityofpleasantonca.gov

Specific Area Subject to Proposed Action

County: Alameda **City/Community:** Pleasanton (Downtown)

Project Description:

See following page.

Additional Request

☒ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): Dublin, Livermore

Township: _____ **Range:** _____ **Section(s):** _____

Project Description

BACKGROUND

In 2016, the City Council authorized the Downtown Specific Plan update. Pleasanton's first Downtown Specific Plan was adopted in 1989, was comprehensively updated in 2002. Though many of the policies in the 2002 Plan remain relevant and will be retained, an update of this Specific Plan will allow the City to address recent changes and opportunities in the Downtown area.

In late 2016, the City Council approved the Draft Pleasanton Civic Center/Library Master Plan, which envisions the Civic Center and library at a new location across from the Alameda County Fairgrounds at Bernal Park. Thus, the Downtown Specific Plan update will propose new land uses, development standards, and circulation network for the 13-acre site that includes the Civic Center, Pleasanton Public Library, and land formerly owned by the San Francisco Public Utilities Commission.

Throughout the update process, City staff has solicited public feedback through "pop-up" outreach events, a community workshop, a project website (www.ptowndtown.org) and online surveys. A 10-member Task Force met periodically in a series of public meetings and provided guidance on strategies and policies included in the updated Plan.

PROJECT PURPOSE

The objective of the Downtown Specific Plan is to improve the viability of the Downtown while preserving its small-town character and scale. The Specific Plan establishes policies and programs related to land use, circulation, infrastructure, historic preservation, urban design, economic development, and the environment.

The main objectives of the Downtown Specific Plan update include the following:

- Provide clear and consistent policy guidance;
- Provide a framework for new development on significant opportunity sites, particularly the Civic Center site;
- Ensure consistency and integration with recent and ongoing planning efforts;
- Achieve the most desirable mix of land uses, including residential, retail, and office throughout the Downtown area, including ground floor uses along Main Street;
- Ensure a high-quality, well-designed public realm;
- Improve connections from Main Street to side streets; and
- Improve the mobility of cars, buses, bicycles, and pedestrians in the Downtown area.

The community can access information about the Downtown Specific Plan update process at www.ptowndtown.org.

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

March 1, 2018

Shweta Bonn
City of Pleasanton

Sent by Email: sbonn@cityofpleasantonca.gov

Re: City of Pleasanton Downtown Specific Plan Update, Alameda County

Dear Schweta,

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced project.

Government Code §65352.3 requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to cultural places in creating or amending general plans, including specific plans. As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the NAHC for the purpose mitigating impacts to tribal cultural resources:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC requests that lead agencies include in their notifications information regarding any cultural resources assessment that has been completed on a potential "area of project affect" (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.

- Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A site is recorded in the APE you provided that may be impacted by the project. Please contact the Muwekma Ohlone Indian Tribe for more information about this site. Please contact all the tribes on the attached list for potential additional sites.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

Lead agencies or agencies potentially undertaking a project are encouraged to send more than one written notice to tribes that are traditionally and culturally affiliated to a potential APE during the 30-day notification period to ensure that the information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: frank.lienert@nahc.ca.gov.

Sincerely,

Frank Lienert
Associate Governmental Program Analyst

Native American Heritage Commission
Tribal Consultation List
March 1, 2018

Coastanoan Rumsen Carmel Tribe
Tonv Cerda. Chairperson
244 E. 1st Street
Pomona , CA 91766
rumsen@aol.com
(909) 524-8041 Cell

Ohlone/Costanoan

Indian Canvon Mutsun Band of Costanoan
Ann Marie Savers. Chairperson
P.O. Box 28
Hollister , CA 95024
ams@indiancanyon.org
(831) 637-4238

Ohlone/Costanoan

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein. Chairperson
789 Canada Road
Woodside , CA 94062
amahmutsuntribal@gmail.com
(650) 851-7489 Cell
(650) 851-7747 Office

Ohlone/Costanoan

North Vallev Yokuts Tribe
Katherine Erolinda Perez. Chairperson
P.O. Box 717
Linden , CA 95236
canutes@verizon.net
(209) 887-3415

Ohlone/Costanoan
Northern Valley Yokuts
Bav Miwok

Muwekma Ohlone Indian Tribe of the SF Bav Area
Rosemarv Cambra. Chairperson
P.O. Box 360791
Milpitas , CA 95036
muwekma@muwekma.org
(408) 314-1898

Ohlone / Costanoan

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3152
Fremont , CA 94539
chochenyo@AOL.com
(510) 882-0527 Cell

Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097 .94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3, 65362.4 et seq. and Public Resourc es CodCity of Pleasanton Downtown Specific Plan Update, Alameda County

THE CITY OF

PLEASANTON

April 4, 2018

Rosemary Cambra, Chairperson
Muwekma Ohlone Indian Tribe of the SF Bay Area
P.O. Box 360791
Milpitas, CA 95036

Dear Chairperson Cambra,

The City of Pleasanton is preparing an update of its Downtown Specific Plan (DSP). The DSP is the City's guide for development and preservation in downtown Pleasanton, establishing policies and programs related to land use, circulation, infrastructure, historic preservation, urban design, economic development, and the environment. In addition, the City has determined that an Environmental Impact Report (EIR) is necessary to evaluate potential environmental impacts of the DSP update, pursuant to the California Environmental Quality Act (CEQA). In compliance with CEQA, the City is the Lead Agency and will prepare the EIR.

We are contacting you because the Native American Heritage Commission (NAHC) has identified your tribe as one that may have knowledge about cultural resources in the area, and which may be traditionally or culturally affiliated with the planning area. In order to provide Native American tribes with the opportunity to participate in local land use decisions at an early stage, the City is seeking your input regarding potential cultural or tribal cultural resources in proximity or relation to the planning area.

Based on a search of its Sacred Lands File, the NAHC has advised that there is one recorded site located within the planning area of importance to the Muwekma Ohlone Indian Tribe and has referred us to your tribe for further information about the site. Additionally, the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) has conducted a non-confidential records search for archaeological and historical resources in the planning area. While no previously-recorded archaeological resources were found, the NWIC notes that there is a moderate potential of identifying Native American archaeological resources in the future. If you have any concerns or information regarding additional cultural or tribal cultural resources in the planning area, please let me know.

Please note that:

- Pursuant to Senate Bill (SB) 18 (Burton, 2004), the City is required to contact and consult with California Native American tribes prior to amending or adopting any specific plan for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.995 of the Public Resources Code that are located within the planning area. To request consultation pursuant to SB 18, you must do so within 90 days of receiving this notice.

- Pursuant to Assembly Bill (AB) 52 (Gatto, 2014), the City is required to provide California Native American tribes formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribes prior to the release of a negative declaration, mitigated negative declaration, or EIR for such projects if the tribes have requested such notification in writing. To request consultation pursuant to AB 52, you must do so in writing within 30 days of receiving this notice.

Enclosed with this letter are: (1) a brief description of the planning area and the project; and (2) a map showing the Downtown Specific Plan Planning Area (Figure 1).

If you have any questions or comments, please feel free to contact me at 925-931-5611 or sbonn@cityofpleasantonca.gov.

Sincerely,

Shweta Bonn
Senior Planner

Project Location

Pleasanton is located in Alameda County, one of nine Bay Area counties bordering the San Francisco Bay. As shown in Figure 1, enclosed, the 307-acre DSP planning area is generally situated in the central portion of the city. The Planning Area is approximately bounded by the Alameda County Fairgrounds to the west, the Arroyo del Valle and Altamont Corridor Express (ACE) tracks to the north, a generally straight-line projection of Second and Third streets to the east, and Bernal Avenue to the south.

Project Description

Background

Pleasanton's first DSP was adopted in 1989 and was comprehensively updated in 2002. Subsequently in 2016, the City Council authorized a further update to the DSP to address recent changes and opportunities in the downtown area. Many of the policies in the 2002 Plan remain relevant and will be retained. The scope of the current DSP update is targeted in nature, focusing primarily on a vision for the Civic Center area, transitions between downtown land uses, and improvements to the public realm.

A key component of the DSP update is consideration of alternative land uses for approximately 13-acres of City-owned properties that are the current site of City offices, the Pleasanton Public Library, the Police Station, and other municipal uses. In late 2016, the City Council accepted the Pleasanton Civic Center/Library Master Plan, which envisions the civic center and library at a new location across Bernal Avenue to the southwest, near Bernal Community Park. Approval of the proposed relocation of the civic center and library is subject to voter approval and is therefore not yet final. In the event that relocation is approved, the DSP update will provide a vision and a conceptual land use plan for the redevelopment of the approximately nine-acre existing civic center property and an adjacent four-acre vacant City-owned property, developed with input from the community.

Planning Process

The DSP update process began in January 2017. The City and professional services team began the process by preparing existing conditions memoranda on existing land use, urban design, streetscape and mobility, and economic conditions in downtown Pleasanton. Community members were invited to participate in the planning process from the initial visioning stage through the development of alternatives. From March through November 2017, City staff solicited public feedback on visions and alternatives through mailed materials, a community workshop, the project website (www.ptowndtown.org), two online surveys, and City staff-led small group and pop-up meetings.

Throughout the update process, City staff and the professional services team have met regularly with a 10-member Task Force consisting of City Council members, Planning Commissioners, representatives from Pleasanton Downtown Association and the City's Economic Vitality Committee, and at-large members appointed by City Council. The Task Force has provided guidance on the Plan's vision, options and alternatives for key streets, new uses for the existing

civic center site, regulations for ground floor uses, a "base" land use plan, and corresponding set of strategies, and draft plan policies.

The Task Force will continue to provide guidance on preparation of the draft plan and will ultimately recommend a draft plan to City Council for consideration.

Project Purpose and Description

The overarching objective of the DSP remains improving the viability of downtown while preserving its small-town character and scale. However, in order to address changes and opportunities downtown, the following objectives have been established for the DSP Update:

- Provide clear and consistent policy guidance;
- Provide a framework for new development on significant opportunity sites, particularly the existing civic center site;
- Ensure consistency and integration with recent and ongoing planning efforts;
- Achieve the most desirable mix of land uses, including residential, retail, and office throughout the downtown area, including ground floor uses along Main Street;
- Ensure a high-quality, well-designed public realm;
- Improve connections from Main Street to side streets; and
- Improve the mobility of cars, buses, bicycles, and pedestrians in the downtown area.

With the active involvement of the community and the DSP Task Force, a base plan was developed and presented to City Council. The base plan was reviewed by the City Council on December 19, 2017, and revised in response to its comments. The Task Force reviewed the revised base plan on January 23, 2018. Its key features include:

- A conceptual land use plan that includes a mix of housing, commercial, visitor-oriented and open space uses to provide a vision for the 13-acre cluster of City-owned properties, should the civic center and library relocation be approved by voters;
- Two new mixed-use land use designations to complement the range of residential, commercial, public, and open space uses currently in the DSP, including a pedestrian-oriented Mixed Use Downtown designation and a lower intensity Mixed Use Transitional designation with operating characteristics that would be more compatible and appropriate for adjacent residential uses (generally, development intensities specified in the DSP update would remain within the existing envelope identified by the City of Pleasanton General Plan, current DSP, and Zoning Ordinance);
- Streetscape improvements to Peters Avenue for the inclusion of bicycle facilities;
- Pedestrian and bicycle connections from First Street to the Alameda Transportation Corridor;

- Strategic relocation of street trees along Main Street to create additional space for pedestrians and outdoor dining;
- Closure of Division Street between Main Street and Railroad Avenue to vehicular traffic to allow for dedicated pedestrian use; and
- Incorporation of enhanced materials and amenities into the streetscape where appropriate (such as colored pavers, signs, plantings, and benches).

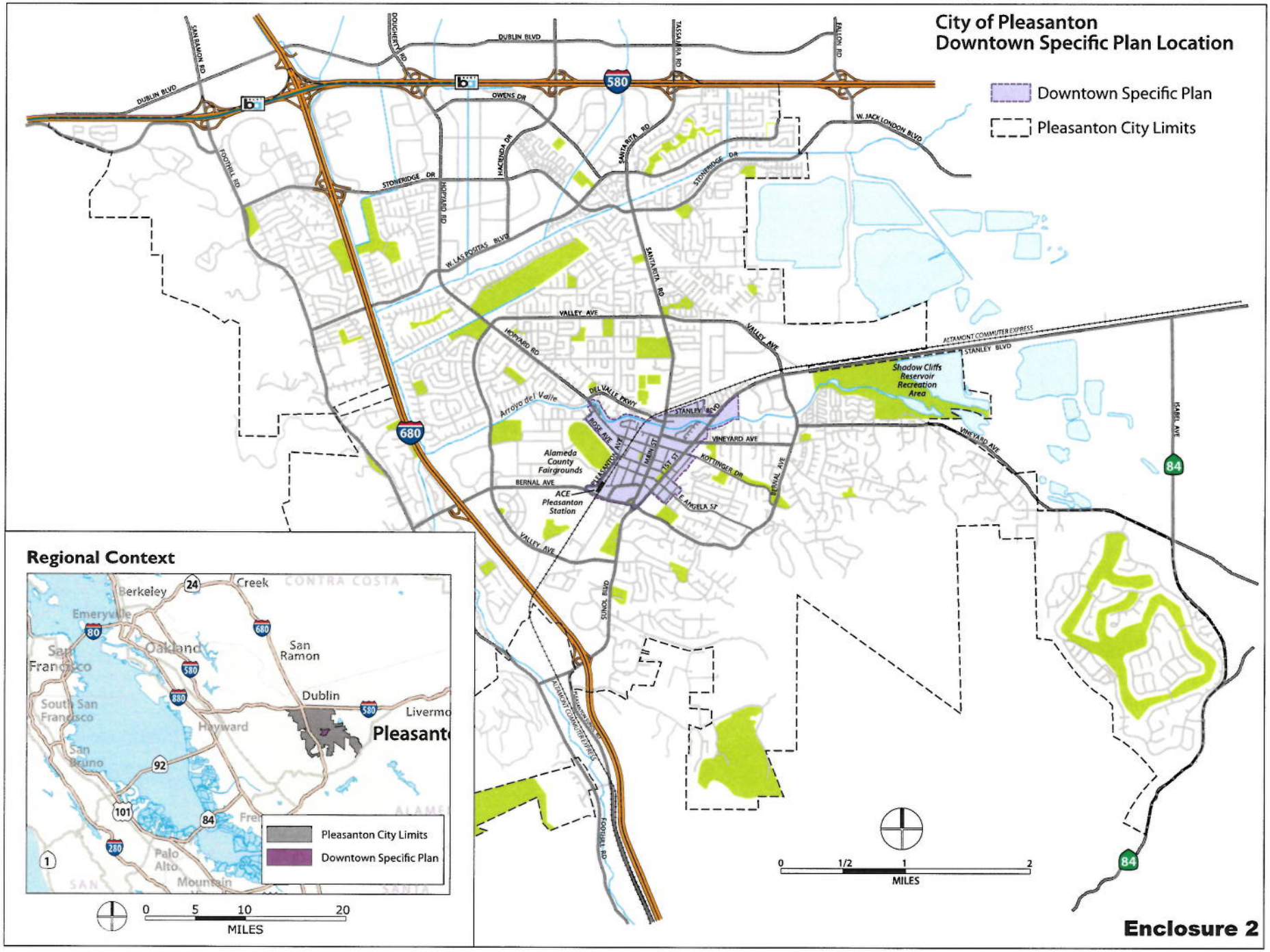
Additional information about the DSP update process, background, and supporting documents are available at www.ptowndtown.org.

Lead Agency Point of Contact and Requests for Consultation

A search of the NAHC's Sacred Lands file has been completed and a California Historical Records Information System (CHRIS) search is in process. If you have any additional information regarding potential cultural or tribal cultural resources in proximity or relation to the planning area, please contact:

Shweta Bonn, Senior Planner
City of Pleasanton, Community Development Department
P.O. Box 520, Pleasanton, CA 94566
E-mail: sbonn@cityofpleasantonca.gov
Phone: 925-931-5611 | Fax: 952-931-5483

Figure 1: Pleasanton Downtown Specific Plan Planning Area



THE CITY OF

PLEASANTON

April 4, 2018

Tony Cerda, Chairperson
Coastanoan Rumsen Carmel Tribe
244 E. 1st Street
Pomona, CA 91766

Dear Chairperson Cerda,

The City of Pleasanton is preparing an update of its Downtown Specific Plan (DSP). The DSP is the City's guide for development and preservation in downtown Pleasanton, establishing policies and programs related to land use, circulation, infrastructure, historic preservation, urban design, economic development, and the environment. In addition, the City has determined that an Environmental Impact Report (EIR) is necessary to evaluate potential environmental impacts of the DSP update, pursuant to the California Environmental Quality Act (CEQA). In compliance with CEQA, the City is the Lead Agency and will prepare the EIR.

We are contacting you because the Native American Heritage Commission (NAHC) has identified your tribe as one that may have knowledge about cultural resources in the area, and which may be traditionally or culturally affiliated with the planning area. In order to provide Native American tribes with the opportunity to participate in local land use decisions at an early stage, the City is seeking your input regarding potential cultural or tribal cultural resources in proximity or relation to the planning area.

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Sincerely,

Shweta Bonn
Senior Planner

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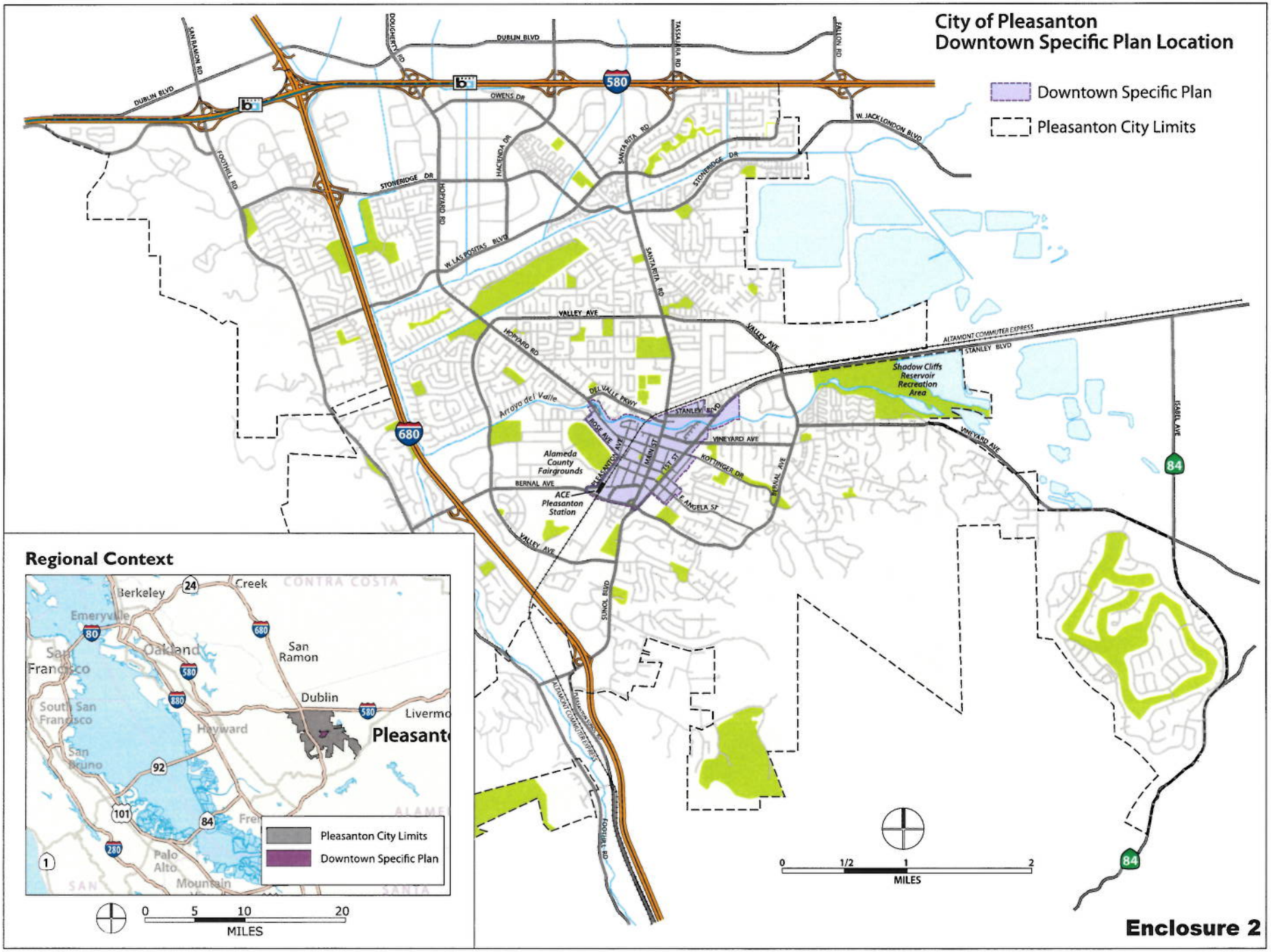

THE CITY OF

PLEASANTON

April 4, 2018

Andrew Galvan
The Ohlone Indian Tribe
P.O. Box 3152
Fremont, CA 94539

Dear Mr. Galvan,

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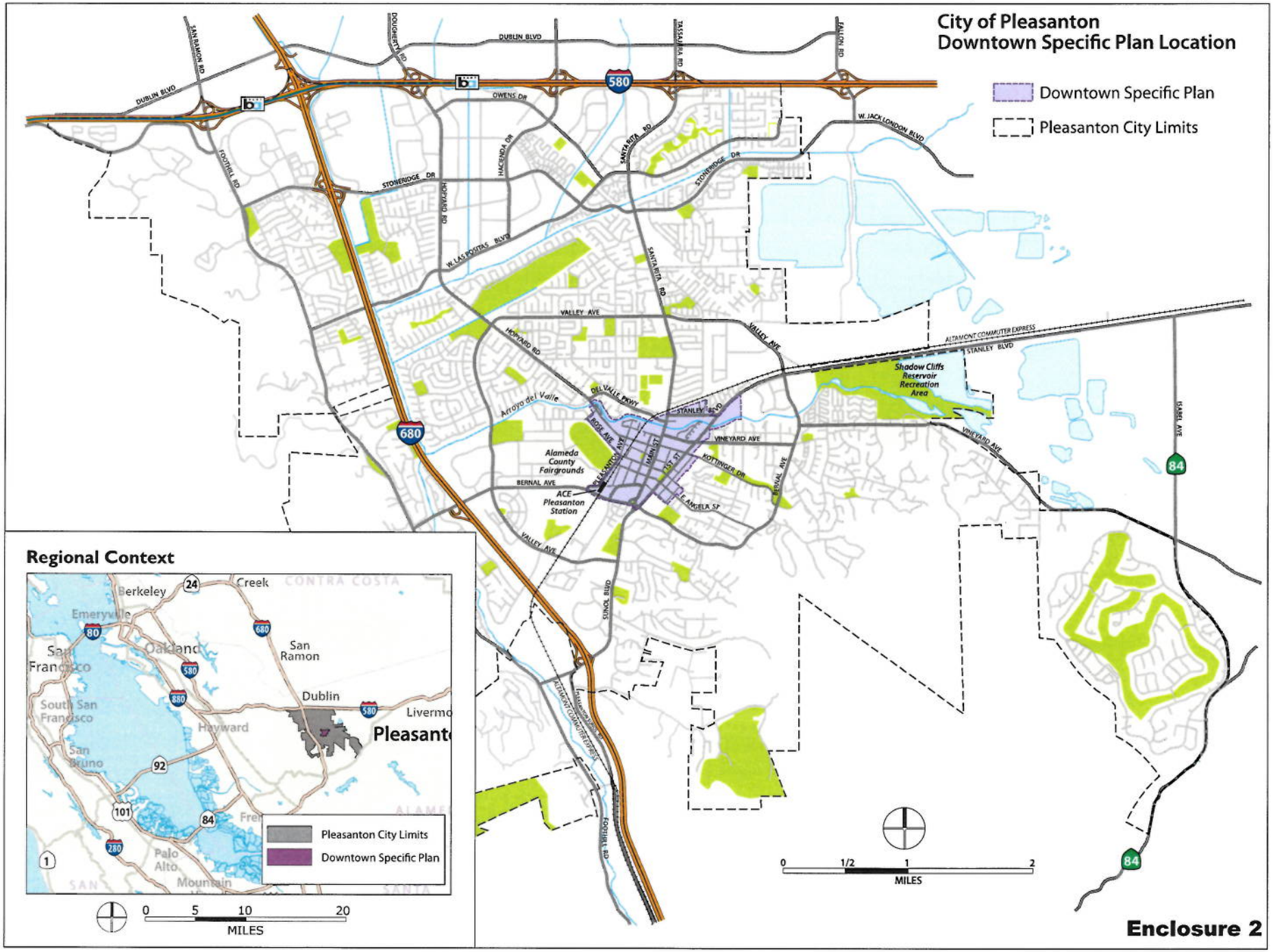

THE CITY OF

PLEASANTON

April 4, 2018

Katherine Erolinda Perez, Chairperson
North Valley Yokuts Tribe
P.O. Box 717
Linden, CA 95236

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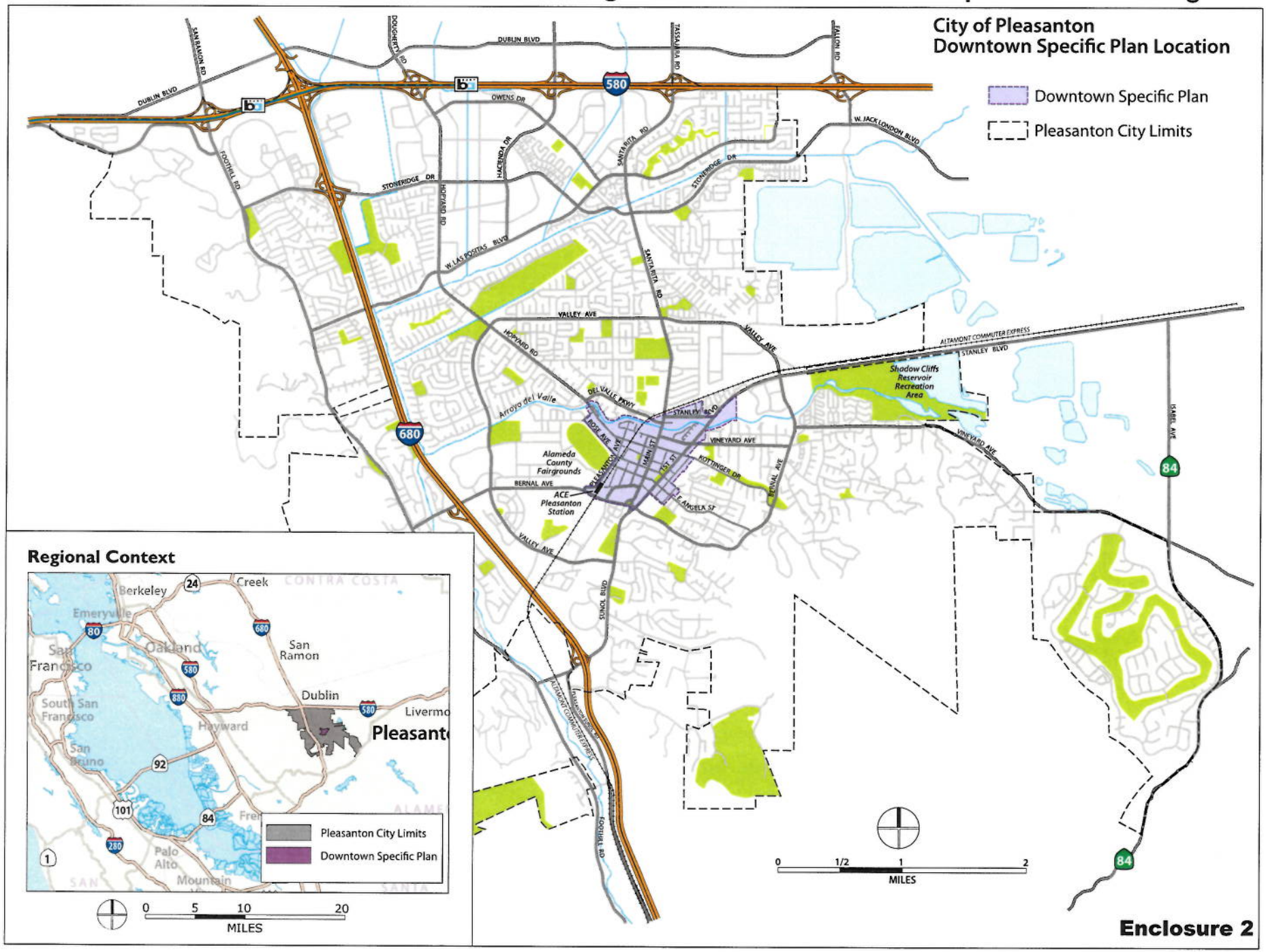

THE CITY OF

PLEASANTON

April 4, 2018

Ann Marie Savers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

Dear Chairperson Savers,

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A key component of the DSP update is consideration of alternative land uses for approximately 13-acres of City-owned properties that are the current site of City offices, the Pleasanton Public Library, the Police Station, and other municipal uses. In late 2016, the City Council accepted the Pleasanton Civic Center/Library Master Plan, which envisions the civic center and library at a new location across Bernal Avenue to the southwest, near Bernal Community Park. Approval of the proposed relocation of the civic center and library is subject to voter approval and is therefore not yet final. In the event that relocation is approved, the DSP update will provide a vision and a conceptual land use plan for the redevelopment of the approximately nine-acre existing civic center property and an adjacent four-acre vacant City-owned property, developed with input from the community.

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civic center site, regulations for ground floor uses, a "base" land use plan, and corresponding set of strategies, and draft plan policies.

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Project Purpose and Description

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- Provide clear and consistent policy guidance;
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- Improve the mobility of cars, buses, bicycles, and pedestrians in the downtown area.

With the active involvement of the community and the DSP Task Force, a base plan was developed and presented to City Council. The base plan was reviewed by the City Council on December 19, 2017, and revised in response to its comments. The Task Force reviewed the revised base plan on January 23, 2018. Its key features include:

- A conceptual land use plan that includes a mix of housing, commercial, visitor-oriented and open space uses to provide a vision for the 13-acre cluster of City-owned properties, should the civic center and library relocation be approved by voters;
- Two new mixed-use land use designations to complement the range of residential, commercial, public, and open space uses currently in the DSP, including a pedestrian-oriented Mixed Use Downtown designation and a lower intensity Mixed Use Transitional designation with operating characteristics that would be more compatible and appropriate for adjacent residential uses (generally, development intensities specified in the DSP update would remain within the existing envelope identified by the City of Pleasanton General Plan, current DSP, and Zoning Ordinance);
- Streetscape improvements to Peters Avenue for the inclusion of bicycle facilities;
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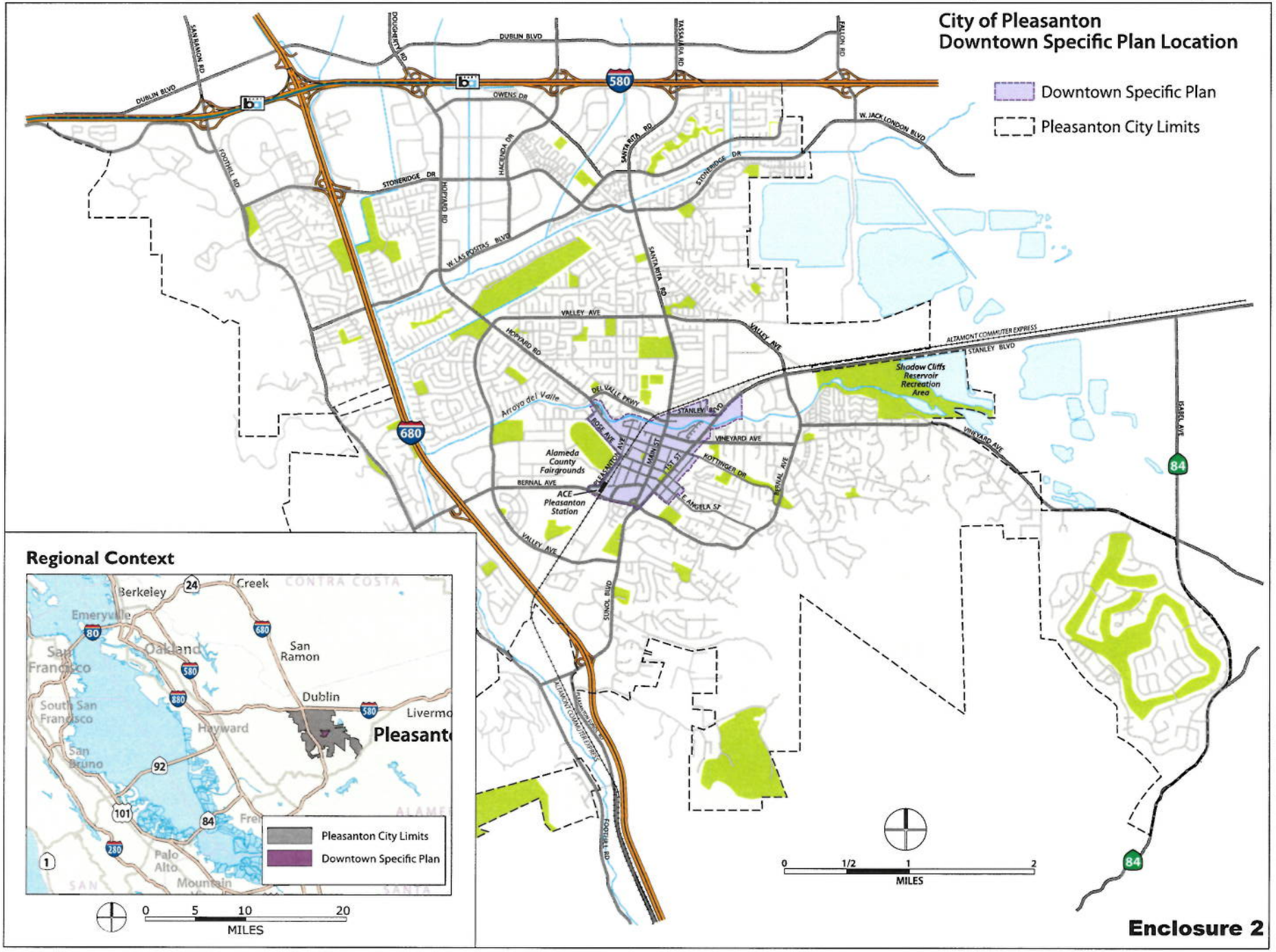
Additional information about the DSP update process, background, and supporting documents are available at www.ptowndtown.org.

Lead Agency Point of Contact and Requests for Consultation

A search of the NAHC's Sacred Lands file has been completed and a California Historical Records Information System (CHRIS) search is in process. If you have any additional information regarding potential cultural or tribal cultural resources in proximity or relation to the planning area, please contact:

Shweta Bonn, Senior Planner
City of Pleasanton, Community Development Department
P.O. Box 520, Pleasanton, CA 94566
E-mail: sbonn@cityofpleasantonca.gov
Phone: 925-931-5611 | Fax: 952-931-5483

Figure 1: Pleasanton Downtown Specific Plan Planning Area



THE CITY OF

PLEASANTON

April 4, 2018

Irenne Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, CA 94062

Dear Chairperson Zwierlein,

The City of Pleasanton is preparing an update of its Downtown Specific Plan (DSP). The DSP is the City's guide for development and preservation in downtown Pleasanton, establishing policies and programs related to land use, circulation, infrastructure, historic preservation, urban design, economic development, and the environment. In addition, the City has determined that an Environmental Impact Report (EIR) is necessary to evaluate potential environmental impacts of the DSP update, pursuant to the California Environmental Quality Act (CEQA). In compliance with CEQA, the City is the Lead Agency and will prepare the EIR.

We are contacting you because the Native American Heritage Commission (NAHC) has identified your tribe as one that may have knowledge about cultural resources in the area, and which may be traditionally or culturally affiliated with the planning area. In order to provide Native American tribes with the opportunity to participate in local land use decisions at an early stage, the City is seeking your input regarding potential cultural or tribal cultural resources in proximity or relation to the planning area.

Based on a search of its Sacred Lands File, the NAHC has referred us to your tribe for further information about the site. Additionally, the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS) has conducted a non-confidential records search for archaeological and historical resources in the planning area. While no previously-recorded archaeological resources were found, the NWIC notes that there is a moderate potential of identifying Native American archaeological resources in the future. If you have any concerns or information regarding additional cultural or tribal cultural resources in the planning area, please let me know.

Please note that:

- Pursuant to Senate Bill (SB) 18 (Burton, 2004), the City is required to contact and consult with California Native American tribes prior to amending or adopting any specific plan for the purpose of preserving or mitigating impacts to places, features, and objects described in Sections 5097.9 and 5097.995 of the Public Resources Code that are located within the planning area. To request consultation pursuant to SB 18, you must do so within 90 days of receiving this notice.

COMMUNITY DEVELOPMENT
www.cityofpleasantonca.gov
P. O. BOX 520 · 200 Old Bernal Avenue
Pleasanton, CA 94566-0802

Planning	Building & Safety	Code Enforcement	Permit Center	Traffic Engineering
(925) 931-5600	(925) 931-5300	(925) 931-5620	(925) 931-5630	(925) 931-5677
Fax: 931-5483	Fax: 931-5478	Fax: 931-5478	Fax: 931-5478	Fax: 931-5487

- Pursuant to Assembly Bill (AB) 52 (Gatto, 2014), the City is required to provide California Native American tribes formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribes prior to the release of a negative declaration, mitigated negative declaration, or EIR for such projects if the tribes have requested such notification in writing. To request consultation pursuant to AB 52, you must do so in writing within 30 days of receiving this notice.

Enclosed with this letter are: (1) a brief description of the planning area and the project; and (2) a map showing the Downtown Specific Plan Planning Area (Figure 1).

If you have any questions or comments, please feel free to contact me at 925-931-5611 or sbonn@cityofpleasantonca.gov.

Sincerely,

Shweta Bonn
Senior Planner

Project Location

Pleasanton is located in Alameda County, one of nine Bay Area counties bordering the San Francisco Bay. As shown in Figure 1, enclosed, the 307-acre DSP planning area is generally situated in the central portion of the city. The Planning Area is approximately bounded by the Alameda County Fairgrounds to the west, the Arroyo del Valle and Altamont Corridor Express (ACE) tracks to the north, a generally straight-line projection of Second and Third streets to the east, and Bernal Avenue to the south.

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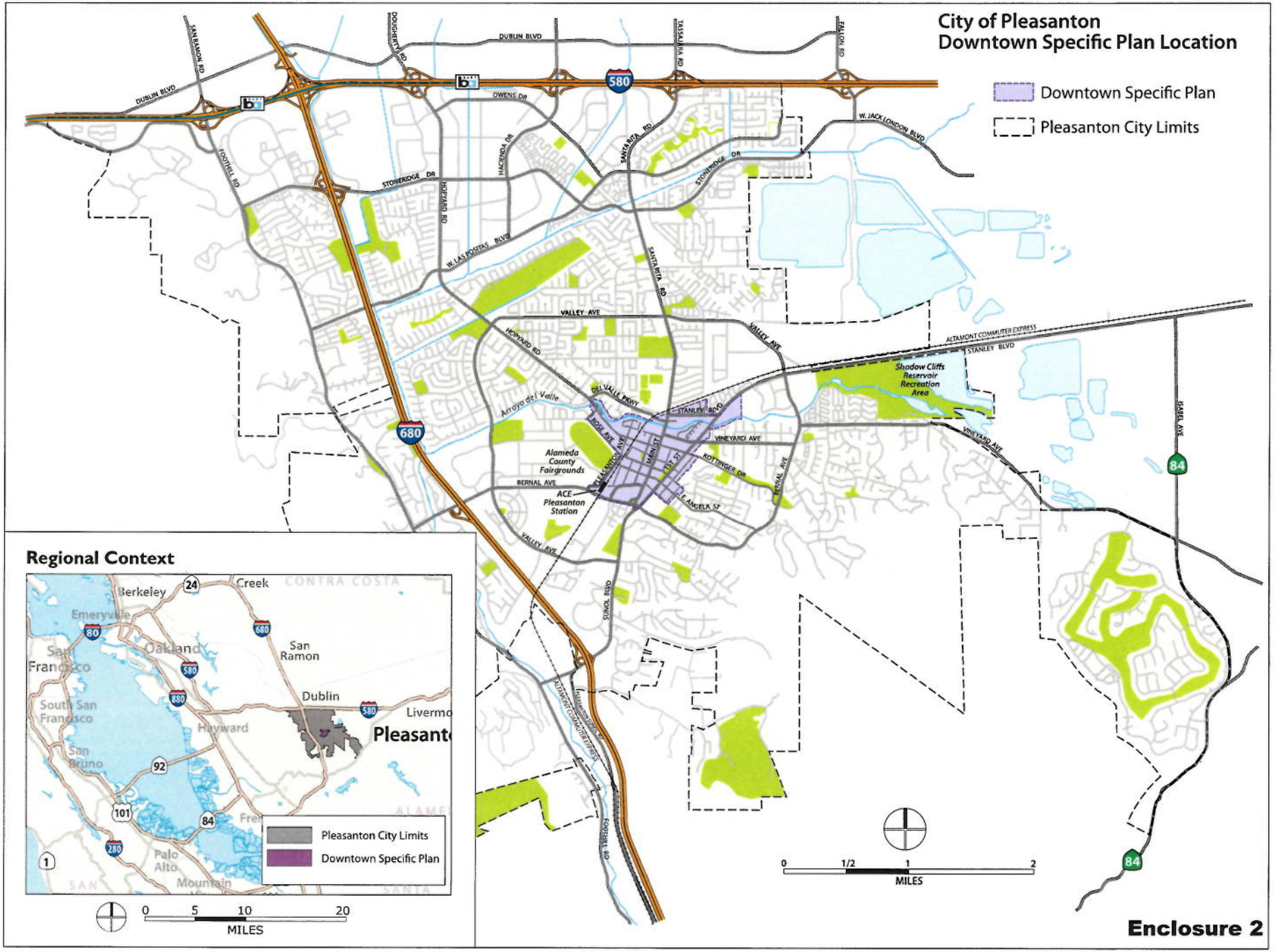

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Appendix C

AIR QUALITY AND GREENHOUSE GAS DATA

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Pleasanton DSP Existing Conditions (2018)

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	763.00	Dwelling Unit	47.69	763,000.00	2182
Hotel	31.47	Room	1.05	45,690.08	0
General Office Building	472.65	1000sqft	10.85	472,652.00	0
Government Office Building	114.93	1000sqft	2.64	114,932.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	389.83	1000sqft	8.95	389,825.00	0
Single Family Housing	488.00	Dwelling Unit	158.44	878,400.00	1396

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	405	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2015 (latest year for which verified data available) PG&E pounds of CO2/MWh.

Land Use -

Construction Phase - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Grading - No construction

Trips and VMT - No construction

Architectural Coating - No construction

On-road Fugitive Dust - No construction

Vehicle Trips - Scaled trip rate to match exising VMT from traffic data.

Woodstoves - No woodstoves.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	511,550.00	0.00
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tblArchitecturalCoating	ConstArea_Residential_Interior	3,377,295.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00

Pleasanton DSP Existing Conditions (2018) - Alameda County, Annual

tblConstructionPhase	NumDays	180.00	0.00
tblConstructionPhase	PhaseEndDate	9/18/2042	6/13/2041
tblConstructionPhase	PhaseEndDate	3/8/2040	5/12/2022
tblConstructionPhase	PhaseEndDate	11/21/2019	9/27/2018
tblConstructionPhase	PhaseEndDate	5/12/2022	7/30/2020
tblConstructionPhase	PhaseEndDate	6/13/2041	3/8/2040
tblConstructionPhase	PhaseEndDate	7/30/2020	11/21/2019
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblTripsAndVMT	VendorTripNumber	304.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,073.00	0.00
tblTripsAndVMT	WorkerTripNumber	215.00	0.00
tblVehicleTrips	CC_TL	7.30	7.81
tblVehicleTrips	CC_TL	7.30	7.81
tblVehicleTrips	CC_TL	7.30	7.81
tblVehicleTrips	CC_TL	7.30	7.81
tblVehicleTrips	CC_TTP	48.00	100.00
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tblVehicleTrips	HO_TL	5.70	0.00
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tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
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tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00

tblVehicleTrips	PB_TP	16.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
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tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	9.08
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tblVehicleTrips	ST_TR	8.19	10.39
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tblVehicleTrips	SU_TR	5.95	7.55
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tblVehicleTrips	SU_TR	25.24	32.02
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tblWoodstoves	NumberNoncatalytic	15.26	0.00
tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	19.52	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.0109	0.1875	14.4995	8.5200e-003		0.7335	0.7335		0.7335	0.7335	60.5664	45.3882	105.9546	0.0159	5.8900e-003	108.1088
Energy	0.1882	1.6454	0.9555	0.0103		0.1300	0.1300		0.1300	0.1300	0.0000	5,973.3459	5,973.3459	0.3300	0.0951	6,009.9213
Mobile	18.6049	116.3785	221.2721	0.6691	48.1703	0.9965	49.1668	12.9539	0.9431	13.8970	0.0000	61,436.4890	61,436.4890	2.8928	0.0000	61,508.8082
Waste						0.0000	0.0000		0.0000	0.0000	389.8239	0.0000	389.8239	23.0379	0.0000	965.7721
Water						0.0000	0.0000		0.0000	0.0000	69.6220	305.2997	374.9218	7.1727	0.1734	605.9038
Total	**35.8039**	**118.2113**	**236.7271**	**0.6879**	**48.1703**	**1.8600**	**50.0303**	**12.9539**	**1.8067**	**14.7605**	**520.0123**	**67,760.5229**	**68,280.5352**	**33.4494**	**0.2743**	**69,198.5142**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	17.0109	0.1875	14.4995	8.5200e-003		0.7335	0.7335		0.7335	0.7335	60.5664	45.3882	105.9546	0.0159	5.8900e-003	108.1088
Energy	0.1882	1.6454	0.9555	0.0103		0.1300	0.1300		0.1300	0.1300	0.0000	5,973.3459	5,973.3459	0.3300	0.0951	6,009.9213
Mobile	18.6049	116.3785	221.2721	0.6691	48.1703	0.9965	49.1668	12.9539	0.9431	13.8970	0.0000	61,436.4890	61,436.4890	2.8928	0.0000	61,508.8082
Waste						0.0000	0.0000		0.0000	0.0000	389.8239	0.0000	389.8239	23.0379	0.0000	965.7721
Water						0.0000	0.0000		0.0000	0.0000	69.6220	305.2997	374.9218	7.1727	0.1734	605.9038
Total	**35.8039**	**118.2113**	**236.7271**	**0.6879**	**48.1703**	**1.8600**	**50.0303**	**12.9539**	**1.8067**	**14.7605**	**520.0123**	**67,760.5229**	**68,280.5352**	**33.4494**	**0.2743**	**69,198.5142**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Pleasanton DSP Existing Conditions (2018) - Alameda County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/28/2018	9/27/2018	5	0	
2	Site Preparation	Site Preparation	11/22/2019	11/21/2019	5	0	
3	Grading	Grading	7/31/2020	7/30/2020	5	0	
4	Building Construction	Building Construction	5/13/2022	5/12/2022	5	0	
5	Paving	Paving	3/9/2040	3/8/2040	5	0	
6	Architectural Coating	Architectural Coating	6/14/2041	6/13/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Pleasanton DSP Existing Conditions (2018) - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	18.6049	116.3785	221.2721	0.6691	48.1703	0.9965	49.1668	12.9539	0.9431	13.8970	0.0000	61,436.4890	61,436.4890	2.8928	0.0000	61,508.8082
Unmitigated	18.6049	116.3785	221.2721	0.6691	48.1703	0.9965	49.1668	12.9539	0.9431	13.8970	0.0000	61,436.4890	61,436.4890	2.8928	0.0000	61,508.8082

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	6,378.68	6,928.04	5875.10	18,152,159	18,152,159
General Office Building	6,612.40	1,474.67	628.63	14,281,335	14,281,335
Government Office Building	10,050.80	0.00	0.00	20,409,161	20,409,161
Hotel	326.31	326.94	237.58	891,873	891,873
Mobile Home Park	139.26	139.48	121.66	388,836	388,836
Regional Shopping Center	21,116.82	24,714.91	12482.20	57,986,302	57,986,302
Single Family Housing	5,895.04	6,134.16	5338.72	16,629,834	16,629,834
Total	50,519.32	39,718.20	24,683.88	128,739,500	128,739,500

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	7.81	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	7.81	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	7.81	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	7.81	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	7.81	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	7.81	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	7.81	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
General Office Building	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Government Office Building	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Hotel	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Mobile Home Park	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Regional Shopping Center	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Single Family Housing	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Pleasanton DSP Existing Conditions (2018) - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,110.6014	4,110.6014	0.2943	0.0609	4,136.1075
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,110.6014	4,110.6014	0.2943	0.0609	4,136.1075
NaturalGas Mitigated	0.1882	1.6454	0.9555	0.0103		0.1300	0.1300		0.1300	0.1300	0.0000	1,862.7445	1,862.7445	0.0357	0.0342	1,873.8139
NaturalGas Unmitigated	0.1882	1.6454	0.9555	0.0103		0.1300	0.1300		0.1300	0.1300	0.0000	1,862.7445	1,862.7445	0.0357	0.0342	1,873.8139

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	7.78172e+006	0.0420	0.3586	0.1526	2.2900e-003		0.0290	0.0290		0.0290	0.0290	0.0000	415.2624	415.2624	7.9600e-003	7.6100e-003	417.7301
General Office Building	7.73731e+006	0.0417	0.3793	0.3186	2.2800e-003		0.0288	0.0288		0.0288	0.0288	0.0000	412.8925	412.8925	7.9100e-003	7.5700e-003	415.3461
Government Office Building	1.88144e+006	0.0102	0.0922	0.0775	5.5000e-004		7.0100e-003	7.0100e-003		7.0100e-003	7.0100e-003	0.0000	100.4006	100.4006	1.9200e-003	1.8400e-003	100.9973
Hotel	2.02453e+006	0.0109	0.0992	0.0834	6.0000e-004		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	108.0365	108.0365	2.0700e-003	1.9800e-003	108.6785
Mobile Home Park	373864	2.0200e-003	0.0172	7.3300e-003	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9508	19.9508	3.8000e-004	3.7000e-004	20.0694
Regional Shopping Center	923885	4.9800e-003	0.0453	0.0380	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3020	49.3020	9.4000e-004	9.0000e-004	49.5950
Single Family Housing	1.41838e+007	0.0765	0.6536	0.2781	4.1700e-003		0.0528	0.0528		0.0528	0.0528	0.0000	756.8997	756.8997	0.0145	0.0139	761.3975
Total		**0.1882**	**1.6454**	**0.9555**	**0.0103**		**0.1300**	**0.1300**		**0.1300**	**0.1300**	**0.0000**	**1,862.7445**	**1,862.7445**	**0.0357**	**0.0342**	**1,873.8139**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	7.78172e+006	0.0420	0.3586	0.1526	2.2900e-003		0.0290	0.0290		0.0290	0.0290	0.0000	415.2624	415.2624	7.9600e-003	7.6100e-003	417.7301
General Office Building	7.73731e+006	0.0417	0.3793	0.3186	2.2800e-003		0.0288	0.0288		0.0288	0.0288	0.0000	412.8925	412.8925	7.9100e-003	7.5700e-003	415.3461
Government Office Building	1.88144e+006	0.0102	0.0922	0.0775	5.5000e-004		7.0100e-003	7.0100e-003		7.0100e-003	7.0100e-003	0.0000	100.4006	100.4006	1.9200e-003	1.8400e-003	100.9973
Hotel	2.02453e+006	0.0109	0.0992	0.0834	6.0000e-004		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	108.0365	108.0365	2.0700e-003	1.9800e-003	108.6785
Mobile Home Park	373864	2.0200e-003	0.0172	7.3300e-003	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9508	19.9508	3.8000e-004	3.7000e-004	20.0694
Regional Shopping Center	923885	4.9800e-003	0.0453	0.0380	2.7000e-004		3.4400e-003	3.4400e-003		3.4400e-003	3.4400e-003	0.0000	49.3020	49.3020	9.4000e-004	9.0000e-004	49.5950
Single Family Housing	1.41838e+007	0.0765	0.6536	0.2781	4.1700e-003		0.0528	0.0528		0.0528	0.0528	0.0000	756.8997	756.8997	0.0145	0.0139	761.3975
Total		**0.1882**	**1.6454**	**0.9555**	**0.0103**		**0.1300**	**0.1300**		**0.1300**	**0.1300**	**0.0000**	**1,862.7445**	**1,862.7445**	**0.0357**	**0.0342**	**1,873.8139**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.31813e+006	609.5576	0.0437	9.0300e-003	613.3399
General Office Building	8.42739e+006	1,548.1520	0.1109	0.0229	1,557.7582
Government Office Building	2.04924e+006	376.4550	0.0270	5.5800e-003	378.7909
Hotel	348158	63.9584	4.5800e-003	9.5000e-004	64.3553
Mobile Home Park	117768	21.6346	1.5500e-003	3.2000e-004	21.7688
Regional Shopping Center	4.16723e+006	765.5405	0.0548	0.0113	770.2906
Single Family Housing	3.9482e+006	725.3034	0.0519	0.0108	729.8039
Total		**4,110.6014**	**0.2944**	**0.0609**	**4,136.1075**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	3.31813e+006	609.5576	0.0437	9.0300e-003	613.3399
General Office Building	8.42739e+006	1,548.1520	0.1109	0.0229	1,557.7582
Government Office Building	2.04924e+006	376.4550	0.0270	5.5800e-003	378.7909
Hotel	348158	63.9584	4.5800e-003	9.5000e-004	64.3553
Mobile Home Park	117768	21.6346	1.5500e-003	3.2000e-004	21.7688
Regional Shopping Center	4.16723e+006	765.5405	0.0548	0.0113	770.2906
Single Family Housing	3.9482e+006	725.3034	0.0519	0.0108	729.8039
Total		**4,110.6014**	**0.2944**	**0.0609**	**4,136.1075**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	17.0109	0.1875	14.4995	8.5200e-003		0.7335	0.7335		0.7335	0.7335	60.5664	45.3882	105.9546	0.0159	5.8900e-003	108.1088
Unmitigated	17.0109	0.1875	14.4995	8.5200e-003		0.7335	0.7335		0.7335	0.7335	60.5664	45.3882	105.9546	0.0159	5.8900e-003	108.1088

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7075					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.5093					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4997	0.0769	4.9711	8.0200e-003		0.6815	0.6815		0.6815	0.6815	60.5664	29.9302	90.4966	5.7000e-004	5.8900e-003	92.2670
Landscaping	0.2943	0.1106	9.5284	5.0000e-004		0.0520	0.0520		0.0520	0.0520	0.0000	15.4580	15.4580	0.0154	0.0000	15.8418
Total	**17.0109**	**0.1875**	**14.4995**	**8.5200e-003**		**0.7335**	**0.7335**		**0.7335**	**0.7335**	**60.5664**	**45.3882**	**105.9546**	**0.0159**	**5.8900e-003**	**108.1088**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.7075					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.5093					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.4997	0.0769	4.9711	8.0200e-003		0.6815	0.6815		0.6815	0.6815	60.5664	29.9302	90.4966	5.7000e-004	5.8900e-003	92.2670
Landscaping	0.2943	0.1106	9.5284	5.0000e-004		0.0520	0.0520		0.0520	0.0520	0.0000	15.4580	15.4580	0.0154	0.0000	15.8418
Total	**17.0109**	**0.1875**	**14.4995**	**8.5200e-003**		**0.7335**	**0.7335**		**0.7335**	**0.7335**	**60.5664**	**45.3882**	**105.9546**	**0.0159**	**5.8900e-003**	**108.1088**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	374.9218	7.1727	0.1734	605.9038
Unmitigated	374.9218	7.1727	0.1734	605.9038

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	49.7125 / 31.3405	85.3380	1.6249	0.0393	137.6649
General Office Building	84.0059 / 51.4875	143.2600	2.7457	0.0664	231.6779
Government Office Building	22.832 / 13.9938	38.9367	0.7463	0.0180	62.9678
Hotel	0.798292 / 0.0886991	1.1038	0.0261	6.3000e-004	1.9424
Mobile Home Park	1.43339 / 0.903658	2.4606	0.0469	1.1300e-003	3.9694
Regional Shopping Center	28.875 / 17.6976	49.2421	0.9438	0.0228	79.6336
Single Family Housing	31.7952 / 20.0448	54.5805	1.0392	0.0251	88.0478
Total		**374.9218**	**7.1727**	**0.1734**	**605.9039**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	49.7125 / 31.3405	85.3380	1.6249	0.0393	137.6649
General Office Building	84.0059 / 51.4875	143.2600	2.7457	0.0664	231.6779
Government Office Building	22.832 / 13.9938	38.9367	0.7463	0.0180	62.9678
Hotel	0.798292 / 0.0886991	1.1038	0.0261	6.3000e-004	1.9424
Mobile Home Park	1.43339 / 0.903658	2.4606	0.0469	1.1300e-003	3.9694
Regional Shopping Center	28.875 / 17.6976	49.2421	0.9438	0.0228	79.6336
Single Family Housing	31.7952 / 20.0448	54.5805	1.0392	0.0251	88.0478
Total		**374.9218**	**7.1727**	**0.1734**	**605.9039**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	389.8239	23.0379	0.0000	965.7721
Unmitigated	389.8239	23.0379	0.0000	965.7721

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	350.98	71.2458	4.2105	0.0000	176.5084
General Office Building	439.56	89.2267	5.2732	0.0000	221.0554
Government Office Building	106.88	21.6957	1.2822	0.0000	53.7501
Hotel	17.23	3.4975	0.2067	0.0000	8.6650
Mobile Home Park	10.12	2.0543	0.1214	0.0000	5.0894
Regional Shopping Center	409.31	83.0862	4.9103	0.0000	205.8426
Single Family Housing	586.32	119.0177	7.0337	0.0000	294.8612
Total		**389.8238**	**23.0379**	**0.0000**	**965.7721**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	350.98	71.2458	4.2105	0.0000	176.5084
General Office Building	439.56	89.2267	5.2732	0.0000	221.0554
Government Office Building	106.88	21.6957	1.2822	0.0000	53.7501
Hotel	17.23	3.4975	0.2067	0.0000	8.6650
Mobile Home Park	10.12	2.0543	0.1214	0.0000	5.0894
Regional Shopping Center	409.31	83.0862	4.9103	0.0000	205.8426
Single Family Housing	586.32	119.0177	7.0337	0.0000	294.8612
Total		**389.8238**	**23.0379**	**0.0000**	**965.7721**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pleasanton DSP Existing Conditions (2018)

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	763.00	Dwelling Unit	47.69	763,000.00	2182
Hotel	31.47	Room	1.05	45,690.08	0
General Office Building	472.65	1000sqft	10.85	472,652.00	0
Government Office Building	114.93	1000sqft	2.64	114,932.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	389.83	1000sqft	8.95	389,825.00	0
Single Family Housing	488.00	Dwelling Unit	158.44	878,400.00	1396

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	405	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Pleasanton DSP Existing Conditions (2018) - Alameda County, Summer

Project Characteristics - 2015 (latest year for which verified data available) PG&E pounds of CO2/MWh.

Land Use -

Construction Phase - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Off-road Equipment - No construction

Grading - No construction

Trips and VMT - No construction

Architectural Coating - No construction

On-road Fugitive Dust - No construction

Vehicle Trips - Scaled trip rate to match exising VMT from traffic data.

Woodstoves - No woodstoves.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	511,550.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,534,649.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	1,125,765.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	3,377,295.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00

Pleasanton DSP Existing Conditions (2018) - Alameda County, Summer

tblConstructionPhase	NumDays	180.00	0.00
tblConstructionPhase	PhaseEndDate	9/18/2042	6/13/2041
tblConstructionPhase	PhaseEndDate	3/8/2040	5/12/2022
tblConstructionPhase	PhaseEndDate	11/21/2019	9/27/2018
tblConstructionPhase	PhaseEndDate	5/12/2022	7/30/2020
tblConstructionPhase	PhaseEndDate	6/13/2041	3/8/2040
tblConstructionPhase	PhaseEndDate	7/30/2020	11/21/2019
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	405

tblTripsAndVMT	VendorTripNumber	304.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,073.00	0.00
tblTripsAndVMT	WorkerTripNumber	215.00	0.00
tblVehicleTrips	CC_TL	7.30	7.81
tblVehicleTrips	CC_TL	7.30	7.81
tblVehicleTrips	CC_TL	7.30	7.81
tblVehicleTrips	CC_TL	7.30	7.81
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CC_TTP	62.00	100.00
tblVehicleTrips	CC_TTP	61.60	100.00
tblVehicleTrips	CC_TTP	64.70	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	19.40	0.00
tblVehicleTrips	CW_TTP	16.30	0.00

tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	34.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HW_TL	10.80	7.81
tblVehicleTrips	HW_TL	10.80	7.81
tblVehicleTrips	HW_TL	10.80	7.81
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00

tblVehicleTrips	PB_TP	16.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	50.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	9.08
tblVehicleTrips	ST_TR	2.46	3.12
tblVehicleTrips	ST_TR	8.19	10.39
tblVehicleTrips	ST_TR	5.00	6.34
tblVehicleTrips	ST_TR	49.97	63.40
tblVehicleTrips	ST_TR	9.91	12.57
tblVehicleTrips	SU_TR	6.07	7.70
tblVehicleTrips	SU_TR	1.05	1.33
tblVehicleTrips	SU_TR	5.95	7.55
tblVehicleTrips	SU_TR	4.36	5.53
tblVehicleTrips	SU_TR	25.24	32.02
tblVehicleTrips	SU_TR	8.62	10.94
tblVehicleTrips	WD_TR	6.59	8.36
tblVehicleTrips	WD_TR	11.03	13.99
tblVehicleTrips	WD_TR	68.93	87.45

tblVehicleTrips	WD_TR	8.17	10.37
tblVehicleTrips	WD_TR	4.99	6.33
tblVehicleTrips	WD_TR	42.70	54.17
tblVehicleTrips	WD_TR	9.52	12.08
tblWoodstoves	NumberCatalytic	15.26	0.00
tblWoodstoves	NumberCatalytic	0.44	0.00
tblWoodstoves	NumberCatalytic	19.52	0.00
tblWoodstoves	NumberNoncatalytic	15.26	0.00
tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	19.52	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	878.0595	15.0344	998.3486	1.4453		122.9298	122.9298		122.9298	122.9298	11,986.1830	6,112.5632	18,098.7462	0.3015	1.1662	18,453.8115
Energy	1.0314	9.0159	5.2356	0.0563		0.7126	0.7126		0.7126	0.7126		11,251.0923	11,251.0923	0.2157	0.2063	11,317.9519
Mobile	139.6380	750.1025	1,534.1579	4.7156	333.1355	6.6228	339.7584	89.2990	6.2679	95.5669		477,020.8381	477,020.8381	21.3044		477,553.4468
Total	**1,018.7288**	**774.1527**	**2,537.7420**	**6.2171**	**333.1355**	**130.2652**	**463.4007**	**89.2990**	**129.9103**	**219.2093**	**11,986.1830**	**494,384.4935**	**506,370.6765**	**21.8215**	**1.3725**	**507,325.2101**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	878.0595	15.0344	998.3486	1.4453		122.9298	122.9298		122.9298	122.9298	11,986.1830	6,112.5632	18,098.7462	0.3015	1.1662	18,453.8115
Energy	1.0314	9.0159	5.2356	0.0563		0.7126	0.7126		0.7126	0.7126		11,251.0923	11,251.0923	0.2157	0.2063	11,317.9519
Mobile	139.6380	750.1025	1,534.1579	4.7156	333.1355	6.6228	339.7584	89.2990	6.2679	95.5669		477,020.8381	477,020.8381	21.3044		477,553.4468
Total	**1,018.7288**	**774.1527**	**2,537.7420**	**6.2171**	**333.1355**	**130.2652**	**463.4007**	**89.2990**	**129.9103**	**219.2093**	**11,986.1830**	**494,384.4935**	**506,370.6765**	**21.8215**	**1.3725**	**507,325.2101**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/28/2018	9/27/2018	5	0	
2	Site Preparation	Site Preparation	11/22/2019	11/21/2019	5	0	
3	Grading	Grading	7/31/2020	7/30/2020	5	0	
4	Building Construction	Building Construction	5/13/2022	5/12/2022	5	0	
5	Paving	Paving	3/9/2040	3/8/2040	5	0	
6	Architectural Coating	Architectural Coating	6/14/2041	6/13/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Pleasanton DSP Existing Conditions (2018) - Alameda County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	139.6380	750.1025	1,534.1579	4.7156	333.1355	6.6228	339.7584	89.2990	6.2679	95.5669		477,020.8381	477,020.8381	21.3044		477,553.4468
Unmitigated	139.6380	750.1025	1,534.1579	4.7156	333.1355	6.6228	339.7584	89.2990	6.2679	95.5669		477,020.8381	477,020.8381	21.3044		477,553.4468

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	6,378.68	6,928.04	5875.10	18,152,159	18,152,159
General Office Building	6,612.40	1,474.67	628.63	14,281,335	14,281,335
Government Office Building	10,050.80	0.00	0.00	20,409,161	20,409,161
Hotel	326.31	326.94	237.58	891,873	891,873
Mobile Home Park	139.26	139.48	121.66	388,836	388,836
Regional Shopping Center	21,116.82	24,714.91	12482.20	57,986,302	57,986,302
Single Family Housing	5,895.04	6,134.16	5338.72	16,629,834	16,629,834
Total	50,519.32	39,718.20	24,683.88	128,739,500	128,739,500

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	7.81	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	7.81	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	7.81	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	7.81	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	7.81	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	7.81	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	7.81	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
General Office Building	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Government Office Building	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Hotel	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Mobile Home Park	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Regional Shopping Center	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801
Single Family Housing	0.554474	0.043142	0.191138	0.112530	0.018944	0.005241	0.021676	0.041026	0.002037	0.003103	0.005598	0.000292	0.000801

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Pleasanton DSP Existing Conditions (2018) - Alameda County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.0314	9.0159	5.2356	0.0563		0.7126	0.7126		0.7126	0.7126		11,251.0923	11,251.0923	0.2157	0.2063	11,317.9519
NaturalGas Unmitigated	1.0314	9.0159	5.2356	0.0563		0.7126	0.7126		0.7126	0.7126		11,251.0923	11,251.0923	0.2157	0.2063	11,317.9519

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	21319.8	0.2299	1.9648	0.8361	0.0125		0.1589	0.1589		0.1589	0.1589		2,508.2103	2,508.2103	0.0481	0.0460	2,523.1154
General Office Building	21198.1	0.2286	2.0783	1.7457	0.0125		0.1580	0.1580		0.1580	0.1580		2,493.8963	2,493.8963	0.0478	0.0457	2,508.7163
Government Office Building	5154.62	0.0556	0.5054	0.4245	3.0300e-003		0.0384	0.0384		0.0384	0.0384		606.4261	606.4261	0.0116	0.0111	610.0297
Hotel	5546.65	0.0598	0.5438	0.4568	3.2600e-003		0.0413	0.0413		0.0413	0.0413		652.5471	652.5471	0.0125	0.0120	656.4249
Mobile Home Park	1024.29	0.0111	0.0944	0.0402	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5043	120.5043	2.3100e-003	2.2100e-003	121.2204
Regional Shopping Center	2531.19	0.0273	0.2482	0.2085	1.4900e-003		0.0189	0.0189		0.0189	0.0189		297.7874	297.7874	5.7100e-003	5.4600e-003	299.5570
Single Family Housing	38859.6	0.4191	3.5812	1.5239	0.0229		0.2895	0.2895		0.2895	0.2895		4,571.7208	4,571.7208	0.0876	0.0838	4,598.8883
Total		**1.0314**	**9.0159**	**5.2356**	**0.0563**		**0.7126**	**0.7126**		**0.7126**	**0.7126**		**11,251.0923**	**11,251.0923**	**0.2156**	**0.2063**	**11,317.9519**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	21.3198	0.2299	1.9648	0.8361	0.0125		0.1589	0.1589		0.1589	0.1589		2,508.2103	2,508.2103	0.0481	0.0460	2,523.1154
General Office Building	21.1981	0.2286	2.0783	1.7457	0.0125		0.1580	0.1580		0.1580	0.1580		2,493.8963	2,493.8963	0.0478	0.0457	2,508.7163
Government Office Building	5.15462	0.0556	0.5054	0.4245	3.0300e-003		0.0384	0.0384		0.0384	0.0384		606.4261	606.4261	0.0116	0.0111	610.0297
Hotel	5.54665	0.0598	0.5438	0.4568	3.2600e-003		0.0413	0.0413		0.0413	0.0413		652.5471	652.5471	0.0125	0.0120	656.4249
Mobile Home Park	1.02429	0.0111	0.0944	0.0402	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5043	120.5043	2.3100e-003	2.2100e-003	121.2204
Regional Shopping Center	2.53119	0.0273	0.2482	0.2085	1.4900e-003		0.0189	0.0189		0.0189	0.0189		297.7874	297.7874	5.7100e-003	5.4600e-003	299.5570
Single Family Housing	38.8596	0.4191	3.5812	1.5239	0.0229		0.2895	0.2895		0.2895	0.2895		4,571.7208	4,571.7208	0.0876	0.0838	4,598.8883
Total		**1.0314**	**9.0159**	**5.2356**	**0.0563**		**0.7126**	**0.7126**		**0.7126**	**0.7126**		**11,251.0923**	**11,251.0923**	**0.2156**	**0.2063**	**11,317.9519**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	878.0595	15.0344	998.3486	1.4453		122.9298	122.9298		122.9298	122.9298	11,986.1830	6,112.5632	18,098.7462	0.3015	1.1662	18,453.8115
Unmitigated	878.0595	15.0344	998.3486	1.4453		122.9298	122.9298		122.9298	122.9298	11,986.1830	6,112.5632	18,098.7462	0.3015	1.1662	18,453.8115

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.3562					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	57.5852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	807.8476	13.8058	892.4773	1.4398		122.3522	122.3522		122.3522	122.3522	11,986.1830	5,923.2353	17,909.4183	0.1135	1.1662	18,259.7832
Landscaping	3.2703	1.2286	105.8713	5.5500e-003		0.5776	0.5776		0.5776	0.5776		189.3279	189.3279	0.1880		194.0283
Total	**878.0595**	**15.0344**	**998.3486**	**1.4453**		**122.9298**	**122.9298**		**122.9298**	**122.9298**	**11,986.1830**	**6,112.5632**	**18,098.7461**	**0.3016**	**1.1662**	**18,453.8115**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	9.3562					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	57.5852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	807.8476	13.8058	892.4773	1.4398		122.3522	122.3522		122.3522	122.3522	11,986.1830	5,923.2353	17,909.4183	0.1135	1.1662	18,259.7832
Landscaping	3.2703	1.2286	105.8713	5.5500e-003		0.5776	0.5776		0.5776	0.5776		189.3279	189.3279	0.1880		194.0283
Total	**878.0595**	**15.0344**	**998.3486**	**1.4453**		**122.9298**	**122.9298**		**122.9298**	**122.9298**	**11,986.1830**	**6,112.5632**	**18,098.7461**	**0.3016**	**1.1662**	**18,453.8115**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pleasanton DSP Buildout (2040)

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	1,050.00	Dwelling Unit	65.63	1,050,000.00	3003
Hotel	60.39	Room	2.01	87,690.64	0
General Office Building	453.21	1000sqft	10.40	453,207.00	0
Government Office Building	18.06	1000sqft	0.41	18,056.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	679.16	1000sqft	15.59	679,158.00	0
Single Family Housing	570.00	Dwelling Unit	185.06	1,026,000.00	1630

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	312.5	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity factor includes RPS benefit up to 2030.

Land Use -

Construction Phase - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Grading - No construction.

Trips and VMT - No construction.

Architectural Coating - No construction.

Vehicle Trips - Scaled trip rate to match VMT resulting from implementation of the Proposed Project.

Woodstoves - No woodstoves.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	619,056.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,857,167.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	1,419,120.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	4,257,360.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	180.00	0.00

tblConstructionPhase	PhaseEndDate	9/19/2042	6/14/2041
tblConstructionPhase	PhaseEndDate	3/9/2040	5/13/2022
tblConstructionPhase	PhaseEndDate	11/22/2019	9/30/2018
tblConstructionPhase	PhaseEndDate	5/13/2022	7/31/2020
tblConstructionPhase	PhaseEndDate	6/14/2041	3/9/2040
tblConstructionPhase	PhaseEndDate	7/31/2020	11/22/2019
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	312.5
tblTripsAndVMT	VendorTripNumber	378.00	0.00

tblTripsAndVMT	WorkerTripNumber	1,382.00	0.00
tblTripsAndVMT	WorkerTripNumber	276.00	0.00
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CC_TTP	62.00	100.00
tblVehicleTrips	CC_TTP	61.60	100.00
tblVehicleTrips	CC_TTP	64.70	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	19.40	0.00
tblVehicleTrips	CW_TTP	16.30	0.00
tblVehicleTrips	DV_TP	11.00	0.00

tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	34.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	16.00	0.00

tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	50.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	9.11
tblVehicleTrips	ST_TR	2.46	3.13
tblVehicleTrips	ST_TR	8.19	10.42
tblVehicleTrips	ST_TR	5.00	6.36
tblVehicleTrips	ST_TR	49.97	63.55
tblVehicleTrips	ST_TR	9.91	12.60
tblVehicleTrips	SU_TR	6.07	7.72
tblVehicleTrips	SU_TR	1.05	1.34
tblVehicleTrips	SU_TR	5.95	7.75
tblVehicleTrips	SU_TR	4.36	5.54
tblVehicleTrips	SU_TR	25.24	32.10
tblVehicleTrips	SU_TR	8.62	10.96
tblVehicleTrips	WD_TR	6.59	8.38
tblVehicleTrips	WD_TR	11.03	14.03
tblVehicleTrips	WD_TR	68.93	87.66
tblVehicleTrips	WD_TR	8.17	10.39

tblVehicleTrips	WD_TR	4.99	6.35
tblVehicleTrips	WD_TR	42.70	54.30
tblVehicleTrips	WD_TR	9.52	12.11
tblWoodstoves	NumberCatalytic	21.00	0.00
tblWoodstoves	NumberCatalytic	0.44	0.00
tblWoodstoves	NumberCatalytic	22.80	0.00
tblWoodstoves	NumberNoncatalytic	21.00	0.00
tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	22.80	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789
Energy	0.2203	1.9216	1.0861	0.0120		0.1522	0.1522		0.1522	0.1522	0.0000	5,812.9362	5,812.9362	0.3789	0.1097	5,855.1045
Mobile	8.9928	88.0645	112.9573	0.7581	77.6829	0.3120	77.9949	20.8683	0.2920	21.1603	0.0000	70,615.4154	70,615.4154	2.2349	0.0000	70,671.2880
Waste						0.0000	0.0000		0.0000	0.0000	479.5032	0.0000	479.5032	28.3378	0.0000	1,187.9489
Water						0.0000	0.0000		0.0000	0.0000	77.0801	260.7762	337.8564	7.9411	0.1919	593.5816
Total	**30.3506**	**90.2226**	**132.3813**	**0.7808**	**77.6829**	**1.3803**	**79.0632**	**20.8683**	**1.3602**	**22.2285**	**631.9786**	**76,746.9286**	**77,378.9073**	**38.9124**	**0.3090**	**78,443.8020**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789
Energy	0.2203	1.9216	1.0861	0.0120		0.1522	0.1522		0.1522	0.1522	0.0000	5,812.9362	5,812.9362	0.3789	0.1097	5,855.1045
Mobile	8.9928	88.0645	112.9573	0.7581	77.6829	0.3120	77.9949	20.8683	0.2920	21.1603	0.0000	70,615.4154	70,615.4154	2.2349	0.0000	70,671.2880
Waste						0.0000	0.0000		0.0000	0.0000	479.5032	0.0000	479.5032	28.3378	0.0000	1,187.9489
Water						0.0000	0.0000		0.0000	0.0000	77.0801	260.7762	337.8564	7.9411	0.1919	593.5816
Total	**30.3506**	**90.2226**	**132.3813**	**0.7808**	**77.6829**	**1.3803**	**79.0632**	**20.8683**	**1.3602**	**22.2285**	**631.9786**	**76,746.9286**	**77,378.9073**	**38.9124**	**0.3090**	**78,443.8020**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	9/30/2018	5	0	
2	Site Preparation	Site Preparation	11/23/2019	11/22/2019	5	0	
3	Grading	Grading	8/1/2020	7/31/2020	5	0	
4	Building Construction	Building Construction	5/14/2022	5/13/2022	5	0	
5	Paving	Paving	3/10/2040	3/9/2040	5	0	
6	Architectural Coating	Architectural Coating	6/15/2041	6/14/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Pleasanton DSP Buildout (2040) - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.9928	88.0645	112.9573	0.7581	77.6829	0.3120	77.9949	20.8683	0.2920	21.1603	0.0000	70,615.4154	70,615.4154	2.2349	0.0000	70,671.2880
Unmitigated	8.9928	88.0645	112.9573	0.7581	77.6829	0.3120	77.9949	20.8683	0.2920	21.1603	0.0000	70,615.4154	70,615.4154	2.2349	0.0000	70,671.2880

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	8,799.00	9,565.50	8106.00	31,553,515	31,553,515
General Office Building	6,358.49	1,418.54	607.30	17,304,151	17,304,151
Government Office Building	1,582.79	0.00	0.00	4,049,407	4,049,407
Hotel	627.48	629.30	468.05	2,166,841	2,166,841
Mobile Home Park	139.70	139.92	121.88	491,366	491,366
Regional Shopping Center	36,878.28	43,160.49	21800.97	127,588,871	127,588,871
Single Family Housing	6,902.70	7,182.00	6247.20	24,531,321	24,531,321
Total	61,288.45	62,095.74	37,351.39	207,685,472	207,685,472

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Government Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Hotel	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Mobile Home Park	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Pleasanton DSP Buildout (2040) - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,632.5171	3,632.5171	0.3371	0.0697	3,661.7283
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,632.5171	3,632.5171	0.3371	0.0697	3,661.7283
NaturalGas Mitigated	0.2203	1.9216	1.0861	0.0120		0.1522	0.1522		0.1522	0.1522	0.0000	2,180.4191	2,180.4191	0.0418	0.0400	2,193.3762
NaturalGas Unmitigated	0.2203	1.9216	1.0861	0.0120		0.1522	0.1522		0.1522	0.1522	0.0000	2,180.4191	2,180.4191	0.0418	0.0400	2,193.3762

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.07088e+007	0.0577	0.4934	0.2100	3.1500e-003		0.0399	0.0399		0.0399	0.0399	0.0000	571.4620	571.4620	0.0110	0.0105	574.8579
General Office Building	7.419e+006	0.0400	0.3637	0.3055	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.9060	395.9060	7.5900e-003	7.2600e-003	398.2587
Government Office Building	295577	1.5900e-003	0.0145	0.0122	9.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	15.7731	15.7731	3.0000e-004	2.9000e-004	15.8668
Hotel	3.88557e+006	0.0210	0.1905	0.1600	1.1400e-003		0.0145	0.0145		0.0145	0.0145	0.0000	207.3489	207.3489	3.9700e-003	3.8000e-003	208.5811
Mobile Home Park	373864	2.0200e-003	0.0172	7.3300e-003	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9508	19.9508	3.8000e-004	3.7000e-004	20.0694
Regional Shopping Center	1.6096e+006	8.6800e-003	0.0789	0.0663	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.8946	85.8946	1.6500e-003	1.5700e-003	86.4051
Single Family Housing	1.65671e+007	0.0893	0.7634	0.3249	4.8700e-003		0.0617	0.0617		0.0617	0.0617	0.0000	884.0836	884.0836	0.0169	0.0162	889.3373
Total		**0.2203**	**1.9216**	**1.0861**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**	**0.0000**	**2,180.4191**	**2,180.4191**	**0.0418**	**0.0400**	**2,193.3762**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.07088e+007	0.0577	0.4934	0.2100	3.1500e-003		0.0399	0.0399		0.0399	0.0399	0.0000	571.4620	571.4620	0.0110	0.0105	574.8579
General Office Building	7.419e+006	0.0400	0.3637	0.3055	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.9060	395.9060	7.5900e-003	7.2600e-003	398.2587
Government Office Building	295577	1.5900e-003	0.0145	0.0122	9.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	15.7731	15.7731	3.0000e-004	2.9000e-004	15.8668
Hotel	3.88557e+006	0.0210	0.1905	0.1600	1.1400e-003		0.0145	0.0145		0.0145	0.0145	0.0000	207.3489	207.3489	3.9700e-003	3.8000e-003	208.5811
Mobile Home Park	373864	2.0200e-003	0.0172	7.3300e-003	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9508	19.9508	3.8000e-004	3.7000e-004	20.0694
Regional Shopping Center	1.6096e+006	8.6800e-003	0.0789	0.0663	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.8946	85.8946	1.6500e-003	1.5700e-003	86.4051
Single Family Housing	1.65671e+007	0.0893	0.7634	0.3249	4.8700e-003		0.0617	0.0617		0.0617	0.0617	0.0000	884.0836	884.0836	0.0169	0.0162	889.3373
Total		**0.2203**	**1.9216**	**1.0861**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**	**0.0000**	**2,180.4191**	**2,180.4191**	**0.0418**	**0.0400**	**2,193.3762**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.56624e+006	647.2536	0.0601	0.0124	652.4586
General Office Building	8.08068e+006	1,145.4172	0.1063	0.0220	1,154.6282
Government Office Building	321938	45.6340	4.2300e-003	8.8000e-004	46.0010
Hotel	668203	94.7161	8.7900e-003	1.8200e-003	95.4778
Mobile Home Park	117768	16.6933	1.5500e-003	3.2000e-004	16.8276
Regional Shopping Center	7.2602e+006	1,029.1159	0.0955	0.0198	1,037.3916
Single Family Housing	4.61162e+006	653.6868	0.0607	0.0126	658.9435
Total		**3,632.5171**	**0.3371**	**0.0698**	**3,661.7283**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.56624e+006	647.2536	0.0601	0.0124	652.4586
General Office Building	8.08068e+006	1,145.4172	0.1063	0.0220	1,154.6282
Government Office Building	321938	45.6340	4.2300e-003	8.8000e-004	46.0010
Hotel	668203	94.7161	8.7900e-003	1.8200e-003	95.4778
Mobile Home Park	117768	16.6933	1.5500e-003	3.2000e-004	16.8276
Regional Shopping Center	7.2602e+006	1,029.1159	0.0955	0.0198	1,037.3916
Single Family Housing	4.61162e+006	653.6868	0.0607	0.0126	658.9435
Total		**3,632.5171**	**0.3371**	**0.0698**	**3,661.7283**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789
Unmitigated	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.0464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.6015	0.0963	6.1884	9.9900e-003		0.8484	0.8484		0.8484	0.8484	75.3953	37.8638	113.2591	7.3000e-004	7.3500e-003	115.4665
Landscaping	0.3641	0.1402	12.1495	6.4000e-004		0.0677	0.0677		0.0677	0.0677	0.0000	19.9371	19.9371	0.0190	0.0000	20.4124
Total	**21.1375**	**0.2365**	**18.3380**	**0.0106**		**0.9161**	**0.9161**		**0.9161**	**0.9161**	**75.3953**	**57.8009**	**133.1962**	**0.0197**	**7.3500e-003**	**135.8789**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.0464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.6015	0.0963	6.1884	9.9900e-003		0.8484	0.8484		0.8484	0.8484	75.3953	37.8638	113.2591	7.3000e-004	7.3500e-003	115.4665
Landscaping	0.3641	0.1402	12.1495	6.4000e-004		0.0677	0.0677		0.0677	0.0677	0.0000	19.9371	19.9371	0.0190	0.0000	20.4124
Total	**21.1375**	**0.2365**	**18.3380**	**0.0106**		**0.9161**	**0.9161**		**0.9161**	**0.9161**	**75.3953**	**57.8009**	**133.1962**	**0.0197**	**7.3500e-003**	**135.8789**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	337.8564	7.9411	0.1919	593.5816
Unmitigated	337.8564	7.9411	0.1919	593.5816

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	68.4117 / 43.1291	95.5725	2.2361	0.0541	167.5820
General Office Building	80.5507 / 49.3698	111.8303	2.6328	0.0636	196.6116
Government Office Building	3.58779 / 2.19897	4.9810	0.1173	2.8300e-003	8.7572
Hotel	1.5319 / 0.170211	1.7454	0.0500	1.2000e-003	3.3547
Mobile Home Park	1.43339 / 0.903658	2.0025	0.0469	1.1300e-003	3.5112
Regional Shopping Center	50.3071 / 30.8334	69.8424	1.6443	0.0397	122.7917
Single Family Housing	37.1378 / 23.413	51.8822	1.2139	0.0293	90.9731
Total		**337.8564**	**7.9411**	**0.1919**	**593.5816**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	68.4117 / 43.1291	95.5725	2.2361	0.0541	167.5820
General Office Building	80.5507 / 49.3698	111.8303	2.6328	0.0636	196.6116
Government Office Building	3.58779 / 2.19897	4.9810	0.1173	2.8300e-003	8.7572
Hotel	1.5319 / 0.170211	1.7454	0.0500	1.2000e-003	3.3547
Mobile Home Park	1.43339 / 0.903658	2.0025	0.0469	1.1300e-003	3.5112
Regional Shopping Center	50.3071 / 30.8334	69.8424	1.6443	0.0397	122.7917
Single Family Housing	37.1378 / 23.413	51.8822	1.2139	0.0293	90.9731
Total		**337.8564**	**7.9411**	**0.1919**	**593.5816**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	479.5032	28.3378	0.0000	1,187.9489
Unmitigated	479.5032	28.3378	0.0000	1,187.9489

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	483	98.0446	5.7943	0.0000	242.9014
General Office Building	421.49	85.5587	5.0564	0.0000	211.9680
Government Office Building	16.8	3.4103	0.2015	0.0000	8.4488
Hotel	33.06	6.7109	0.3966	0.0000	16.6259
Mobile Home Park	10.12	2.0543	0.1214	0.0000	5.0894
Regional Shopping Center	713.12	144.7569	8.5549	0.0000	358.6291
Single Family Housing	684.6	138.9676	8.2128	0.0000	344.2864
Total		**479.5032**	**28.3378**	**0.0000**	**1,187.9489**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	483	98.0446	5.7943	0.0000	242.9014
General Office Building	421.49	85.5587	5.0564	0.0000	211.9680
Government Office Building	16.8	3.4103	0.2015	0.0000	8.4488
Hotel	33.06	6.7109	0.3966	0.0000	16.6259
Mobile Home Park	10.12	2.0543	0.1214	0.0000	5.0894
Regional Shopping Center	713.12	144.7569	8.5549	0.0000	358.6291
Single Family Housing	684.6	138.9676	8.2128	0.0000	344.2864
Total		**479.5032**	**28.3378**	**0.0000**	**1,187.9489**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pleasanton DSP Buildout (2040)

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	1,050.00	Dwelling Unit	65.63	1,050,000.00	3003
Hotel	60.39	Room	2.01	87,690.64	0
General Office Building	453.21	1000sqft	10.40	453,207.00	0
Government Office Building	18.06	1000sqft	0.41	18,056.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	679.16	1000sqft	15.59	679,158.00	0
Single Family Housing	570.00	Dwelling Unit	185.06	1,026,000.00	1630

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	312.5	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity factor includes RPS benefit up to 2030.

Land Use -

Construction Phase - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Grading - No construction.

Trips and VMT - No construction.

Architectural Coating - No construction.

Vehicle Trips - Scaled trip rate to match VMT resulting from implementation of the Proposed Project.

Woodstoves - No woodstoves.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	619,056.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,857,167.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	1,419,120.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	4,257,360.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	180.00	0.00

tblConstructionPhase	PhaseEndDate	9/19/2042	6/14/2041
tblConstructionPhase	PhaseEndDate	3/9/2040	5/13/2022
tblConstructionPhase	PhaseEndDate	11/22/2019	9/30/2018
tblConstructionPhase	PhaseEndDate	5/13/2022	7/31/2020
tblConstructionPhase	PhaseEndDate	6/14/2041	3/9/2040
tblConstructionPhase	PhaseEndDate	7/31/2020	11/22/2019
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	312.5
tblTripsAndVMT	VendorTripNumber	378.00	0.00

tblTripsAndVMT	WorkerTripNumber	1,382.00	0.00
tblTripsAndVMT	WorkerTripNumber	276.00	0.00
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CC_TTP	62.00	100.00
tblVehicleTrips	CC_TTP	61.60	100.00
tblVehicleTrips	CC_TTP	64.70	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	19.40	0.00
tblVehicleTrips	CW_TTP	16.30	0.00
tblVehicleTrips	DV_TP	11.00	0.00

tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	34.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
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tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	16.00	0.00

tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	50.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	9.11
tblVehicleTrips	ST_TR	2.46	3.13
tblVehicleTrips	ST_TR	8.19	10.42
tblVehicleTrips	ST_TR	5.00	6.36
tblVehicleTrips	ST_TR	49.97	63.55
tblVehicleTrips	ST_TR	9.91	12.60
tblVehicleTrips	SU_TR	6.07	7.72
tblVehicleTrips	SU_TR	1.05	1.34
tblVehicleTrips	SU_TR	5.95	7.75
tblVehicleTrips	SU_TR	4.36	5.54
tblVehicleTrips	SU_TR	25.24	32.10
tblVehicleTrips	SU_TR	8.62	10.96
tblVehicleTrips	WD_TR	6.59	8.38
tblVehicleTrips	WD_TR	11.03	14.03
tblVehicleTrips	WD_TR	68.93	87.66
tblVehicleTrips	WD_TR	8.17	10.39

tblVehicleTrips	WD_TR	4.99	6.35
tblVehicleTrips	WD_TR	42.70	54.30
tblVehicleTrips	WD_TR	9.52	12.11
tblWoodstoves	NumberCatalytic	21.00	0.00
tblWoodstoves	NumberCatalytic	0.44	0.00
tblWoodstoves	NumberCatalytic	22.80	0.00
tblWoodstoves	NumberNoncatalytic	21.00	0.00
tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	22.80	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035
Energy	1.2072	10.5293	5.9511	0.0659		0.8341	0.8341		0.8341	0.8341		13,169.8663	13,169.8663	0.2524	0.2415	13,248.1283
Mobile	64.8477	564.3243	779.9589	5.1686	524.3698	2.0289	526.3987	140.4173	1.8985	142.3157		530,144.3750	530,144.3750	15.8101		530,539.6276
Total	**1,158.8834**	**593.6913**	**2,031.9333**	**7.0344**	**524.3698**	**155.9307**	**680.3005**	**140.4173**	**155.8003**	**296.2176**	**14,920.8408**	**551,051.7234**	**565,972.5641**	**16.4390**	**1.6954**	**566,888.7593**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035
Energy	1.2072	10.5293	5.9511	0.0659		0.8341	0.8341		0.8341	0.8341		13,169.8663	13,169.8663	0.2524	0.2415	13,248.1283
Mobile	64.8477	564.3243	779.9589	5.1686	524.3698	2.0289	526.3987	140.4173	1.8985	142.3157		530,144.3750	530,144.3750	15.8101		530,539.6276
Total	**1,158.8834**	**593.6913**	**2,031.9333**	**7.0344**	**524.3698**	**155.9307**	**680.3005**	**140.4173**	**155.8003**	**296.2176**	**14,920.8408**	**551,051.7234**	**565,972.5641**	**16.4390**	**1.6954**	**566,888.7593**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	9/30/2018	5	0	
2	Site Preparation	Site Preparation	11/23/2019	11/22/2019	5	0	
3	Grading	Grading	8/1/2020	7/31/2020	5	0	
4	Building Construction	Building Construction	5/14/2022	5/13/2022	5	0	
5	Paving	Paving	3/10/2040	3/9/2040	5	0	
6	Architectural Coating	Architectural Coating	6/15/2041	6/14/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Pleasanton DSP Buildout (2040) - Alameda County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	64.8477	564.3243	779.9589	5.1686	524.3698	2.0289	526.3987	140.4173	1.8985	142.3157		530,144.3750	530,144.3750	15.8101		530,539.6276
Unmitigated	64.8477	564.3243	779.9589	5.1686	524.3698	2.0289	526.3987	140.4173	1.8985	142.3157		530,144.3750	530,144.3750	15.8101		530,539.6276

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	8,799.00	9,565.50	8106.00	31,553,515	31,553,515
General Office Building	6,358.49	1,418.54	607.30	17,304,151	17,304,151
Government Office Building	1,582.79	0.00	0.00	4,049,407	4,049,407
Hotel	627.48	629.30	468.05	2,166,841	2,166,841
Mobile Home Park	139.70	139.92	121.88	491,366	491,366
Regional Shopping Center	36,878.28	43,160.49	21800.97	127,588,871	127,588,871
Single Family Housing	6,902.70	7,182.00	6247.20	24,531,321	24,531,321
Total	61,288.45	62,095.74	37,351.39	207,685,472	207,685,472

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Government Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Hotel	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Mobile Home Park	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Pleasanton DSP Buildout (2040) - Alameda County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.2072	10.5293	5.9511	0.0659		0.8341	0.8341		0.8341	0.8341		13,169.8663	13,169.8663	0.2524	0.2415	13,248.1283
NaturalGas Unmitigated	1.2072	10.5293	5.9511	0.0659		0.8341	0.8341		0.8341	0.8341		13,169.8663	13,169.8663	0.2524	0.2415	13,248.1283

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	29339.2	0.3164	2.7038	1.1506	0.0173		0.2186	0.2186		0.2186	0.2186		3,451.6656	3,451.6656	0.0662	0.0633	3,472.1771
General Office Building	20326	0.2192	1.9928	1.6739	0.0120		0.1515	0.1515		0.1515	0.1515		2,391.2969	2,391.2969	0.0458	0.0438	2,405.5072
Government Office Building	809.799	8.7300e-003	0.0794	0.0667	4.8000e-004		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003		95.2705	95.2705	1.8300e-003	1.7500e-003	95.8366
Hotel	10645.4	0.1148	1.0437	0.8767	6.2600e-003		0.0793	0.0793		0.0793	0.0793		1,252.4004	1,252.4004	0.0240	0.0230	1,259.8428
Mobile Home Park	1024.29	0.0111	0.0944	0.0402	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5043	120.5043	2.3100e-003	2.2100e-003	121.2204
Regional Shopping Center	4409.88	0.0476	0.4323	0.3632	2.5900e-003		0.0329	0.0329		0.0329	0.0329		518.8089	518.8089	9.9400e-003	9.5100e-003	521.8919
Single Family Housing	45389.3	0.4895	4.1829	1.7800	0.0267		0.3382	0.3382		0.3382	0.3382		5,339.9198	5,339.9198	0.1024	0.0979	5,371.6523
Total		**1.2072**	**10.5293**	**5.9512**	**0.0659**		**0.8341**	**0.8341**		**0.8341**	**0.8341**		**13,169.8663**	**13,169.8663**	**0.2524**	**0.2415**	**13,248.1283**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	29.3392	0.3164	2.7038	1.1506	0.0173		0.2186	0.2186		0.2186	0.2186		3,451.6656	3,451.6656	0.0662	0.0633	3,472.1771
General Office Building	20.326	0.2192	1.9928	1.6739	0.0120		0.1515	0.1515		0.1515	0.1515		2,391.2969	2,391.2969	0.0458	0.0438	2,405.5072
Government Office Building	0.809799	8.7300e-003	0.0794	0.0667	4.8000e-004		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003		95.2705	95.2705	1.8300e-003	1.7500e-003	95.8366
Hotel	10.6454	0.1148	1.0437	0.8767	6.2600e-003		0.0793	0.0793		0.0793	0.0793		1,252.4004	1,252.4004	0.0240	0.0230	1,259.8428
Mobile Home Park	1.02429	0.0111	0.0944	0.0402	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5043	120.5043	2.3100e-003	2.2100e-003	121.2204
Regional Shopping Center	4.40988	0.0476	0.4323	0.3632	2.5900e-003		0.0329	0.0329		0.0329	0.0329		518.8089	518.8089	9.9400e-003	9.5100e-003	521.8919
Single Family Housing	45.3893	0.4895	4.1829	1.7800	0.0267		0.3382	0.3382		0.3382	0.3382		5,339.9198	5,339.9198	0.1024	0.0979	5,371.6523
Total		**1.2072**	**10.5293**	**5.9512**	**0.0659**		**0.8341**	**0.8341**		**0.8341**	**0.8341**		**13,169.8663**	**13,169.8663**	**0.2524**	**0.2415**	**13,248.1283**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035
Unmitigated	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.6469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	71.4870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,005.6494	17.2798	1,111.0285	1.7929		152.3161	152.3161		152.3161	152.3161	14,920.8408	7,493.2941	22,414.1349	0.1436	1.4539	22,850.9942
Landscaping	4.0452	1.5579	134.9948	7.1600e-003		0.7517	0.7517		0.7517	0.7517		244.1879	244.1879	0.2329		250.0093
Total	**1,092.8284**	**18.8377**	**1,246.0233**	**1.8000**		**153.0677**	**153.0677**		**153.0677**	**153.0677**	**14,920.8408**	**7,737.4820**	**22,658.3228**	**0.3765**	**1.4539**	**23,101.0035**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.6469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	71.4870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,005.6494	17.2798	1,111.0285	1.7929		152.3161	152.3161		152.3161	152.3161	14,920.8408	7,493.2941	22,414.1349	0.1436	1.4539	22,850.9942
Landscaping	4.0452	1.5579	134.9948	7.1600e-003		0.7517	0.7517		0.7517	0.7517		244.1879	244.1879	0.2329		250.0093
Total	**1,092.8284**	**18.8377**	**1,246.0233**	**1.8000**		**153.0677**	**153.0677**		**153.0677**	**153.0677**	**14,920.8408**	**7,737.4820**	**22,658.3228**	**0.3765**	**1.4539**	**23,101.0035**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pleasanton DSP Buildout (2040) with Mitigation

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	1,050.00	Dwelling Unit	65.63	1,050,000.00	3003
Hotel	60.39	Room	2.01	87,690.64	0
General Office Building	453.21	1000sqft	10.40	453,207.00	0
Government Office Building	18.06	1000sqft	0.41	18,056.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	679.16	1000sqft	15.59	679,158.00	0
Single Family Housing	570.00	Dwelling Unit	185.06	1,026,000.00	1630

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	312.5	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity factor includes RPS benefit up to 2030.

Land Use -

Construction Phase - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Grading - No construction.

Trips and VMT - No construction.

Architectural Coating - No construction.

Vehicle Trips - Scaled trip rate to match VMT resulting from implementation of the Proposed Project.

Woodstoves - No woodstoves.

Energy Use -

Mobile Land Use Mitigation - Municipal Code requires 15% of units in new multi-family developments to be affordable housing. Proposed Plan policies in Land Use and Design and Mobility and Parking chapters improve density, diversity, walkability, pedestrian network, and traffic calming measures.

Mobile Commute Mitigation - Mobile Commute Mitigation - Existing programs include School Traffic Calming Program and Transportation Systems Management program, continued and expanded under Proposed Plan Mobility and Parking policies. Mitigation Measure GHG-1 would increase school bus ridership. Mitigation Measure GHG-2 would enable the PDA to implement and market a voluntary Trip Reduction Program for all downtown businesses and employees.

Area Mitigation - Municipal Code adopts California Green Building Code including VOC content limits.

Energy Mitigation - Climate Action Plan calls for 25% improvement of Title 24 requirements. The City has installed solar PV systems at two buildings. Program 6.2 of the General Plan Air Quality and Climate Change Element requires single and multi-family residential and commercial development to install Energy Star appliances and energy efficient systems. Mitigation Measure GHG-3 requires 15 percent reduction in building energy for new projects.

Water Mitigation - Free Indoor Device Program offers low-flow water-efficient appliances. Recycled Water Program will create recycled water distribution system to irrigate landscapes currently served with potable water, supported by Climate Action Plan. Climate Action Plan promotes water efficiency measures. Mitigation Measure GHG-3 requires installation of water efficient systems to reduce consumption.

Waste Mitigation - Climate Action Plan establishes Zero Waste goal of 90% diversion of municipal waste by 2020 and citywide waste by 2025.

Table Name	Column Name	Default Value	New Value
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tblArchitecturalCoating	ConstArea_Residential_Interior	4,257,360.00	0.00
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tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
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tblConstructionPhase	PhaseEndDate	4/16/2040	6/20/2022
tblConstructionPhase	PhaseEndDate	12/30/2019	11/5/2018
tblConstructionPhase	PhaseEndDate	6/20/2022	9/7/2020
tblConstructionPhase	PhaseEndDate	7/22/2041	4/16/2040
tblConstructionPhase	PhaseEndDate	9/7/2020	12/30/2019
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tblLandUse	LandUseSquareFeet	18,060.00	18,056.00
tblLandUse	LandUseSquareFeet	679,160.00	679,158.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblProjectCharacteristics	CO2IntensityFactor	641.35	312.5
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tblTripsAndVMT	WorkerTripNumber	1,382.00	0.00
tblTripsAndVMT	WorkerTripNumber	276.00	0.00
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tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00

tblVehicleTrips	CNW_TL	7.30	0.00
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tblVehicleTrips	HW_TTP	31.00	100.00
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tblWoodstoves	NumberNoncatalytic	21.00	0.00
tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	22.80	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789
Energy	0.2203	1.9216	1.0861	0.0120		0.1522	0.1522		0.1522	0.1522	0.0000	5,812.9362	5,812.9362	0.3789	0.1097	5,855.1045
Mobile	8.9776	87.9154	112.7659	0.7568	77.5513	0.3115	77.8628	20.8329	0.2915	21.1244	0.0000	70,495.8011	70,495.8011	2.2311	0.0000	70,551.5791
Waste						0.0000	0.0000		0.0000	0.0000	479.5032	0.0000	479.5032	28.3378	0.0000	1,187.9489
Water						0.0000	0.0000		0.0000	0.0000	77.0801	260.7762	337.8564	7.9411	0.1919	593.5816
Total	**30.3353**	**90.0734**	**132.1900**	**0.7795**	**77.5513**	**1.3797**	**78.9311**	**20.8329**	**1.3597**	**22.1927**	**631.9786**	**76,627.3144**	**77,259.2930**	**38.9087**	**0.3090**	**78,324.0931**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789
Energy	0.1728	1.5063	0.8445	9.4300e-003		0.1194	0.1194		0.1194	0.1194	0.0000	4,960.6373	4,960.6373	0.3344	0.0938	4,996.9385
Mobile	6.2309	69.4027	62.5276	0.3889	36.3352	0.1600	36.4952	9.7609	0.1495	9.9104	0.0000	36,310.0837	36,310.0837	1.4767	0.0000	36,347.0018
Waste						0.0000	0.0000		0.0000	0.0000	47.9503	0.0000	47.9503	2.8338	0.0000	118.7949
Water						0.0000	0.0000		0.0000	0.0000	65.5181	225.3811	290.8992	6.7503	0.1632	508.2956
Total	**27.5412**	**71.1454**	**81.7101**	**0.4090**	**36.3352**	**1.1955**	**37.5306**	**9.7609**	**1.1850**	**10.9459**	**188.8637**	**41,553.9029**	**41,742.7666**	**11.4149**	**0.2643**	**42,106.9097**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.21**	**21.01**	**38.19**	**47.53**	**53.15**	**13.36**	**52.45**	**53.15**	**12.85**	**50.68**	**70.12**	**45.77**	**45.97**	**70.66**	**14.46**	**46.24**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/6/2018	11/5/2018	5	0	
2	Site Preparation	Site Preparation	12/31/2019	12/30/2019	5	0	
3	Grading	Grading	9/8/2020	9/7/2020	5	0	
4	Building Construction	Building Construction	6/21/2022	6/20/2022	5	0	
5	Paving	Paving	4/17/2040	4/16/2040	5	0	
6	Architectural Coating	Architectural Coating	7/23/2041	7/22/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Pleasanton DSP Buildout (2040) with Mitigation - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Integrate Below Market Rate Housing

Improve Pedestrian Network

Provide Traffic Calming Measures

Implement Trip Reduction Program

Encourage Telecommuting and Alternative Work Schedules

Market Commute Trip Reduction Option

Employee Vanpool/Shuttle

Provide Riade Sharing Program

Implement School Bus Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.2309	69.4027	62.5276	0.3889	36.3352	0.1600	36.4952	9.7609	0.1495	9.9104	0.0000	36,310.0837	36,310.0837	1.4767	0.0000	36,347.0018
Unmitigated	8.9776	87.9154	112.7659	0.7568	77.5513	0.3115	77.8628	20.8329	0.2915	21.1244	0.0000	70,495.8011	70,495.8011	2.2311	0.0000	70,551.5791

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	8,799.00	9,565.50	8106.00	31,553,515	14,783,795
General Office Building	6,358.54	1,418.55	607.30	17,304,266	8,107,582
Government Office Building	1,583.14	0.00	0.00	4,050,304	1,897,693
Hotel	627.45	629.26	457.15	2,161,171	1,012,575
Mobile Home Park	139.70	139.92	121.88	491,366	230,220
Regional Shopping Center	36,878.39	43,160.62	21121.88	127,241,734	59,616,677
Single Family Housing	6,902.70	7,182.00	6247.20	24,531,321	11,493,680
Total	61,288.92	62,095.85	36,661.41	207,333,677	97,142,223

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Government Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Hotel	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Mobile Home Park	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,250.2759	3,250.2759	0.3016	0.0624	3,276.4133
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,632.5171	3,632.5171	0.3371	0.0697	3,661.7283
NaturalGas Mitigated	0.1728	1.5063	0.8445	9.4300e-003		0.1194	0.1194		0.1194	0.1194	0.0000	1,710.3614	1,710.3614	0.0328	0.0314	1,720.5252
NaturalGas Unmitigated	0.2203	1.9216	1.0861	0.0120		0.1522	0.1522		0.1522	0.1522	0.0000	2,180.4191	2,180.4191	0.0418	0.0400	2,193.3762

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.07088e+007	0.0577	0.4934	0.2100	3.1500e-003		0.0399	0.0399		0.0399	0.0399	0.0000	571.4620	571.4620	0.0110	0.0105	574.8579
General Office Building	7.419e+006	0.0400	0.3637	0.3055	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.9060	395.9060	7.5900e-003	7.2600e-003	398.2587
Government Office Building	295577	1.5900e-003	0.0145	0.0122	9.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	15.7731	15.7731	3.0000e-004	2.9000e-004	15.8668
Hotel	3.88557e+006	0.0210	0.1905	0.1600	1.1400e-003		0.0145	0.0145		0.0145	0.0145	0.0000	207.3489	207.3489	3.9700e-003	3.8000e-003	208.5811
Mobile Home Park	373864	2.0200e-003	0.0172	7.3300e-003	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9508	19.9508	3.8000e-004	3.7000e-004	20.0694
Regional Shopping Center	1.6096e+006	8.6800e-003	0.0789	0.0663	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.8946	85.8946	1.6500e-003	1.5700e-003	86.4051
Single Family Housing	1.65671e+007	0.0893	0.7634	0.3249	4.8700e-003		0.0617	0.0617		0.0617	0.0617	0.0000	884.0836	884.0836	0.0169	0.0162	889.3373
Total		**0.2203**	**1.9216**	**1.0861**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**	**0.0000**	**2,180.4191**	**2,180.4191**	**0.0418**	**0.0400**	**2,193.3762**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	8.85978e+006	0.0478	0.4082	0.1737	2.6100e-003		0.0330	0.0330		0.0330	0.0330	0.0000	472.7917	472.7917	9.0600e-003	8.6700e-003	475.6013
General Office Building	5.57105e+006	0.0300	0.2731	0.2294	1.6400e-003		0.0208	0.0208		0.0208	0.0208	0.0000	297.2923	297.2923	5.7000e-003	5.4500e-003	299.0590
Government Office Building	221953	1.2000e-003	0.0109	9.1400e-003	7.0000e-005		8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	11.8443	11.8443	2.3000e-004	2.2000e-004	11.9147
Hotel	3.01831e+006	0.0163	0.1480	0.1243	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	161.0686	161.0686	3.0900e-003	2.9500e-003	162.0258
Mobile Home Park	297751	1.6100e-003	0.0137	5.8400e-003	9.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	15.8891	15.8891	3.0000e-004	2.9000e-004	15.9835
Regional Shopping Center	1.2072e+006	6.5100e-003	0.0592	0.0497	3.6000e-004		4.5000e-003	4.5000e-003		4.5000e-003	4.5000e-003	0.0000	64.4210	64.4210	1.2300e-003	1.1800e-003	64.8038
Single Family Housing	1.28749e+007	0.0694	0.5933	0.2525	3.7900e-003		0.0480	0.0480		0.0480	0.0480	0.0000	687.0544	687.0544	0.0132	0.0126	691.1372
Total		**0.1728**	**1.5063**	**0.8445**	**9.4500e-003**		**0.1194**	**0.1194**		**0.1194**	**0.1194**	**0.0000**	**1,710.3614**	**1,710.3614**	**0.0328**	**0.0314**	**1,720.5252**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.56624e+006	647.2536	0.0601	0.0124	652.4586
General Office Building	8.08068e+006	1,145.4172	0.1063	0.0220	1,154.6282
Government Office Building	321938	45.6340	4.2300e-003	8.8000e-004	46.0010
Hotel	668203	94.7161	8.7900e-003	1.8200e-003	95.4778
Mobile Home Park	117768	16.6933	1.5500e-003	3.2000e-004	16.8276
Regional Shopping Center	7.2602e+006	1,029.1159	0.0955	0.0198	1,037.3916
Single Family Housing	4.61162e+006	653.6868	0.0607	0.0126	658.9435
Total		**3,632.5171**	**0.3371**	**0.0698**	**3,661.7283**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.22801e+006	599.3109	0.0556	0.0115	604.1303
General Office Building	7.12463e+006	1,009.8999	0.0937	0.0194	1,018.0211
Government Office Building	283843	40.2341	3.7300e-003	7.7000e-004	40.5576
Hotel	592344	83.9634	7.7900e-003	1.6100e-003	84.6386
Mobile Home Park	112631	15.9651	1.4800e-003	3.1000e-004	16.0935
Regional Shopping Center	6.25674e+006	886.8775	0.0823	0.0170	894.0094
Single Family Housing	4.33182e+006	614.0250	0.0570	0.0118	618.9627
Total		**3,250.2759**	**0.3016**	**0.0624**	**3,276.4133**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789
Unmitigated	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.0464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.6015	0.0963	6.1884	9.9900e-003		0.8484	0.8484		0.8484	0.8484	75.3953	37.8638	113.2591	7.3000e-004	7.3500e-003	115.4665
Landscaping	0.3641	0.1402	12.1495	6.4000e-004		0.0677	0.0677		0.0677	0.0677	0.0000	19.9371	19.9371	0.0190	0.0000	20.4124
Total	**21.1375**	**0.2365**	**18.3380**	**0.0106**		**0.9161**	**0.9161**		**0.9161**	**0.9161**	**75.3953**	**57.8009**	**133.1962**	**0.0197**	**7.3500e-003**	**135.8789**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.0464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.6015	0.0963	6.1884	9.9900e-003		0.8484	0.8484		0.8484	0.8484	75.3953	37.8638	113.2591	7.3000e-004	7.3500e-003	115.4665
Landscaping	0.3641	0.1402	12.1495	6.4000e-004		0.0677	0.0677		0.0677	0.0677	0.0000	19.9371	19.9371	0.0190	0.0000	20.4124
Total	**21.1375**	**0.2365**	**18.3380**	**0.0106**		**0.9161**	**0.9161**		**0.9161**	**0.9161**	**75.3953**	**57.8009**	**133.1962**	**0.0197**	**7.3500e-003**	**135.8789**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	290.8992	6.7503	0.1632	508.2956
Unmitigated	337.8564	7.9411	0.1919	593.5816

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	68.4117 / 43.1291	95.5725	2.2361	0.0541	167.5820
General Office Building	80.5507 / 49.3698	111.8303	2.6328	0.0636	196.6116
Government Office Building	3.58779 / 2.19897	4.9810	0.1173	2.8300e-003	8.7572
Hotel	1.5319 / 0.170211	1.7454	0.0500	1.2000e-003	3.3547
Mobile Home Park	1.43339 / 0.903658	2.0025	0.0469	1.1300e-003	3.5112
Regional Shopping Center	50.3071 / 30.8334	69.8424	1.6443	0.0397	122.7917
Single Family Housing	37.1378 / 23.413	51.8822	1.2139	0.0293	90.9731
Total		**337.8564**	**7.9411**	**0.1919**	**593.5816**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	58.15 / 38.8162	82.3065	1.9007	0.0460	143.5232
General Office Building	68.4681 / 44.4328	96.2804	2.2380	0.0541	168.3544
Government Office Building	3.04962 / 1.97907	4.2884	0.0997	2.4100e-003	7.4986
Hotel	1.30211 / 0.15319	1.4878	0.0425	1.0200e-003	2.8558
Mobile Home Park	1.21838 / 0.813292	1.7245	0.0398	9.6000e-004	3.0072
Regional Shopping Center	42.761 / 27.75	60.1309	1.3977	0.0338	105.1439
Single Family Housing	31.5671 / 21.0717	44.6807	1.0318	0.0250	77.9126
Total		**290.8992**	**6.7503**	**0.1632**	**508.2956**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	47.9503	2.8338	0.0000	118.7949
Unmitigated	479.5032	28.3378	0.0000	1,187.9489

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	483	98.0446	5.7943	0.0000	242.9014
General Office Building	421.49	85.5587	5.0564	0.0000	211.9680
Government Office Building	16.8	3.4103	0.2015	0.0000	8.4488
Hotel	33.06	6.7109	0.3966	0.0000	16.6259
Mobile Home Park	10.12	2.0543	0.1214	0.0000	5.0894
Regional Shopping Center	713.12	144.7569	8.5549	0.0000	358.6291
Single Family Housing	684.6	138.9676	8.2128	0.0000	344.2864
Total		**479.5032**	**28.3378**	**0.0000**	**1,187.9489**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	48.3	9.8045	0.5794	0.0000	24.2901
General Office Building	42.149	8.5559	0.5056	0.0000	21.1968
Government Office Building	1.68	0.3410	0.0202	0.0000	0.8449
Hotel	3.306	0.6711	0.0397	0.0000	1.6626
Mobile Home Park	1.012	0.2054	0.0121	0.0000	0.5089
Regional Shopping Center	71.312	14.4757	0.8555	0.0000	35.8629
Single Family Housing	68.46	13.8968	0.8213	0.0000	34.4286
Total		**47.9503**	**2.8338**	**0.0000**	**118.7949**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pleasanton DSP Buildout (2040) with Mitigation

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	1,050.00	Dwelling Unit	65.63	1,050,000.00	3003
Hotel	60.39	Room	2.01	87,690.64	0
General Office Building	453.21	1000sqft	10.40	453,207.00	0
Government Office Building	18.06	1000sqft	0.41	18,056.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	679.16	1000sqft	15.59	679,158.00	0
Single Family Housing	570.00	Dwelling Unit	185.06	1,026,000.00	1630

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	312.5	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity factor includes RPS benefit up to 2030.

Land Use -

Construction Phase - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Grading - No construction.

Trips and VMT - No construction.

Architectural Coating - No construction.

Vehicle Trips - Scaled trip rate to match VMT resulting from implementation of the Proposed Project.

Woodstoves - No woodstoves.

Energy Use -

Mobile Land Use Mitigation - Municipal Code requires 15% of units in new multi-family developments to be affordable housing. Proposed Plan policies in Land Use and Design and Mobility and Parking chapters improve density, diversity, walkability, pedestrian network, and traffic calming measures.

Mobile Commute Mitigation - Mobile Commute Mitigation - Existing programs include School Traffic Calming Program and Transportation Systems Management program, continued and expanded under Proposed Plan Mobility and Parking policies. Mitigation Measure GHG-1 would increase school bus ridership. Mitigation Measure GHG-2 would enable the PDA to implement and market a voluntary Trip Reduction Program for all downtown businesses and employees.

Area Mitigation - Municipal Code adopts California Green Building Code including VOC content limits.

Energy Mitigation - Climate Action Plan calls for 25% improvement of Title 24 requirements. The City has installed solar PV systems at two buildings. Program 6.2 of the General Plan Air Quality and Climate Change Element requires single and multi-family residential and commercial development to install Energy Star appliances and energy efficient systems. Mitigation Measure GHG-3 requires 15 percent reduction in building energy for new projects.

Water Mitigation - Free Indoor Device Program offers low-flow water-efficient appliances. Recycled Water Program will create recycled water distribution system to irrigate landscapes currently served with potable water, supported by Climate Action Plan. Climate Action Plan promotes water efficiency measures. Mitigation Measure GHG-3 requires installation of water efficient systems to reduce consumption.

Waste Mitigation - Climate Action Plan establishes Zero Waste goal of 90% diversion of municipal waste by 2020 and citywide waste by 2025.

Table Name	Column Name	Default Value	New Value
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tblArchitecturalCoating	ConstArea_Residential_Interior	4,257,360.00	0.00
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tblConstructionPhase	PhaseEndDate	12/30/2019	11/5/2018
tblConstructionPhase	PhaseEndDate	6/20/2022	9/7/2020
tblConstructionPhase	PhaseEndDate	7/22/2041	4/16/2040
tblConstructionPhase	PhaseEndDate	9/7/2020	12/30/2019
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblVehicleTrips	CNW_TL	7.30	0.00

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tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	22.80	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035
Energy	1.2072	10.5293	5.9511	0.0659		0.8341	0.8341		0.8341	0.8341		13,169.8663	13,169.8663	0.2524	0.2415	13,248.1283
Mobile	64.8482	564.3283	779.9644	5.1686	524.3735	2.0289	526.4024	140.4183	1.8985	142.3168		530,148.1497	530,148.1497	15.8102		530,543.4051
Total	**1,158.8838**	**593.6953**	**2,031.9388**	**7.0345**	**524.3735**	**155.9307**	**680.3043**	**140.4183**	**155.8004**	**296.2186**	**14,920.8408**	**551,055.4980**	**565,976.3388**	**16.4391**	**1.6954**	**566,892.5368**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035
Energy	0.9470	8.2538	4.6276	0.0517		0.6543	0.6543		0.6543	0.6543		10,330.6887	10,330.6887	0.1980	0.1894	10,392.0789
Mobile	46.9172	449.8897	417.3633	2.6567	245.6852	1.0411	246.7262	65.7903	0.9730	66.7633		273,174.9785	273,174.9785	10.3102		273,432.7332
Total	**1,140.6926**	**476.9812**	**1,668.0141**	**4.5083**	**245.6852**	**154.7631**	**400.4483**	**65.7903**	**154.6950**	**220.4853**	**14,920.8408**	**291,243.1492**	**306,163.9900**	**10.8847**	**1.6433**	**306,925.8156**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.57**	**19.66**	**17.91**	**35.91**	**53.15**	**0.75**	**41.14**	**53.15**	**0.71**	**25.57**	**0.00**	**47.15**	**45.91**	**33.79**	**3.07**	**45.86**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/6/2018	11/5/2018	5	0	
2	Site Preparation	Site Preparation	12/31/2019	12/30/2019	5	0	
3	Grading	Grading	9/8/2020	9/7/2020	5	0	
4	Building Construction	Building Construction	6/21/2022	6/20/2022	5	0	
5	Paving	Paving	4/17/2040	4/16/2040	5	0	
6	Architectural Coating	Architectural Coating	7/23/2041	7/22/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Pleasanton DSP Buildout (2040) with Mitigation - Alameda County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Integrate Below Market Rate Housing

Improve Pedestrian Network

Provide Traffic Calming Measures

Implement Trip Reduction Program

Encourage Telecommuting and Alternative Work Schedules

Market Commute Trip Reduction Option

Employee Vanpool/Shuttle

Provide Riade Sharing Program

Implement School Bus Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	46.9172	449.8897	417.3633	2.6567	245.6852	1.0411	246.7262	65.7903	0.9730	66.7633		273,174.9785	273,174.9785	10.3102		273,432.7332
Unmitigated	64.8482	564.3283	779.9644	5.1686	524.3735	2.0289	526.4024	140.4183	1.8985	142.3168		530,148.1497	530,148.1497	15.8102		530,543.4051

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	8,799.00	9,565.50	8106.00	31,553,515	14,783,795
General Office Building	6,358.54	1,418.55	607.30	17,304,266	8,107,582
Government Office Building	1,583.14	0.00	0.00	4,050,304	1,897,693
Hotel	627.45	629.26	457.15	2,161,171	1,012,575
Mobile Home Park	139.70	139.92	121.88	491,366	230,220
Regional Shopping Center	36,878.39	43,160.62	21121.88	127,241,734	59,616,677
Single Family Housing	6,902.70	7,182.00	6247.20	24,531,321	11,493,680
Total	61,288.92	62,095.85	36,661.41	207,333,677	97,142,223

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Government Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Hotel	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Mobile Home Park	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Kilowatt Hours of Renewable Electricity Generated

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.9470	8.2538	4.6276	0.0517		0.6543	0.6543		0.6543	0.6543		10,330.6887	10,330.6887	0.1980	0.1894	10,392.0789
NaturalGas Unmitigated	1.2072	10.5293	5.9511	0.0659		0.8341	0.8341		0.8341	0.8341		13,169.8663	13,169.8663	0.2524	0.2415	13,248.1283

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	29339.2	0.3164	2.7038	1.1506	0.0173		0.2186	0.2186		0.2186	0.2186		3,451.6656	3,451.6656	0.0662	0.0633	3,472.1771
General Office Building	20326	0.2192	1.9928	1.6739	0.0120		0.1515	0.1515		0.1515	0.1515		2,391.2969	2,391.2969	0.0458	0.0438	2,405.5072
Government Office Building	809.799	8.7300e-003	0.0794	0.0667	4.8000e-004		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003		95.2705	95.2705	1.8300e-003	1.7500e-003	95.8366
Hotel	10645.4	0.1148	1.0437	0.8767	6.2600e-003		0.0793	0.0793		0.0793	0.0793		1,252.4004	1,252.4004	0.0240	0.0230	1,259.8428
Mobile Home Park	1024.29	0.0111	0.0944	0.0402	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5043	120.5043	2.3100e-003	2.2100e-003	121.2204
Regional Shopping Center	4409.88	0.0476	0.4323	0.3632	2.5900e-003		0.0329	0.0329		0.0329	0.0329		518.8089	518.8089	9.9400e-003	9.5100e-003	521.8919
Single Family Housing	45389.3	0.4895	4.1829	1.7800	0.0267		0.3382	0.3382		0.3382	0.3382		5,339.9198	5,339.9198	0.1024	0.0979	5,371.6523
Total		**1.2072**	**10.5293**	**5.9512**	**0.0659**		**0.8341**	**0.8341**		**0.8341**	**0.8341**		**13,169.8663**	**13,169.8663**	**0.2524**	**0.2415**	**13,248.1283**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	24.2734	0.2618	2.2370	0.9519	0.0143		0.1809	0.1809		0.1809	0.1809		2,855.6912	2,855.6912	0.0547	0.0524	2,872.6611
General Office Building	15.2631	0.1646	1.4964	1.2570	8.9800e-003		0.1137	0.1137		0.1137	0.1137		1,795.6638	1,795.6638	0.0344	0.0329	1,806.3346
Government Office Building	0.608091	6.5600e-003	0.0596	0.0501	3.6000e-004		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003		71.5402	71.5402	1.3700e-003	1.3100e-003	71.9653
Hotel	8.26935	0.0892	0.8107	0.6810	4.8600e-003		0.0616	0.0616		0.0616	0.0616		972.8644	972.8644	0.0187	0.0178	978.6457
Mobile Home Park	0.815756	8.8000e-003	0.0752	0.0320	4.8000e-004		6.0800e-003	6.0800e-003		6.0800e-003	6.0800e-003		95.9713	95.9713	1.8400e-003	1.7600e-003	96.5416
Regional Shopping Center	3.30741	0.0357	0.3243	0.2724	1.9500e-003		0.0246	0.0246		0.0246	0.0246		389.1066	389.1066	7.4600e-003	7.1300e-003	391.4189
Single Family Housing	35.2737	0.3804	3.2507	1.3833	0.0208		0.2628	0.2628		0.2628	0.2628		4,149.8512	4,149.8512	0.0795	0.0761	4,174.5117
Total		**0.9470**	**8.2539**	**4.6276**	**0.0517**		**0.6543**	**0.6543**		**0.6543**	**0.6543**		**10,330.6887**	**10,330.6887**	**0.1980**	**0.1894**	**10,392.0789**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035
Unmitigated	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.6469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	71.4870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,005.6494	17.2798	1,111.0285	1.7929		152.3161	152.3161		152.3161	152.3161	14,920.8408	7,493.2941	22,414.1349	0.1436	1.4539	22,850.9942
Landscaping	4.0452	1.5579	134.9948	7.1600e-003		0.7517	0.7517		0.7517	0.7517		244.1879	244.1879	0.2329		250.0093
Total	**1,092.8284**	**18.8377**	**1,246.0233**	**1.8000**		**153.0677**	**153.0677**		**153.0677**	**153.0677**	**14,920.8408**	**7,737.4820**	**22,658.3228**	**0.3765**	**1.4539**	**23,101.0035**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.6469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	71.4870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,005.6494	17.2798	1,111.0285	1.7929		152.3161	152.3161		152.3161	152.3161	14,920.8408	7,493.2941	22,414.1349	0.1436	1.4539	22,850.9942
Landscaping	4.0452	1.5579	134.9948	7.1600e-003		0.7517	0.7517		0.7517	0.7517		244.1879	244.1879	0.2329		250.0093
Total	**1,092.8284**	**18.8377**	**1,246.0233**	**1.8000**		**153.0677**	**153.0677**		**153.0677**	**153.0677**	**14,920.8408**	**7,737.4820**	**22,658.3228**	**0.3765**	**1.4539**	**23,101.0035**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pleasanton DSP No Project 2040

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	1,006.00	Dwelling Unit	62.88	1,006,000.00	2877
Hotel	31.47	Room	1.05	45,690.08	0
General Office Building	428.54	1000sqft	9.84	428,543.00	0
Government Office Building	114.93	1000sqft	2.64	114,932.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	510.62	1000sqft	11.72	510,615.00	0
Single Family Housing	497.00	Dwelling Unit	161.36	894,600.00	1421

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	312.5	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity factor includes RPS benefit up to 2030

Land Use -

Construction Phase - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Grading - No construction.

Trips and VMT - No construction.

Architectural Coating - No construction.

Vehicle Trips - Scaled trip rate to match exising VMT from traffic data.

Woodstoves - No woodstoves.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	549,890.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,649,670.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	1,300,725.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	3,902,175.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	180.00	0.00

tblConstructionPhase	PhaseEndDate	9/19/2042	6/14/2041
tblConstructionPhase	PhaseEndDate	3/9/2040	5/13/2022
tblConstructionPhase	PhaseEndDate	11/22/2019	9/30/2018
tblConstructionPhase	PhaseEndDate	5/13/2022	7/31/2020
tblConstructionPhase	PhaseEndDate	6/14/2041	3/9/2040
tblConstructionPhase	PhaseEndDate	7/31/2020	11/22/2019
tblLandUse	LandUseSquareFeet	45,694.44	45,690.08
tblLandUse	LandUseSquareFeet	428,540.00	428,543.00
tblLandUse	LandUseSquareFeet	114,930.00	114,932.00
tblLandUse	LandUseSquareFeet	510,620.00	510,615.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	312.5
tblTripsAndVMT	VendorTripNumber	343.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,276.00	0.00
tblTripsAndVMT	WorkerTripNumber	255.00	0.00
tblVehicleTrips	CC_TL	7.30	9.83
tblVehicleTrips	CC_TL	7.30	9.83
tblVehicleTrips	CC_TL	7.30	9.83
tblVehicleTrips	CC_TL	7.30	9.83
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CC_TTP	62.00	100.00
tblVehicleTrips	CC_TTP	61.60	100.00
tblVehicleTrips	CC_TTP	64.70	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
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tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TTP	33.00	0.00

tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	19.40	0.00
tblVehicleTrips	CW_TTP	16.30	0.00
tblVehicleTrips	DV_TP	11.00	0.00
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tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
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tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
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tblVehicleTrips	HW_TL	10.80	9.83
tblVehicleTrips	HW_TL	10.80	9.83
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00

tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	16.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	50.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	9.23
tblVehicleTrips	ST_TR	2.46	3.17
tblVehicleTrips	ST_TR	8.19	10.56
tblVehicleTrips	ST_TR	5.00	6.54
tblVehicleTrips	ST_TR	49.97	64.44
tblVehicleTrips	ST_TR	9.91	12.78
tblVehicleTrips	SU_TR	6.07	7.83
tblVehicleTrips	SU_TR	1.05	1.35
tblVehicleTrips	SU_TR	5.95	7.67
tblVehicleTrips	SU_TR	4.36	5.62
tblVehicleTrips	SU_TR	25.24	32.55
tblVehicleTrips	SU_TR	8.62	11.12

tblVehicleTrips	WD_TR	6.59	8.50
tblVehicleTrips	WD_TR	11.03	14.22
tblVehicleTrips	WD_TR	68.93	88.89
tblVehicleTrips	WD_TR	8.17	10.54
tblVehicleTrips	WD_TR	4.99	6.44
tblVehicleTrips	WD_TR	42.70	55.07
tblVehicleTrips	WD_TR	9.52	12.28
tblWoodstoves	NumberCatalytic	20.12	0.00
tblWoodstoves	NumberCatalytic	0.44	0.00
tblWoodstoves	NumberCatalytic	19.88	0.00
tblWoodstoves	NumberNoncatalytic	20.12	0.00
tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	19.88	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	19.1811	0.2180	16.9091	9.6800e-003		0.8341	0.8341		0.8341	0.8341	68.5375	53.2773	121.8148	0.0183	6.6800e-003	124.2649
Energy	0.2007	1.7503	0.9913	0.0109		0.1386	0.1386		0.1386	0.1386	0.0000	5,389.1271	5,389.1271	0.3539	0.1018	5,428.2962
Mobile	8.3950	82.2257	105.4205	0.7075	72.4878	0.2912	72.7790	19.4727	0.2725	19.7452	0.0000	65,898.8476	65,898.8476	2.0862	0.0000	65,951.0030
Waste						0.0000	0.0000		0.0000	0.0000	432.0663	0.0000	432.0663	25.5344	0.0000	1,070.4259
Water						0.0000	0.0000		0.0000	0.0000	75.1825	254.4861	329.6687	7.7456	0.1872	579.0993
Total	**27.7768**	**84.1939**	**123.3210**	**0.7281**	**72.4878**	**1.2639**	**73.7517**	**19.4727**	**1.2452**	**20.7179**	**575.7863**	**71,595.7381**	**72,171.5244**	**35.7384**	**0.2957**	**73,153.0893**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	19.1811	0.2180	16.9091	9.6800e-003		0.8341	0.8341		0.8341	0.8341	68.5375	53.2773	121.8148	0.0183	6.6800e-003	124.2649
Energy	0.2007	1.7503	0.9913	0.0109		0.1386	0.1386		0.1386	0.1386	0.0000	5,389.1271	5,389.1271	0.3539	0.1018	5,428.2962
Mobile	8.3950	82.2257	105.4205	0.7075	72.4878	0.2912	72.7790	19.4727	0.2725	19.7452	0.0000	65,898.8476	65,898.8476	2.0862	0.0000	65,951.0030
Waste						0.0000	0.0000		0.0000	0.0000	432.0663	0.0000	432.0663	25.5344	0.0000	1,070.4259
Water						0.0000	0.0000		0.0000	0.0000	75.1825	254.4861	329.6687	7.7456	0.1872	579.0993
Total	**27.7768**	**84.1939**	**123.3210**	**0.7281**	**72.4878**	**1.2639**	**73.7517**	**19.4727**	**1.2452**	**20.7179**	**575.7863**	**71,595.7381**	**72,171.5244**	**35.7384**	**0.2957**	**73,153.0893**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	9/30/2018	5	0	
2	Site Preparation	Site Preparation	11/23/2019	11/22/2019	5	0	
3	Grading	Grading	8/1/2020	7/31/2020	5	0	
4	Building Construction	Building Construction	5/14/2022	5/13/2022	5	0	
5	Paving	Paving	3/10/2040	3/9/2040	5	0	
6	Architectural Coating	Architectural Coating	6/15/2041	6/14/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Pleasanton DSP No Project 2040 - Alameda County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.3950	82.2257	105.4205	0.7075	72.4878	0.2912	72.7790	19.4727	0.2725	19.7452	0.0000	65,898.8476	65,898.8476	2.0862	0.0000	65,951.0030
Unmitigated	8.3950	82.2257	105.4205	0.7075	72.4878	0.2912	72.7790	19.4727	0.2725	19.7452	0.0000	65,898.8476	65,898.8476	2.0862	0.0000	65,951.0030

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	8,551.00	9,285.38	7876.98	30,627,358	30,627,358
General Office Building	6,093.84	1,358.47	578.53	16,564,751	16,564,751
Government Office Building	10,216.13	0.00	0.00	26,110,379	26,110,379
Hotel	331.69	332.32	241.37	1,140,995	1,140,995
Mobile Home Park	141.68	143.88	123.64	498,851	498,851
Regional Shopping Center	28,119.84	32,904.35	16620.68	97,183,912	97,183,912
Single Family Housing	6,103.16	6,351.66	5526.64	21,670,168	21,670,168
Total	59,557.34	50,376.07	30,967.84	193,796,413	193,796,413

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.83	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	9.83	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	9.83	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	9.83	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	9.83	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	9.83	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	9.83	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Government Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Hotel	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Mobile Home Park	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Pleasanton DSP No Project 2040 - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,403.4263	3,403.4263	0.3158	0.0654	3,430.7953
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,403.4263	3,403.4263	0.3158	0.0654	3,430.7953
NaturalGas Mitigated	0.2007	1.7503	0.9913	0.0109		0.1386	0.1386		0.1386	0.1386	0.0000	1,985.7008	1,985.7008	0.0381	0.0364	1,997.5009
NaturalGas Unmitigated	0.2007	1.7503	0.9913	0.0109		0.1386	0.1386		0.1386	0.1386	0.0000	1,985.7008	1,985.7008	0.0381	0.0364	1,997.5009

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.026e+007	0.0553	0.4728	0.2012	3.0200e-003		0.0382	0.0382		0.0382	0.0382	0.0000	547.5150	547.5150	0.0105	0.0100	550.7686
General Office Building	7.01525e+006	0.0378	0.3439	0.2889	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.3604	374.3604	7.1800e-003	6.8600e-003	376.5850
Government Office Building	1.88144e+006	0.0102	0.0922	0.0775	5.5000e-004		7.0100e-003	7.0100e-003		7.0100e-003	7.0100e-003	0.0000	100.4006	100.4006	1.9200e-003	1.8400e-003	100.9973
Hotel	2.02453e+006	0.0109	0.0992	0.0834	6.0000e-004		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	108.0365	108.0365	2.0700e-003	1.9800e-003	108.6785
Mobile Home Park	373864	2.0200e-003	0.0172	7.3300e-003	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9508	19.9508	3.8000e-004	3.7000e-004	20.0694
Regional Shopping Center	1.21016e+006	6.5300e-003	0.0593	0.0498	3.6000e-004		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	64.5786	64.5786	1.2400e-003	1.1800e-003	64.9624
Single Family Housing	1.44453e+007	0.0779	0.6656	0.2832	4.2500e-003		0.0538	0.0538		0.0538	0.0538	0.0000	770.8589	770.8589	0.0148	0.0141	775.4397
Total		**0.2007**	**1.7503**	**0.9913**	**0.0110**		**0.1386**	**0.1386**		**0.1386**	**0.1386**	**0.0000**	**1,985.7008**	**1,985.7008**	**0.0381**	**0.0364**	**1,997.5008**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.026e+007	0.0553	0.4728	0.2012	3.0200e-003		0.0382	0.0382		0.0382	0.0382	0.0000	547.5150	547.5150	0.0105	0.0100	550.7686
General Office Building	7.01525e+006	0.0378	0.3439	0.2889	2.0600e-003		0.0261	0.0261		0.0261	0.0261	0.0000	374.3604	374.3604	7.1800e-003	6.8600e-003	376.5850
Government Office Building	1.88144e+006	0.0102	0.0922	0.0775	5.5000e-004		7.0100e-003	7.0100e-003		7.0100e-003	7.0100e-003	0.0000	100.4006	100.4006	1.9200e-003	1.8400e-003	100.9973
Hotel	2.02453e+006	0.0109	0.0992	0.0834	6.0000e-004		7.5400e-003	7.5400e-003		7.5400e-003	7.5400e-003	0.0000	108.0365	108.0365	2.0700e-003	1.9800e-003	108.6785
Mobile Home Park	373864	2.0200e-003	0.0172	7.3300e-003	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9508	19.9508	3.8000e-004	3.7000e-004	20.0694
Regional Shopping Center	1.21016e+006	6.5300e-003	0.0593	0.0498	3.6000e-004		4.5100e-003	4.5100e-003		4.5100e-003	4.5100e-003	0.0000	64.5786	64.5786	1.2400e-003	1.1800e-003	64.9624
Single Family Housing	1.44453e+007	0.0779	0.6656	0.2832	4.2500e-003		0.0538	0.0538		0.0538	0.0538	0.0000	770.8589	770.8589	0.0148	0.0141	775.4397
Total		**0.2007**	**1.7503**	**0.9913**	**0.0110**		**0.1386**	**0.1386**		**0.1386**	**0.1386**	**0.0000**	**1,985.7008**	**1,985.7008**	**0.0381**	**0.0364**	**1,997.5008**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.37489e+006	620.1306	0.0576	0.0119	625.1175
General Office Building	7.64092e+006	1,083.0824	0.1005	0.0208	1,091.7922
Government Office Building	2.04924e+006	290.4745	0.0270	5.5800e-003	292.8104
Hotel	348158	49.3506	4.5800e-003	9.5000e-004	49.7475
Mobile Home Park	117768	16.6933	1.5500e-003	3.2000e-004	16.8276
Regional Shopping Center	5.45847e+006	773.7257	0.0718	0.0149	779.9477
Single Family Housing	4.02101e+006	569.9691	0.0529	0.0109	574.5525
Total		**3,403.4263**	**0.3158**	**0.0654**	**3,430.7953**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.37489e+006	620.1306	0.0576	0.0119	625.1175
General Office Building	7.64092e+006	1,083.0824	0.1005	0.0208	1,091.7922
Government Office Building	2.04924e+006	290.4745	0.0270	5.5800e-003	292.8104
Hotel	348158	49.3506	4.5800e-003	9.5000e-004	49.7475
Mobile Home Park	117768	16.6933	1.5500e-003	3.2000e-004	16.8276
Regional Shopping Center	5.45847e+006	773.7257	0.0718	0.0149	779.9477
Single Family Housing	4.02101e+006	569.9691	0.0529	0.0109	574.5525
Total		**3,403.4263**	**0.3158**	**0.0654**	**3,430.7953**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	19.1811	0.2180	16.9091	9.6800e-003		0.8341	0.8341		0.8341	0.8341	68.5375	53.2773	121.8148	0.0183	6.6800e-003	124.2649
Unmitigated	19.1811	0.2180	16.9091	9.6800e-003		0.8341	0.8341		0.8341	0.8341	68.5375	53.2773	121.8148	0.0183	6.6800e-003	124.2649

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.9300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	11.8211					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.0920	0.0878	5.6257	9.0800e-003		0.7713	0.7713		0.7713	0.7713	68.5375	34.7615	103.2990	6.7000e-004	6.6800e-003	105.3077
Landscaping	0.3381	0.1302	11.2835	6.0000e-004		0.0628	0.0628		0.0628	0.0628	0.0000	18.5158	18.5158	0.0177	0.0000	18.9572
Total	**19.1811**	**0.2180**	**16.9091**	**9.6800e-003**		**0.8341**	**0.8341**		**0.8341**	**0.8341**	**68.5375**	**53.2773**	**121.8148**	**0.0183**	**6.6800e-003**	**124.2649**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.9300					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	11.8211					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.0920	0.0878	5.6257	9.0800e-003		0.7713	0.7713		0.7713	0.7713	68.5375	34.7615	103.2990	6.7000e-004	6.6800e-003	105.3077
Landscaping	0.3381	0.1302	11.2835	6.0000e-004		0.0628	0.0628		0.0628	0.0628	0.0000	18.5158	18.5158	0.0177	0.0000	18.9572
Total	**19.1811**	**0.2180**	**16.9091**	**9.6800e-003**		**0.8341**	**0.8341**		**0.8341**	**0.8341**	**68.5375**	**53.2773**	**121.8148**	**0.0183**	**6.6800e-003**	**124.2649**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	329.6687	7.7456	0.1872	579.0993
Unmitigated	329.6687	7.7456	0.1872	579.0993

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	65.5449 / 41.3218	91.5676	2.1424	0.0518	160.5596
General Office Building	76.166 / 46.6824	105.7429	2.4894	0.0602	185.9092
Government Office Building	22.832 / 13.9938	31.6981	0.7463	0.0180	55.7292
Hotel	0.798292 / 0.0886991	0.9096	0.0261	6.3000e-004	1.7482
Mobile Home Park	1.43339 / 0.903658	2.0025	0.0469	1.1300e-003	3.5112
Regional Shopping Center	37.8229 / 23.1818	52.5104	1.2362	0.0299	92.3198
Single Family Housing	32.3816 / 20.4145	45.2377	1.0584	0.0256	79.3222
Total		**329.6687**	**7.7456**	**0.1872**	**579.0993**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	65.5449 / 41.3218	91.5676	2.1424	0.0518	160.5596
General Office Building	76.166 / 46.6824	105.7429	2.4894	0.0602	185.9092
Government Office Building	22.832 / 13.9938	31.6981	0.7463	0.0180	55.7292
Hotel	0.798292 / 0.0886991	0.9096	0.0261	6.3000e-004	1.7482
Mobile Home Park	1.43339 / 0.903658	2.0025	0.0469	1.1300e-003	3.5112
Regional Shopping Center	37.8229 / 23.1818	52.5104	1.2362	0.0299	92.3198
Single Family Housing	32.3816 / 20.4145	45.2377	1.0584	0.0256	79.3222
Total		**329.6687**	**7.7456**	**0.1872**	**579.0993**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	432.0663	25.5344	0.0000	1,070.4259
Unmitigated	432.0663	25.5344	0.0000	1,070.4259

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	462.76	93.9361	5.5515	0.0000	232.7227
General Office Building	398.54	80.9000	4.7811	0.0000	200.4264
Government Office Building	106.88	21.6957	1.2822	0.0000	53.7501
Hotel	17.23	3.4975	0.2067	0.0000	8.6650
Mobile Home Park	10.12	2.0543	0.1214	0.0000	5.0894
Regional Shopping Center	536.15	108.8336	6.4319	0.0000	269.6307
Single Family Housing	596.82	121.1491	7.1597	0.0000	300.1417
Total		**432.0663**	**25.5344**	**0.0000**	**1,070.4259**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	462.76	93.9361	5.5515	0.0000	232.7227
General Office Building	398.54	80.9000	4.7811	0.0000	200.4264
Government Office Building	106.88	21.6957	1.2822	0.0000	53.7501
Hotel	17.23	3.4975	0.2067	0.0000	8.6650
Mobile Home Park	10.12	2.0543	0.1214	0.0000	5.0894
Regional Shopping Center	536.15	108.8336	6.4319	0.0000	269.6307
Single Family Housing	596.82	121.1491	7.1597	0.0000	300.1417
Total		**432.0663**	**25.5344**	**0.0000**	**1,070.4259**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pleasanton DSP No Project 2040

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	1,006.00	Dwelling Unit	62.88	1,006,000.00	2877
Hotel	31.47	Room	1.05	45,690.08	0
General Office Building	428.54	1000sqft	9.84	428,543.00	0
Government Office Building	114.93	1000sqft	2.64	114,932.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	510.62	1000sqft	11.72	510,615.00	0
Single Family Housing	497.00	Dwelling Unit	161.36	894,600.00	1421

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	312.5	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity factor includes RPS benefit up to 2030

Land Use -

Construction Phase - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Grading - No construction.

Trips and VMT - No construction.

Architectural Coating - No construction.

Vehicle Trips - Scaled trip rate to match exising VMT from traffic data.

Woodstoves - No woodstoves.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	549,890.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,649,670.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	1,300,725.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	3,902,175.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	180.00	0.00

tblConstructionPhase	PhaseEndDate	9/19/2042	6/14/2041
tblConstructionPhase	PhaseEndDate	3/9/2040	5/13/2022
tblConstructionPhase	PhaseEndDate	11/22/2019	9/30/2018
tblConstructionPhase	PhaseEndDate	5/13/2022	7/31/2020
tblConstructionPhase	PhaseEndDate	6/14/2041	3/9/2040
tblConstructionPhase	PhaseEndDate	7/31/2020	11/22/2019
tblLandUse	LandUseSquareFeet	45,694.44	45,690.08
tblLandUse	LandUseSquareFeet	428,540.00	428,543.00
tblLandUse	LandUseSquareFeet	114,930.00	114,932.00
tblLandUse	LandUseSquareFeet	510,620.00	510,615.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	312.5
tblTripsAndVMT	VendorTripNumber	343.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,276.00	0.00
tblTripsAndVMT	WorkerTripNumber	255.00	0.00
tblVehicleTrips	CC_TL	7.30	9.83
tblVehicleTrips	CC_TL	7.30	9.83
tblVehicleTrips	CC_TL	7.30	9.83
tblVehicleTrips	CC_TL	7.30	9.83
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CC_TTP	62.00	100.00
tblVehicleTrips	CC_TTP	61.60	100.00
tblVehicleTrips	CC_TTP	64.70	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TTP	33.00	0.00

tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	19.40	0.00
tblVehicleTrips	CW_TTP	16.30	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	34.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HW_TL	10.80	9.83
tblVehicleTrips	HW_TL	10.80	9.83
tblVehicleTrips	HW_TL	10.80	9.83
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00

tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	16.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	50.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	9.23
tblVehicleTrips	ST_TR	2.46	3.17
tblVehicleTrips	ST_TR	8.19	10.56
tblVehicleTrips	ST_TR	5.00	6.54
tblVehicleTrips	ST_TR	49.97	64.44
tblVehicleTrips	ST_TR	9.91	12.78
tblVehicleTrips	SU_TR	6.07	7.83
tblVehicleTrips	SU_TR	1.05	1.35
tblVehicleTrips	SU_TR	5.95	7.67
tblVehicleTrips	SU_TR	4.36	5.62
tblVehicleTrips	SU_TR	25.24	32.55
tblVehicleTrips	SU_TR	8.62	11.12

tblVehicleTrips	WD_TR	6.59	8.50
tblVehicleTrips	WD_TR	11.03	14.22
tblVehicleTrips	WD_TR	68.93	88.89
tblVehicleTrips	WD_TR	8.17	10.54
tblVehicleTrips	WD_TR	4.99	6.44
tblVehicleTrips	WD_TR	42.70	55.07
tblVehicleTrips	WD_TR	9.52	12.28
tblWoodstoves	NumberCatalytic	20.12	0.00
tblWoodstoves	NumberCatalytic	0.44	0.00
tblWoodstoves	NumberCatalytic	19.88	0.00
tblWoodstoves	NumberNoncatalytic	20.12	0.00
tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	19.88	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	993.2885	17.2079	1,135.3659	1.6368		139.1641	139.1641		139.1641	139.1641	13,563.6707	7,106.1328	20,669.8034	0.3481	1.3229	21,072.7348
Energy	1.0994	9.5906	5.4317	0.0600		0.7596	0.7596		0.7596	0.7596		11,993.7560	11,993.7560	0.2299	0.2199	12,065.0289
Mobile	61.7050	537.0511	741.8921	4.9161	498.7138	1.9298	500.6436	133.5470	1.8058	135.3528		504,250.9681	504,250.9681	15.0418		504,627.0141
Total	**1,056.0929**	**563.8496**	**1,882.6897**	**6.6129**	**498.7138**	**141.8535**	**640.5673**	**133.5470**	**141.7295**	**275.2765**	**13,563.6707**	**523,350.8569**	**536,914.5276**	**15.6198**	**1.5428**	**537,764.7779**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	993.2885	17.2079	1,135.3659	1.6368		139.1641	139.1641		139.1641	139.1641	13,563.6707	7,106.1328	20,669.8034	0.3481	1.3229	21,072.7348
Energy	1.0994	9.5906	5.4317	0.0600		0.7596	0.7596		0.7596	0.7596		11,993.7560	11,993.7560	0.2299	0.2199	12,065.0289
Mobile	61.7050	537.0511	741.8921	4.9161	498.7138	1.9298	500.6436	133.5470	1.8058	135.3528		504,250.9681	504,250.9681	15.0418		504,627.0141
Total	**1,056.0929**	**563.8496**	**1,882.6897**	**6.6129**	**498.7138**	**141.8535**	**640.5673**	**133.5470**	**141.7295**	**275.2765**	**13,563.6707**	**523,350.8569**	**536,914.5276**	**15.6198**	**1.5428**	**537,764.7779**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2018	9/30/2018	5	0	
2	Site Preparation	Site Preparation	11/23/2019	11/22/2019	5	0	
3	Grading	Grading	8/1/2020	7/31/2020	5	0	
4	Building Construction	Building Construction	5/14/2022	5/13/2022	5	0	
5	Paving	Paving	3/10/2040	3/9/2040	5	0	
6	Architectural Coating	Architectural Coating	6/15/2041	6/14/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Pleasanton DSP No Project 2040 - Alameda County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	61.7050	537.0511	741.8921	4.9161	498.7138	1.9298	500.6436	133.5470	1.8058	135.3528		504,250.9681	504,250.9681	15.0418		504,627.0141
Unmitigated	61.7050	537.0511	741.8921	4.9161	498.7138	1.9298	500.6436	133.5470	1.8058	135.3528		504,250.9681	504,250.9681	15.0418		504,627.0141

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	8,551.00	9,285.38	7876.98	30,627,358	30,627,358
General Office Building	6,093.84	1,358.47	578.53	16,564,751	16,564,751
Government Office Building	10,216.13	0.00	0.00	26,110,379	26,110,379
Hotel	331.69	332.32	241.37	1,140,995	1,140,995
Mobile Home Park	141.68	143.88	123.64	498,851	498,851
Regional Shopping Center	28,119.84	32,904.35	16620.68	97,183,912	97,183,912
Single Family Housing	6,103.16	6,351.66	5526.64	21,670,168	21,670,168
Total	59,557.34	50,376.07	30,967.84	193,796,413	193,796,413

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.83	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	9.83	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	9.83	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	9.83	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	9.83	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	9.83	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	9.83	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Government Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Hotel	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Mobile Home Park	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Pleasanton DSP No Project 2040 - Alameda County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.0994	9.5906	5.4317	0.0600		0.7596	0.7596		0.7596	0.7596		11,993.7560	11,993.7560	0.2299	0.2199	12,065.0289
NaturalGas Unmitigated	1.0994	9.5906	5.4317	0.0600		0.7596	0.7596		0.7596	0.7596		11,993.7560	11,993.7560	0.2299	0.2199	12,065.0289

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	28109.7	0.3031	2.5905	1.1023	0.0165		0.2094	0.2094		0.2094	0.2094		3,307.0244	3,307.0244	0.0634	0.0606	3,326.6764
General Office Building	19219.9	0.2073	1.8843	1.5828	0.0113		0.1432	0.1432		0.1432	0.1432		2,261.1600	2,261.1600	0.0433	0.0415	2,274.5970
Government Office Building	5154.62	0.0556	0.5054	0.4245	3.0300e-003		0.0384	0.0384		0.0384	0.0384		606.4261	606.4261	0.0116	0.0111	610.0297
Hotel	5546.65	0.0598	0.5438	0.4568	3.2600e-003		0.0413	0.0413		0.0413	0.0413		652.5471	652.5471	0.0125	0.0120	656.4249
Mobile Home Park	1024.29	0.0111	0.0944	0.0402	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5043	120.5043	2.3100e-003	2.2100e-003	121.2204
Regional Shopping Center	3315.5	0.0358	0.3251	0.2730	1.9500e-003		0.0247	0.0247		0.0247	0.0247		390.0588	390.0588	7.4800e-003	7.1500e-003	392.3768
Single Family Housing	39576.3	0.4268	3.6472	1.5520	0.0233		0.2949	0.2949		0.2949	0.2949		4,656.0354	4,656.0354	0.0892	0.0854	4,683.7039
Total		**1.0994**	**9.5906**	**5.4317**	**0.0600**		**0.7596**	**0.7596**		**0.7596**	**0.7596**		**11,993.7560**	**11,993.7560**	**0.2299**	**0.2199**	**12,065.0289**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	28.1097	0.3031	2.5905	1.1023	0.0165		0.2094	0.2094		0.2094	0.2094		3,307.0244	3,307.0244	0.0634	0.0606	3,326.6764
General Office Building	19.2199	0.2073	1.8843	1.5828	0.0113		0.1432	0.1432		0.1432	0.1432		2,261.1600	2,261.1600	0.0433	0.0415	2,274.5970
Government Office Building	5.15462	0.0556	0.5054	0.4245	3.0300e-003		0.0384	0.0384		0.0384	0.0384		606.4261	606.4261	0.0116	0.0111	610.0297
Hotel	5.54665	0.0598	0.5438	0.4568	3.2600e-003		0.0413	0.0413		0.0413	0.0413		652.5471	652.5471	0.0125	0.0120	656.4249
Mobile Home Park	1.02429	0.0111	0.0944	0.0402	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5043	120.5043	2.3100e-003	2.2100e-003	121.2204
Regional Shopping Center	3.3155	0.0358	0.3251	0.2730	1.9500e-003		0.0247	0.0247		0.0247	0.0247		390.0588	390.0588	7.4800e-003	7.1500e-003	392.3768
Single Family Housing	39.5763	0.4268	3.6472	1.5520	0.0233		0.2949	0.2949		0.2949	0.2949		4,656.0354	4,656.0354	0.0892	0.0854	4,683.7039
Total		**1.0994**	**9.5906**	**5.4317**	**0.0600**		**0.7596**	**0.7596**		**0.7596**	**0.7596**		**11,993.7560**	**11,993.7560**	**0.2299**	**0.2199**	**12,065.0289**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	993.2885	17.2079	1,135.3659	1.6368		139.1641	139.1641		139.1641	139.1641	13,563.6707	7,106.1328	20,669.8034	0.3481	1.3229	21,072.7348
Unmitigated	993.2885	17.2079	1,135.3659	1.6368		139.1641	139.1641		139.1641	139.1641	13,563.6707	7,106.1328	20,669.8034	0.3481	1.3229	21,072.7348

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	10.5751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.7731					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	914.1837	15.7611	1,009.9941	1.6301		138.4660	138.4660		138.4660	138.4660	13,563.6707	6,879.3529	20,443.0236	0.1319	1.3229	20,840.5489
Landscaping	3.7566	1.4468	125.3719	6.6500e-003		0.6981	0.6981		0.6981	0.6981		226.7798	226.7798	0.2162		232.1859
Total	**993.2885**	**17.2079**	**1,135.3659**	**1.6368**		**139.1641**	**139.1641**		**139.1641**	**139.1641**	**13,563.6707**	**7,106.1328**	**20,669.8034**	**0.3481**	**1.3229**	**21,072.7348**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	10.5751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.7731					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	914.1837	15.7611	1,009.9941	1.6301		138.4660	138.4660		138.4660	138.4660	13,563.6707	6,879.3529	20,443.0236	0.1319	1.3229	20,840.5489
Landscaping	3.7566	1.4468	125.3719	6.6500e-003		0.6981	0.6981		0.6981	0.6981		226.7798	226.7798	0.2162		232.1859
Total	**993.2885**	**17.2079**	**1,135.3659**	**1.6368**		**139.1641**	**139.1641**		**139.1641**	**139.1641**	**13,563.6707**	**7,106.1328**	**20,669.8034**	**0.3481**	**1.3229**	**21,072.7348**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pleasanton DSP Buildout (2040) with Plan Policies and State/Local Actions

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	1,050.00	Dwelling Unit	65.63	1,050,000.00	3003
Hotel	60.39	Room	2.01	87,690.64	0
General Office Building	453.21	1000sqft	10.40	453,207.00	0
Government Office Building	18.06	1000sqft	0.41	18,056.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	679.16	1000sqft	15.59	679,158.00	0
Single Family Housing	570.00	Dwelling Unit	185.06	1,026,000.00	1630

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	312.5	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity factor includes RPS benefit up to 2030.

Land Use -

Construction Phase - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Grading - No construction.

Trips and VMT - No construction.

Architectural Coating - No construction.

Vehicle Trips - Scaled trip rate to match VMT resulting from implementation of the Proposed Project.

Woodstoves - No woodstoves.

Energy Use -

Mobile Land Use Mitigation - Municipal Code requires 15% of units in new multi-family developments to be affordable housing. Proposed Plan policies in Land Use and Design and Mobility and Parking chapters improve density, diversity, walkability, pedestrian network, and traffic calming measures.

Mobile Commute Mitigation - Mobile Commute Mitigation - Existing programs include School Traffic Calming Program and Transportation Systems Management program, continued and expanded under Proposed Plan Mobility and Parking policies.

Area Mitigation - Municipal Code adopts California Green Building Code including VOC content limits.

Energy Mitigation - Climate Action Plan calls for 25% improvement of Title 24 requirements. The City has installed solar photovoltaic systems at two public buildings in the planning area. Program 6.2 of the General Plan Air Quality and Climate Change Element requires single and multi-family residential and commercial development to install Energy Star appliances and energy efficient systems, as promoted by the Climate Action Plan.

Water Mitigation - Free Indoor Device Program offers low-flow water-efficient appliances. Recycled Water Program will create recycled water distribution system to irrigate landscapes currently served with potable water, supported by Climate Action Plan. Climate Action Plan promotes water efficiency measures.

Waste Mitigation - Climate Action Plan establishes Zero Waste goal of 90% diversion of municipal waste by 2020 and citywide waste by 2025.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	619,056.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,857,167.00	0.00

tblArchitecturalCoating	ConstArea_Residential_Exterior	1,419,120.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	4,257,360.00	0.00
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	180.00	0.00
tblConstructionPhase	PhaseEndDate	10/27/2042	7/22/2041
tblConstructionPhase	PhaseEndDate	4/16/2040	6/20/2022
tblConstructionPhase	PhaseEndDate	12/30/2019	11/5/2018
tblConstructionPhase	PhaseEndDate	6/20/2022	9/7/2020
tblConstructionPhase	PhaseEndDate	7/22/2041	4/16/2040
tblConstructionPhase	PhaseEndDate	9/7/2020	12/30/2019
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	312.5
tblTripsAndVMT	VendorTripNumber	378.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,382.00	0.00
tblTripsAndVMT	WorkerTripNumber	276.00	0.00
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CC_TTP	62.00	100.00
tblVehicleTrips	CC_TTP	61.60	100.00
tblVehicleTrips	CC_TTP	64.70	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00

tblVehicleTrips	CW_TL	9.50	0.00
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tblVehicleTrips	CW_TL	9.50	0.00
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tblVehicleTrips	CW_TTP	16.30	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	34.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
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tblVehicleTrips	HO_TTP	54.00	0.00
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tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00

tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
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tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	50.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
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tblVehicleTrips	ST_TR	8.19	10.42
tblVehicleTrips	ST_TR	5.00	6.36
tblVehicleTrips	ST_TR	49.97	63.55
tblVehicleTrips	ST_TR	9.91	12.60
tblVehicleTrips	SU_TR	6.07	7.72

tblVehicleTrips	SU_TR	1.05	1.34
tblVehicleTrips	SU_TR	5.95	7.57
tblVehicleTrips	SU_TR	4.36	5.54
tblVehicleTrips	SU_TR	25.24	31.10
tblVehicleTrips	SU_TR	8.62	10.96
tblVehicleTrips	WD_TR	6.59	8.38
tblVehicleTrips	WD_TR	11.03	14.03
tblVehicleTrips	WD_TR	68.93	87.66
tblVehicleTrips	WD_TR	8.17	10.39
tblVehicleTrips	WD_TR	4.99	6.35
tblVehicleTrips	WD_TR	42.70	54.30
tblVehicleTrips	WD_TR	9.52	12.11
tblWoodstoves	NumberCatalytic	21.00	0.00
tblWoodstoves	NumberCatalytic	0.44	0.00
tblWoodstoves	NumberCatalytic	22.80	0.00
tblWoodstoves	NumberNoncatalytic	21.00	0.00
tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	22.80	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789
Energy	0.2203	1.9216	1.0861	0.0120		0.1522	0.1522		0.1522	0.1522	0.0000	5,812.9362	5,812.9362	0.3789	0.1097	5,855.1045
Mobile	8.9775	87.9148	112.7652	0.7568	77.5508	0.3115	77.8623	20.8328	0.2915	21.1243	0.0000	70,495.3663	70,495.3663	2.2311	0.0000	70,551.1439
Waste						0.0000	0.0000		0.0000	0.0000	479.5032	0.0000	479.5032	28.3378	0.0000	1,187.9489
Water						0.0000	0.0000		0.0000	0.0000	77.0801	260.7762	337.8564	7.9411	0.1919	593.5816
Total	**30.3353**	**90.0729**	**132.1893**	**0.7795**	**77.5508**	**1.3797**	**78.9306**	**20.8328**	**1.3597**	**22.1926**	**631.9786**	**76,626.8795**	**77,258.8582**	**38.9086**	**0.3090**	**78,323.6579**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789
Energy	0.1728	1.5063	0.8445	9.4300e-003		0.1194	0.1194		0.1194	0.1194	0.0000	5,117.7903	5,117.7903	0.3490	0.0968	5,155.3553
Mobile	6.8378	73.4932	73.6289	0.4702	45.4429	0.1935	45.6364	12.2075	0.1809	12.3884	0.0000	43,864.2380	43,864.2380	1.6434	0.0000	43,905.3236
Waste						0.0000	0.0000		0.0000	0.0000	47.9503	0.0000	47.9503	2.8338	0.0000	118.7949
Water						0.0000	0.0000		0.0000	0.0000	61.6641	218.9663	280.6304	6.3538	0.1538	485.2937
Total	**28.1481**	**75.2360**	**92.8114**	**0.4903**	**45.4429**	**1.2289**	**46.6719**	**12.2075**	**1.2164**	**13.4239**	**185.0097**	**49,258.7954**	**49,443.8051**	**11.1997**	**0.2579**	**49,800.6464**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**7.21**	**16.47**	**29.79**	**37.10**	**41.40**	**10.93**	**40.87**	**41.40**	**10.54**	**39.51**	**70.73**	**35.72**	**36.00**	**71.22**	**16.55**	**36.42**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/6/2018	11/5/2018	5	0	
2	Site Preparation	Site Preparation	12/31/2019	12/30/2019	5	0	
3	Grading	Grading	9/8/2020	9/7/2020	5	0	
4	Building Construction	Building Construction	6/21/2022	6/20/2022	5	0	
5	Paving	Paving	4/17/2040	4/16/2040	5	0	
6	Architectural Coating	Architectural Coating	7/23/2041	7/22/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Integrate Below Market Rate Housing

Improve Pedestrian Network

Provide Traffic Calming Measures

Implement Trip Reduction Program

Implement School Bus Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.8378	73.4932	73.6289	0.4702	45.4429	0.1935	45.6364	12.2075	0.1809	12.3884	0.0000	43,864.2380	43,864.2380	1.6434	0.0000	43,905.3236
Unmitigated	8.9775	87.9148	112.7652	0.7568	77.5508	0.3115	77.8623	20.8328	0.2915	21.1243	0.0000	70,495.3663	70,495.3663	2.2311	0.0000	70,551.1439

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	8,799.00	9,565.50	8106.00	31,553,515	18,489,600
General Office Building	6,358.49	1,418.54	607.30	17,304,151	10,139,816
Government Office Building	1,582.79	0.00	0.00	4,049,407	2,372,855
Hotel	627.48	629.30	457.18	2,161,278	1,266,457
Mobile Home Park	139.70	139.92	121.88	491,366	287,929
Regional Shopping Center	36,878.28	43,160.49	21121.81	127,241,360	74,560,372
Single Family Housing	6,902.70	7,182.00	6247.20	24,531,321	14,374,763
Total	61,288.45	62,095.74	36,661.37	207,332,398	121,491,791

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Government Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Hotel	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Mobile Home Park	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

Pleasanton DSP Buildout (2040) with Plan Policies and State/Local Actions - Alameda County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,407.4289	3,407.4289	0.3162	0.0654	3,434.8301
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	3,632.5171	3,632.5171	0.3371	0.0697	3,661.7283
NaturalGas Mitigated	0.1728	1.5063	0.8445	9.4300e-003		0.1194	0.1194		0.1194	0.1194	0.0000	1,710.3614	1,710.3614	0.0328	0.0314	1,720.5252
NaturalGas Unmitigated	0.2203	1.9216	1.0861	0.0120		0.1522	0.1522		0.1522	0.1522	0.0000	2,180.4191	2,180.4191	0.0418	0.0400	2,193.3762

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.07088e+007	0.0577	0.4934	0.2100	3.1500e-003		0.0399	0.0399		0.0399	0.0399	0.0000	571.4620	571.4620	0.0110	0.0105	574.8579
General Office Building	7.419e+006	0.0400	0.3637	0.3055	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.9060	395.9060	7.5900e-003	7.2600e-003	398.2587
Government Office Building	295577	1.5900e-003	0.0145	0.0122	9.0000e-005		1.1000e-003	1.1000e-003		1.1000e-003	1.1000e-003	0.0000	15.7731	15.7731	3.0000e-004	2.9000e-004	15.8668
Hotel	3.88557e+006	0.0210	0.1905	0.1600	1.1400e-003		0.0145	0.0145		0.0145	0.0145	0.0000	207.3489	207.3489	3.9700e-003	3.8000e-003	208.5811
Mobile Home Park	373864	2.0200e-003	0.0172	7.3300e-003	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9508	19.9508	3.8000e-004	3.7000e-004	20.0694
Regional Shopping Center	1.6096e+006	8.6800e-003	0.0789	0.0663	4.7000e-004		6.0000e-003	6.0000e-003		6.0000e-003	6.0000e-003	0.0000	85.8946	85.8946	1.6500e-003	1.5700e-003	86.4051
Single Family Housing	1.65671e+007	0.0893	0.7634	0.3249	4.8700e-003		0.0617	0.0617		0.0617	0.0617	0.0000	884.0836	884.0836	0.0169	0.0162	889.3373
Total		**0.2203**	**1.9216**	**1.0861**	**0.0120**		**0.1522**	**0.1522**		**0.1522**	**0.1522**	**0.0000**	**2,180.4191**	**2,180.4191**	**0.0418**	**0.0400**	**2,193.3762**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	8.85978e+006	0.0478	0.4082	0.1737	2.6100e-003		0.0330	0.0330		0.0330	0.0330	0.0000	472.7917	472.7917	9.0600e-003	8.6700e-003	475.6013
General Office Building	5.57105e+006	0.0300	0.2731	0.2294	1.6400e-003		0.0208	0.0208		0.0208	0.0208	0.0000	297.2923	297.2923	5.7000e-003	5.4500e-003	299.0590
Government Office Building	221953	1.2000e-003	0.0109	9.1400e-003	7.0000e-005		8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	11.8443	11.8443	2.3000e-004	2.2000e-004	11.9147
Hotel	3.01831e+006	0.0163	0.1480	0.1243	8.9000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	161.0686	161.0686	3.0900e-003	2.9500e-003	162.0258
Mobile Home Park	297751	1.6100e-003	0.0137	5.8400e-003	9.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	15.8891	15.8891	3.0000e-004	2.9000e-004	15.9835
Regional Shopping Center	1.2072e+006	6.5100e-003	0.0592	0.0497	3.6000e-004		4.5000e-003	4.5000e-003		4.5000e-003	4.5000e-003	0.0000	64.4210	64.4210	1.2300e-003	1.1800e-003	64.8038
Single Family Housing	1.28749e+007	0.0694	0.5933	0.2525	3.7900e-003		0.0480	0.0480		0.0480	0.0480	0.0000	687.0544	687.0544	0.0132	0.0126	691.1372
Total		**0.1728**	**1.5063**	**0.8445**	**9.4500e-003**		**0.1194**	**0.1194**		**0.1194**	**0.1194**	**0.0000**	**1,710.3614**	**1,710.3614**	**0.0328**	**0.0314**	**1,720.5252**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.56624e+006	647.2536	0.0601	0.0124	652.4586
General Office Building	8.08068e+006	1,145.4172	0.1063	0.0220	1,154.6282
Government Office Building	321938	45.6340	4.2300e-003	8.8000e-004	46.0010
Hotel	668203	94.7161	8.7900e-003	1.8200e-003	95.4778
Mobile Home Park	117768	16.6933	1.5500e-003	3.2000e-004	16.8276
Regional Shopping Center	7.2602e+006	1,029.1159	0.0955	0.0198	1,037.3916
Single Family Housing	4.61162e+006	653.6868	0.0607	0.0126	658.9435
Total		**3,632.5171**	**0.3371**	**0.0698**	**3,661.7283**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	4.35565e+006	617.4033	0.0573	0.0119	622.3682
General Office Building	7.38841e+006	1,047.2891	0.0972	0.0201	1,055.7110
Government Office Building	294358	41.7245	3.8700e-003	8.0000e-004	42.0601
Hotel	623261	88.3458	8.2000e-003	1.7000e-003	89.0562
Mobile Home Park	116064	16.4519	1.5300e-003	3.2000e-004	16.5841
Regional Shopping Center	6.79158e+006	962.6903	0.0893	0.0185	970.4318
Single Family Housing	4.46938e+006	633.5241	0.0588	0.0122	638.6186
Total		**3,407.4289**	**0.3162**	**0.0654**	**3,434.8301**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789
Unmitigated	21.1375	0.2365	18.3380	0.0106		0.9161	0.9161		0.9161	0.9161	75.3953	57.8009	133.1962	0.0197	7.3500e-003	135.8789

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.0464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.6015	0.0963	6.1884	9.9900e-003		0.8484	0.8484		0.8484	0.8484	75.3953	37.8638	113.2591	7.3000e-004	7.3500e-003	115.4665
Landscaping	0.3641	0.1402	12.1495	6.4000e-004		0.0677	0.0677		0.0677	0.0677	0.0000	19.9371	19.9371	0.0190	0.0000	20.4124
Total	**21.1375**	**0.2365**	**18.3380**	**0.0106**		**0.9161**	**0.9161**		**0.9161**	**0.9161**	**75.3953**	**57.8009**	**133.1962**	**0.0197**	**7.3500e-003**	**135.8789**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.1256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	13.0464					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.6015	0.0963	6.1884	9.9900e-003		0.8484	0.8484		0.8484	0.8484	75.3953	37.8638	113.2591	7.3000e-004	7.3500e-003	115.4665
Landscaping	0.3641	0.1402	12.1495	6.4000e-004		0.0677	0.0677		0.0677	0.0677	0.0000	19.9371	19.9371	0.0190	0.0000	20.4124
Total	**21.1375**	**0.2365**	**18.3380**	**0.0106**		**0.9161**	**0.9161**		**0.9161**	**0.9161**	**75.3953**	**57.8009**	**133.1962**	**0.0197**	**7.3500e-003**	**135.8789**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Use Grey Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	280.6304	6.3538	0.1538	485.2937
Unmitigated	337.8564	7.9411	0.1919	593.5816

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	68.4117 / 43.1291	95.5725	2.2361	0.0541	167.5820
General Office Building	80.5507 / 49.3698	111.8303	2.6328	0.0636	196.6116
Government Office Building	3.58779 / 2.19897	4.9810	0.1173	2.8300e-003	8.7572
Hotel	1.5319 / 0.170211	1.7454	0.0500	1.2000e-003	3.3547
Mobile Home Park	1.43339 / 0.903658	2.0025	0.0469	1.1300e-003	3.5112
Regional Shopping Center	50.3071 / 30.8334	69.8424	1.6443	0.0397	122.7917
Single Family Housing	37.1378 / 23.413	51.8822	1.2139	0.0293	90.9731
Total		**337.8564**	**7.9411**	**0.1919**	**593.5816**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	54.7294 / 40.4983	79.4322	1.7891	0.0433	137.0637
General Office Building	64.4406 / 46.3582	92.8688	2.1065	0.0510	160.7212
Government Office Building	2.87024 / 2.06483	4.1365	0.0938	2.2700e-003	7.1587
Hotel	1.22552 / 0.159828	1.4081	0.0400	9.6000e-004	2.6956
Mobile Home Park	1.14671 / 0.848535	1.6643	0.0375	9.1000e-004	2.8718
Regional Shopping Center	40.2457 / 28.9525	58.0002	1.3156	0.0318	100.3767
Single Family Housing	29.7102 / 21.9848	43.1203	0.9712	0.0235	74.4060
Total		**280.6304**	**6.3538**	**0.1538**	**485.2937**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	47.9503	2.8338	0.0000	118.7949
Unmitigated	479.5032	28.3378	0.0000	1,187.9489

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	483	98.0446	5.7943	0.0000	242.9014
General Office Building	421.49	85.5587	5.0564	0.0000	211.9680
Government Office Building	16.8	3.4103	0.2015	0.0000	8.4488
Hotel	33.06	6.7109	0.3966	0.0000	16.6259
Mobile Home Park	10.12	2.0543	0.1214	0.0000	5.0894
Regional Shopping Center	713.12	144.7569	8.5549	0.0000	358.6291
Single Family Housing	684.6	138.9676	8.2128	0.0000	344.2864
Total		**479.5032**	**28.3378**	**0.0000**	**1,187.9489**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	48.3	9.8045	0.5794	0.0000	24.2901
General Office Building	42.149	8.5559	0.5056	0.0000	21.1968
Government Office Building	1.68	0.3410	0.0202	0.0000	0.8449
Hotel	3.306	0.6711	0.0397	0.0000	1.6626
Mobile Home Park	1.012	0.2054	0.0121	0.0000	0.5089
Regional Shopping Center	71.312	14.4757	0.8555	0.0000	35.8629
Single Family Housing	68.46	13.8968	0.8213	0.0000	34.4286
Total		**47.9503**	**2.8338**	**0.0000**	**118.7949**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pleasanton DSP Buildout (2040) with Plan Policies and State/Local Actions

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	1,050.00	Dwelling Unit	65.63	1,050,000.00	3003
Hotel	60.39	Room	2.01	87,690.64	0
General Office Building	453.21	1000sqft	10.40	453,207.00	0
Government Office Building	18.06	1000sqft	0.41	18,056.00	0
Mobile Home Park	22.00	Dwelling Unit	2.77	26,400.00	63
Regional Shopping Center	679.16	1000sqft	15.59	679,158.00	0
Single Family Housing	570.00	Dwelling Unit	185.06	1,026,000.00	1630

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	312.5	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Intensity factor includes RPS benefit up to 2030.

Land Use -

Construction Phase - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Off-road Equipment - No construction.

Grading - No construction.

Trips and VMT - No construction.

Architectural Coating - No construction.

Vehicle Trips - Scaled trip rate to match VMT resulting from implementation of the Proposed Project.

Woodstoves - No woodstoves.

Energy Use -

Mobile Land Use Mitigation - Municipal Code requires 15% of units in new multi-family developments to be affordable housing. Proposed Plan policies in Land Use and Design and Mobility and Parking chapters improve density, diversity, walkability, pedestrian network, and traffic calming measures.

Mobile Commute Mitigation - Mobile Commute Mitigation - Existing programs include School Traffic Calming Program and Transportation Systems Management program, continued and expanded under Proposed Plan Mobility and Parking policies.

Area Mitigation - Municipal Code adopts California Green Building Code including VOC content limits.

Energy Mitigation - Climate Action Plan calls for 25% improvement of Title 24 requirements. The City has installed solar photovoltaic systems at two public buildings in the planning area. Program 6.2 of the General Plan Air Quality and Climate Change Element requires single and multi-family residential and commercial development to install Energy Star appliances and energy efficient systems, as promoted by the Climate Action Plan.

Water Mitigation - Free Indoor Device Program offers low-flow water-efficient appliances. Recycled Water Program will create recycled water distribution system to irrigate landscapes currently served with potable water, supported by Climate Action Plan. Climate Action Plan promotes water efficiency measures.

Waste Mitigation - Climate Action Plan establishes Zero Waste goal of 90% diversion of municipal waste by 2020 and citywide waste by 2025.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	619,056.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,857,167.00	0.00

tblArchitecturalCoating	ConstArea_Residential_Exterior	1,419,120.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	4,257,360.00	0.00
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	4,650.00	0.00
tblConstructionPhase	NumDays	300.00	0.00
tblConstructionPhase	NumDays	465.00	0.00
tblConstructionPhase	NumDays	330.00	0.00
tblConstructionPhase	NumDays	180.00	0.00
tblConstructionPhase	PhaseEndDate	10/27/2042	7/22/2041
tblConstructionPhase	PhaseEndDate	4/16/2040	6/20/2022
tblConstructionPhase	PhaseEndDate	12/30/2019	11/5/2018
tblConstructionPhase	PhaseEndDate	6/20/2022	9/7/2020
tblConstructionPhase	PhaseEndDate	7/22/2041	4/16/2040
tblConstructionPhase	PhaseEndDate	9/7/2020	12/30/2019
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	312.5
tblTripsAndVMT	VendorTripNumber	378.00	0.00
tblTripsAndVMT	WorkerTripNumber	1,382.00	0.00
tblTripsAndVMT	WorkerTripNumber	276.00	0.00
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TL	7.30	9.84
tblVehicleTrips	CC_TTP	48.00	100.00
tblVehicleTrips	CC_TTP	62.00	100.00
tblVehicleTrips	CC_TTP	61.60	100.00
tblVehicleTrips	CC_TTP	64.70	100.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	5.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00

tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	19.40	0.00
tblVehicleTrips	CW_TTP	16.30	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	DV_TP	34.00	0.00
tblVehicleTrips	DV_TP	38.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TL	5.70	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HO_TTP	54.00	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TL	4.80	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00
tblVehicleTrips	HS_TTP	15.00	0.00

tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TL	10.80	9.84
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	HW_TTP	31.00	100.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	16.00	0.00
tblVehicleTrips	PB_TP	4.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	77.00	100.00
tblVehicleTrips	PR_TP	50.00	100.00
tblVehicleTrips	PR_TP	58.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	54.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	7.16	9.11
tblVehicleTrips	ST_TR	2.46	3.13
tblVehicleTrips	ST_TR	8.19	10.42
tblVehicleTrips	ST_TR	5.00	6.36
tblVehicleTrips	ST_TR	49.97	63.55
tblVehicleTrips	ST_TR	9.91	12.60
tblVehicleTrips	SU_TR	6.07	7.72

tblVehicleTrips	SU_TR	1.05	1.34
tblVehicleTrips	SU_TR	5.95	7.57
tblVehicleTrips	SU_TR	4.36	5.54
tblVehicleTrips	SU_TR	25.24	31.10
tblVehicleTrips	SU_TR	8.62	10.96
tblVehicleTrips	WD_TR	6.59	8.38
tblVehicleTrips	WD_TR	11.03	14.03
tblVehicleTrips	WD_TR	68.93	87.66
tblVehicleTrips	WD_TR	8.17	10.39
tblVehicleTrips	WD_TR	4.99	6.35
tblVehicleTrips	WD_TR	42.70	54.30
tblVehicleTrips	WD_TR	9.52	12.11
tblWoodstoves	NumberCatalytic	21.00	0.00
tblWoodstoves	NumberCatalytic	0.44	0.00
tblWoodstoves	NumberCatalytic	22.80	0.00
tblWoodstoves	NumberNoncatalytic	21.00	0.00
tblWoodstoves	NumberNoncatalytic	0.44	0.00
tblWoodstoves	NumberNoncatalytic	22.80	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2040	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035
Energy	1.2072	10.5293	5.9511	0.0659		0.8341	0.8341		0.8341	0.8341		13,169.8663	13,169.8663	0.2524	0.2415	13,248.1283
Mobile	64.8477	564.3243	779.9589	5.1686	524.3698	2.0289	526.3987	140.4173	1.8985	142.3157		530,144.3750	530,144.3750	15.8101		530,539.6276
Total	**1,158.8834**	**593.6913**	**2,031.9333**	**7.0344**	**524.3698**	**155.9307**	**680.3005**	**140.4173**	**155.8003**	**296.2176**	**14,920.8408**	**551,051.7234**	**565,972.5641**	**16.4390**	**1.6954**	**566,888.7593**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035
Energy	0.9470	8.2538	4.6276	0.0517		0.6543	0.6543		0.6543	0.6543		10,330.6887	10,330.6887	0.1980	0.1894	10,392.0789
Mobile	50.8793	475.1752	497.4880	3.2117	307.2681	1.2594	308.5274	82.2811	1.1775	83.4586		329,959.0497	329,959.0497	11.5255		330,247.1876
Total	**1,144.6547**	**502.2667**	**1,748.1389**	**5.0634**	**307.2681**	**154.9814**	**462.2494**	**82.2811**	**154.8995**	**237.1807**	**14,920.8408**	**348,027.2204**	**362,948.0612**	**12.1000**	**1.6433**	**363,740.2699**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.23**	**15.40**	**13.97**	**28.02**	**41.40**	**0.61**	**32.05**	**41.40**	**0.58**	**19.93**	**0.00**	**36.84**	**35.87**	**26.39**	**3.07**	**35.84**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/6/2018	11/5/2018	5	0	
2	Site Preparation	Site Preparation	12/31/2019	12/30/2019	5	0	
3	Grading	Grading	9/8/2020	9/7/2020	5	0	
4	Building Construction	Building Construction	6/21/2022	6/20/2022	5	0	
5	Paving	Paving	4/17/2040	4/16/2040	5	0	
6	Architectural Coating	Architectural Coating	7/23/2041	7/22/2041	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Pleasanton DSP Buildout (2040) with Plan Policies and State/Local Actions - Alameda County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	0	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.2 Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Paving	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Integrate Below Market Rate Housing

Improve Pedestrian Network

Provide Traffic Calming Measures

Implement Trip Reduction Program

Implement School Bus Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	50.8793	475.1752	497.4880	3.2117	307.2681	1.2594	308.5274	82.2811	1.1775	83.4586		329,959.0497	329,959.0497	11.5255		330,247.1876
Unmitigated	64.8477	564.3243	779.9589	5.1686	524.3698	2.0289	526.3987	140.4173	1.8985	142.3157		530,144.3750	530,144.3750	15.8101		530,539.6276

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	8,799.00	9,565.50	8106.00	31,553,515	18,489,600
General Office Building	6,358.49	1,418.54	607.30	17,304,151	10,139,816
Government Office Building	1,582.79	0.00	0.00	4,049,407	2,372,855
Hotel	627.48	629.30	457.18	2,161,278	1,266,457
Mobile Home Park	139.70	139.92	121.88	491,366	287,929
Regional Shopping Center	36,878.28	43,160.49	21121.81	127,241,360	74,560,372
Single Family Housing	6,902.70	7,182.00	6247.20	24,531,321	14,374,763
Total	61,288.45	62,095.74	36,661.37	207,332,398	121,491,791

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
General Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Government Office Building	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Hotel	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Mobile Home Park	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0
Regional Shopping Center	0.00	9.84	0.00	0.00	100.00	0.00	100	0	0
Single Family Housing	9.84	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
General Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Government Office Building	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Hotel	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Mobile Home Park	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Regional Shopping Center	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633
Single Family Housing	0.564354	0.034948	0.188156	0.101714	0.011079	0.005040	0.028641	0.055840	0.002376	0.001564	0.005216	0.000439	0.000633

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.9470	8.2538	4.6276	0.0517		0.6543	0.6543		0.6543	0.6543		10,330.6887	10,330.6887	0.1980	0.1894	10,392.0789
NaturalGas Unmitigated	1.2072	10.5293	5.9511	0.0659		0.8341	0.8341		0.8341	0.8341		13,169.8663	13,169.8663	0.2524	0.2415	13,248.1283

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	29339.2	0.3164	2.7038	1.1506	0.0173		0.2186	0.2186		0.2186	0.2186		3,451.6656	3,451.6656	0.0662	0.0633	3,472.1771
General Office Building	20326	0.2192	1.9928	1.6739	0.0120		0.1515	0.1515		0.1515	0.1515		2,391.2969	2,391.2969	0.0458	0.0438	2,405.5072
Government Office Building	809.799	8.7300e-003	0.0794	0.0667	4.8000e-004		6.0300e-003	6.0300e-003		6.0300e-003	6.0300e-003		95.2705	95.2705	1.8300e-003	1.7500e-003	95.8366
Hotel	10645.4	0.1148	1.0437	0.8767	6.2600e-003		0.0793	0.0793		0.0793	0.0793		1,252.4004	1,252.4004	0.0240	0.0230	1,259.8428
Mobile Home Park	1024.29	0.0111	0.0944	0.0402	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5043	120.5043	2.3100e-003	2.2100e-003	121.2204
Regional Shopping Center	4409.88	0.0476	0.4323	0.3632	2.5900e-003		0.0329	0.0329		0.0329	0.0329		518.8089	518.8089	9.9400e-003	9.5100e-003	521.8919
Single Family Housing	45389.3	0.4895	4.1829	1.7800	0.0267		0.3382	0.3382		0.3382	0.3382		5,339.9198	5,339.9198	0.1024	0.0979	5,371.6523
Total		**1.2072**	**10.5293**	**5.9512**	**0.0659**		**0.8341**	**0.8341**		**0.8341**	**0.8341**		**13,169.8663**	**13,169.8663**	**0.2524**	**0.2415**	**13,248.1283**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	24.2734	0.2618	2.2370	0.9519	0.0143		0.1809	0.1809		0.1809	0.1809		2,855.6912	2,855.6912	0.0547	0.0524	2,872.6611
General Office Building	15.2631	0.1646	1.4964	1.2570	8.9800e-003		0.1137	0.1137		0.1137	0.1137		1,795.6638	1,795.6638	0.0344	0.0329	1,806.3346
Government Office Building	0.608091	6.5600e-003	0.0596	0.0501	3.6000e-004		4.5300e-003	4.5300e-003		4.5300e-003	4.5300e-003		71.5402	71.5402	1.3700e-003	1.3100e-003	71.9653
Hotel	8.26935	0.0892	0.8107	0.6810	4.8600e-003		0.0616	0.0616		0.0616	0.0616		972.8644	972.8644	0.0187	0.0178	978.6457
Mobile Home Park	0.815756	8.8000e-003	0.0752	0.0320	4.8000e-004		6.0800e-003	6.0800e-003		6.0800e-003	6.0800e-003		95.9713	95.9713	1.8400e-003	1.7600e-003	96.5416
Regional Shopping Center	3.30741	0.0357	0.3243	0.2724	1.9500e-003		0.0246	0.0246		0.0246	0.0246		389.1066	389.1066	7.4600e-003	7.1300e-003	391.4189
Single Family Housing	35.2737	0.3804	3.2507	1.3833	0.0208		0.2628	0.2628		0.2628	0.2628		4,149.8512	4,149.8512	0.0795	0.0761	4,174.5117
Total		**0.9470**	**8.2539**	**4.6276**	**0.0517**		**0.6543**	**0.6543**		**0.6543**	**0.6543**		**10,330.6887**	**10,330.6887**	**0.1980**	**0.1894**	**10,392.0789**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035
Unmitigated	1,092.8284	18.8377	1,246.0233	1.8000		153.0678	153.0678		153.0678	153.0678	14,920.8408	7,737.4820	22,658.3228	0.3765	1.4539	23,101.0035

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.6469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	71.4870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,005.6494	17.2798	1,111.0285	1.7929		152.3161	152.3161		152.3161	152.3161	14,920.8408	7,493.2941	22,414.1349	0.1436	1.4539	22,850.9942
Landscaping	4.0452	1.5579	134.9948	7.1600e-003		0.7517	0.7517		0.7517	0.7517		244.1879	244.1879	0.2329		250.0093
Total	**1,092.8284**	**18.8377**	**1,246.0233**	**1.8000**		**153.0677**	**153.0677**		**153.0677**	**153.0677**	**14,920.8408**	**7,737.4820**	**22,658.3228**	**0.3765**	**1.4539**	**23,101.0035**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.6469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	71.4870					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,005.6494	17.2798	1,111.0285	1.7929		152.3161	152.3161		152.3161	152.3161	14,920.8408	7,493.2941	22,414.1349	0.1436	1.4539	22,850.9942
Landscaping	4.0452	1.5579	134.9948	7.1600e-003		0.7517	0.7517		0.7517	0.7517		244.1879	244.1879	0.2329		250.0093
Total	**1,092.8284**	**18.8377**	**1,246.0233**	**1.8000**		**153.0677**	**153.0677**		**153.0677**	**153.0677**	**14,920.8408**	**7,737.4820**	**22,658.3228**	**0.3765**	**1.4539**	**23,101.0035**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Use Grey Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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Appendix D

TRANSPORTATION ASSESSMENT ASSUMPTIONS

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FEHR PEERS

DRAFT MEMORANDUM

Date: August 8, 2018

To: Katharine Pan, Urban and Regional Planners

From: Kathrin Tellez, Mark Howard, Meiqing Li, Fehr & Peers

Subject: Pleasanton Downtown Specific Plan Transportation Assessment Assumptions

WC18-3466

This memorandum documents our proposed analysis assumptions for the Pleasanton Downtown Specific Plan (DSP) Transportation Assessment, including the project description, proposed analysis locations, scenarios, and parameters. An approach to evaluate the vehicle miles of travel (VMT) is also presented. The purpose of this memo is to confirm the project elements to be evaluated as part of the assessment, and provide the project team an opportunity to review our analysis parameters and assumptions prior to the completion of the technical analysis.

PROJECT DESCRIPTION

The City of Pleasanton is undergoing a process to update their Downtown Specific Plan which was previously adopted in 2002. The Pleasanton Downtown Specific Plan planning area (planning area) is generally situated in the central portion of the city, as regionally shown on **Figure 1** (all figures are provided at the end of this memorandum). The approximately 319 acre planning area is generally bounded by the Alameda County Fairgrounds to the west; the Arroyo del Valle and Altamont Corridor Express (ACE) tracks to the north; a generally straight-line projection of Second and Third Streets to the east; and Bernal Avenue to the south.

Pleasanton's first DSP was adopted in 1989 and was comprehensively updated in 2002. The 1989 Pleasanton DSP and the 2002 update helped create an active commercial core along Main Street and aimed to preserve historic residential neighborhoods. Based on feedback from the community and elected officials, the City initiated an update to the 2002 DSP in late 2016 in order to better respond to current market conditions, promote multi-modal mobility, and incorporate other planning efforts recently undertaken by the City.

Several transportation improvements proposed are proposed in the DSP area, including extending the street system, sidewalks, and bicycle network into the Town Square District. Major transportation improvements are summarized by street as follows:

- **Main Street.** Moderate changes are envisioned for Main Street, including moving street trees to the parking areas to provide wider pedestrian rights-of-way and restricting outdoor dining areas to ensure a six-foot pedestrian clear zone is provided. Improvements for travel flow on Main Street would include prohibiting the construction of new driveway openings onto Main Street and eliminating or narrowing existing driveways wherever possible.
- **Peters Avenue**. Peters Avenue would continue to serve as a parallel transportation corridor, but the roadway would be reorganized to include a separated Class IV cycle track for bicycles on the west side of the street.
- **First Street.** The addition of bicycle and pedestrian-focused street furnishings are envisioned on First Street, but the roadway would remain unchanged. The provision of bicycle facilities is addressed via a proposed Class 1 multi-use bike and pedestrian trail on the nearby Transportation Corridor.
- **Division Street.** Division Street would be retrofitted into a shared street for pedestrians and bicyclists such that it could be closed periodically.

As part of the potential future Town Square District in the southern portion of the DSP area, a new right-of-way connection would be developed between Old Bernal Avenue and Main Street, with Peters Avenue extending to the new east-west street. The new roadways would accommodate vehicles, pedestrians and bicycles and would continue the grid system into the extension of downtown. A network of pedestrian paths beyond the new streets would connect amenities within the potential Town Square District, as well as between adjacent downtown destinations and the ACE Station. A new parking structure is contemplated for the area with pedestrian paths connecting to the parking structure.

Land use changes are also proposed throughout the DSP area, including redevelopment of the Civic Center site and resignation of other parcels that could permit increased or changed land use development. The City of Pleasanton maintains a travel forecasting model that is used to forecast near-term (next 5 to 10 years) and long-term (next 20 to 25 years) transportation system needs. The DSP area is represented by approximately 14 travel analysis zones (TAZs) in the model, as shown on **Figure 3**, which are used to represent various socio demographic data for the defined geographic area. Some of the DSP planning area TAZ boundaries extend beyond the extents of the DSP planning area (TAZs 28, 38, 39, 42, and 201); only changes to land uses within the DSP planning area are being considered as a part of this project. A summary of existing land uses and

potential land use changes under no project and with project conditions is presented in **Table 1**, with details by TAZ provided in Attachment A. In total, the number of residential units in the DSP area is expected to increase by approximately 368 residential units and 260,702 square-feet of non-residential uses.

TABLE 1
DOWNTOWN SPECIFIC PLAN AREA LAND USE CHANGE SUMMARY

Land Use	Unit	Existing	New Development	Existing Development to Remain	Total Development	Net Change
Residential	Dwelling Units	1,274	369	1,273	1,642	+368
Non-Residential	1,000 square feet	977,409	534,438	703,673	1,238,111	+260,702

Source: Dyett & Bhatia, August 2018

Three project alternatives will also be considered, including:

- Reconfigured Site Plan Alternative, designed to address local circulation impacts with a variation of the street grid configuration in the current Civic Center area, such as the extension of Peters Avenue to Main Street or Bernal Avenue
- Reduced Density Alternative, which considers less redevelopment on the City-owned parcels in the current Civic Center area
- Varied Use Alternative, which considers a different mix of uses in the Civic Center area

These alternatives will be further defined based on the impacts (transportation as well as other resource areas) of the preferred project as the alternatives will be crafted to reduce the severity of potentially significant project impacts.

ANALYSIS SCENARIOS AND PARAMETERS

The study will evaluate peak hour intersection operations for a number of scenarios.

Analysis Scenarios

The intersection peak hour level of service will be evaluated for the following scenarios using the *2000 Highway Capacity Manual* method. The impact analysis will be conducted for the following scenarios:

1. Existing Conditions – Existing volumes obtained from traffic counts and the existing roadway system configuration.
2. Existing Plus Project – Existing volumes obtained from traffic counts and the existing roadway system configuration plus traffic estimated for development changes within the Specific Plan Area, and roadway network changes proposed as part of the preferred plan.
3. Existing Plus Approved Projects (EPAP) No Project Conditions – Existing traffic plus traffic that could be generated by approved projects in the area.
4. EPAP Plus Project – Traffic volumes from Scenario 3 plus changed levels of development over the next 5 to 10 years, and roadway network changes proposed as part of the preferred plan.
5. Far-Term (Cumulative) No Project Conditions – Projected traffic volumes and the projected roadway system using the City of Pleasanton Travel Demand Model. The traffic forecasts include Approved and Pending projects, in addition to build out of land uses consistent with the General Plan and adopted Housing Element. Roadway improvements to assume in this scenario will be discussed with City Staff.
6. Far-Term (Cumulative) Project Conditions with Preferred Project – Traffic volumes from Scenario 5 plus traffic estimated from land use and roadway network changes proposed as part of the preferred plan.

Mitigation measures will be identified for impacts that exceed the thresholds established in the significance criteria. The project's proportionate share of identified intersection and roadway improvements will be calculated. For unsignalized intersections that have one or more movements experiencing excessive vehicle delay (LOS E or F), we will assess if all-way stop-control or signalization is potentially warranted.

Forecasts will be developed using the City's travel behavior model for scenarios 2 through 7 based on the land uses summarized in Table 1 (detailed in Attachment A), and the roadway network changes proposed as part of the DSP.

Vehicle Miles of Travel

Senate Bill (SB) 743 proposes to change the metric used to identify potential significant transportation impacts in CEQA analysis. SB 743 directed the California Governor's Office of Planning and Research (OPR) to identify a new metric and to recommend analysis methodology and thresholds. OPR selected vehicle miles of travel or VMT as the preferred metric and is working to finalize guidance material that is anticipated to go into effect in July 2020. SB 743 did not change the discretion that lead agencies have to select methodology or define their own significance thresholds, but the guidance being developed by OPR should be carefully considered by lead agencies when they ultimately finalize their own recommended practices. A key factor should be how the lead agency/community values VMT reduction especially with regard to its influence on reducing greenhouse gases, promoting active transportation, and encouraging infill development, all of which, are identified as objectives in the legislative intent of SB 743.

Fehr & Peers will use the City of Pleasanton and Alameda CTC models to assess vehicle miles of travel (VMT) for the proposed plan. This analysis will be conducted using guidance from the state Office of Planning and Research (OPR). Based on current guidance, VMT estimates for specific land uses proposed to change (residential, office and retail) within the Pleasanton Downtown Specific Plan would be prepared, in addition to total VMT by speed generated by land uses within the plan boundaries for use in the Air Quality, Greenhouse Gas Emissions, and Noise analyses for the following scenarios:

- Baseline Regional VMT estimates
- Baseline Without Project VMT estimates for Plan Area
- Baseline With Preferred Project VMT estimates for Plan Area
- Cumulative Without Project VMT estimates for Plan Area
- Cumulative With Preferred Project VMT estimates for Plan Area

The resulting VMT estimates will be compared to other sources for reasonableness, including the California Household Travel survey, and other VMT estimates prepared by other regional agencies as available.

Project Alternatives Assessment

Fehr & Peers will develop order of magnitude trip generation estimates for the three project alternatives. Based on the relative trip generation and roadway network changes proposed as part of the alternatives as compared to the preferred project, Fehr & Peers will qualitatively assess how each alternative would either reduce impacts of the preferred project to a less-than-significant level, or potentially result in a worsening of impacts or new impacts. For one alternative (to be determined based on the results of the qualitative assessment), Fehr & Peers will conduct intersection level of service calculations for the cumulative condition as well as estimate vehicle miles of travel for the baseline and cumulative conditions.

Study Locations and Data Collection

The transportation assessment will include weekday morning (7:00 to 9:00 am) and evening (4:00 to 6:00 PM) peak period intersection analyses to coincide with the time-periods when adjacent street traffic demands are greatest and the project generates the most traffic.

Based on the project location, projected levels of service at intersections in the area, and proposed roadway network changes with the DSP planning area, we developed an initial list of study locations which has previously been reviewed by the City Staff and data collection completed while school was in session. These locations are listed below and shown on **Figure 4**:

Study Intersections:

1. Division Street at Del Valle Parkway
2. Main Street at Stanley Boulevard
3. First Street at Stanley Boulevard
4. Main Street at Vineyard Avenue
5. Main Street at Saint John Street
6. First Street at Vineyard Avenue
7. Peters Avenue at Saint Mary Street
8. Main Street at Saint Mary Street
9. Peters Avenue at Rose Avenue
10. Main Street at Rose Avenue
11. First Street at Neal Street
12. First Street at Angela Street
13. Old Bernal Avenue at Bernal Court
14. Old Bernal Avenue at Augustine Street

15. Bernal Avenue at Pleasanton Avenue
16. Bernal Avenue at Old Bernal Avenue
17. Bernal Avenue at Main Street
18. First Street/Sunol Boulevard at Bernal Avenue

PROPOSED SIGNIFICANCE CRITERIA

The determination of significance for project impacts is based on applicable policies, regulations, goals, and guidelines defined by the City of Pleasanton. Changes to the CEQA guidelines as identified by Senate Bill 743 are also considered in the criteria below. The impacts of the project will be evaluated by comparing the results of the technical analysis under Plus Project conditions to the results under Existing, Near-term without Project, and Cumulative without Project conditions, as outlined above.

Vehicular Impact Criteria

For this study, based on guidance contained in the City of Pleasanton General Plan and recently prepared environmental documents for other projects in the City, a significant transportation-related impact would occur if *(note that criteria in italics has been added to incorporate pending update of CEQA guidelines)* a project results in:

- Deterioration of a signalized intersection from LOS D (or better) to LOS E or LOS F[1]
- At an intersection projected to operate at LOS E or F prior to the addition of project traffic, the Project adds 10 or more trips
- Deterioration of a controlled movement at an unsignalized intersection from LOS E or better to LOS F, or at intersections where a controlled movement already operates at LOS F, one of the following:
    1. Project traffic results in satisfaction at the peak hour volume traffic signal warrant;
    2. Project traffic increases minor movement delay by more than 30 seconds; or
    3. Where the peak hour volume signal warrant is met without Project traffic and delay cannot be measured, Project increases traffic by 10 or more vehicles per lane on the controlled approach.

[1] There is no level of service standard for Gateway and Downtown intersections.

- The addition of project traffic at a study intersection would result in the 95th percentile vehicle queue exceeding the available storage or would increase 95th percentile queue by more than two vehicles where the queue already exceeds the available storage space (for example, vehicle queues spilling back from ramp terminal intersections to the freeway mainline, or vehicle queues extending beyond the available turn pocket length, impeding travel in the adjacent lanes)
- The Project would conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the County Congestion Management Agency for designated roads and highways:

    1. Exceed, either individually or cumulatively, an LOS standard established by the Alameda County Transportation Commission (Alameda CTC) for designated roads or highways; or

    2. For a roadway segment of the Metropolitan Transportation System (MTS) network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project.

- If a Caltrans facility (freeway mainline, ramp merge/diverge area) is projected to operate acceptably (i.e., LOS E or better) without project and the project is expected to cause the facility to operate at an unacceptable service level (i.e., LOS F), the impact is considered significant.
- If a Caltrans facility is projected to operate unacceptably (i.e., LOS F) without project and the project is expected to increase delay or density, the impact is considered significant. If density cannot be calculated, project traffic increases overall traffic by more than 3 percent. Pedestrian and Bicycle Impact Criteria

The *City of Pleasanton 2005-2025 General Plan* and *2018 City of Pleasanton Pedestrian and Bicycle Master Plan,* describes related policies necessary to ensure that pedestrian and bicycle facilities are safe and effective for City residents. Using these plans as a guide, significant impacts to these facilities would occur when a project or an element of the project:

- Creates a hazardous condition that currently does not exist for pedestrians and bicyclists, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- Conflicts with an existing or planned pedestrian or bicycle facility; or

- Conflicts with policies related to bicycle and pedestrian activity adopted by the City of Pleasanton, including the Complete Streets Policy.

Transit Impact Criteria

Generally, a project causes a significant impact to transit facilities and services if an element of it conflicts with existing or planned transit services. The evaluation of transit facilities shall consider if:

- A project creates demand for public transit services above the capacity which is provided, or planned;
- A project or project-related mitigation disrupts existing transit services or facilities;[2]
- A project or project-related mitigation conflicts with an existing or planned transit facility; or
- A project or project-related mitigation conflicts with transit policies adopted by the City of Pleasanton, Alameda CTC, Wheels (LAVTA), or BART for their respective facilities in the study area.

Other CEQA Considerations

Based on Appendix G of the CEQA guidelines, other CEQA criteria will also be assessed:

- Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?
- Would the Project substantially increase traffic hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?
- Would the project result in inadequate emergency access?
- Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

[2] This includes disruptions caused by proposed-project driveways on transit streets and impacts to transit stops/shelters; and impacts to transit operations from traffic improvements proposed or resulting from a project.

VEHICLE MILES OF TRAVEL

According to the *Update to CEQA Thresholds of Significance and Transportation Impact Study Guidelines* dated November 2017, and associated *Technical Advisory*, April 2018, VMT impacts would have a significant effect on the environment if the project would:

1. Conflict with a plan, ordinance, or policy addressing the safety or performance of the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths (except for automobile level of service or other measures of vehicle delay); or
2. Cause substantial additional VMT per capita, per service population, or other appropriate efficiency measure; or
3. Substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network.

Thresholds of Significance for VMT

The following are suggested thresholds of significance related to substantial additional VMT:

- For residential projects, a project would cause substantial additional VMT if it exceeds existing regional household VMT per capita minus 15 percent.
- For office projects, a project would cause substantial additional VMT if it exceeds the existing regional VMT per worker minus 15 percent.
- For retail projects, a project would cause substantial additional VMT if it results in a net increase in total VMT.

Screening Criteria

VMT impacts would be less than significant for a project if any of the identified screening criteria are met:

1. Small Projects: The project generates fewer than 100 vehicle trips per day
2. Low-VMT Areas: The project meets map-based screening criteria by being located in an area that exhibits below threshold VMT, or 15 percent or more below the regional average

3. Near Transit Stations: The project is located in a Transit Priority Area or within a one-half mile of a Major Transit Corridor or Stop[3] and satisfies the following:

    - Has a Floor Area Ratio (FAR) of more than 0.75
    - Does not include more parking for use by residents, customers, or employees of the project than other typical nearby uses, or more than required by the City (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site).
    - Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from MTC)

The City of Pleasanton does have discretion to establish their own VMT thresholds, provided these thresholds are supported by substantial evidence. As the guidelines do not go into effect until July 2020, conclusions regarding the VMT assessment will be for informational purposes only.

NEXT STEPS

We appreciate your time to review and comment on the assumptions described in this memo prior to the commencement of the technical analysis. Specifically, we request additional guidance or concurrence with our proposed approach for the following elements:

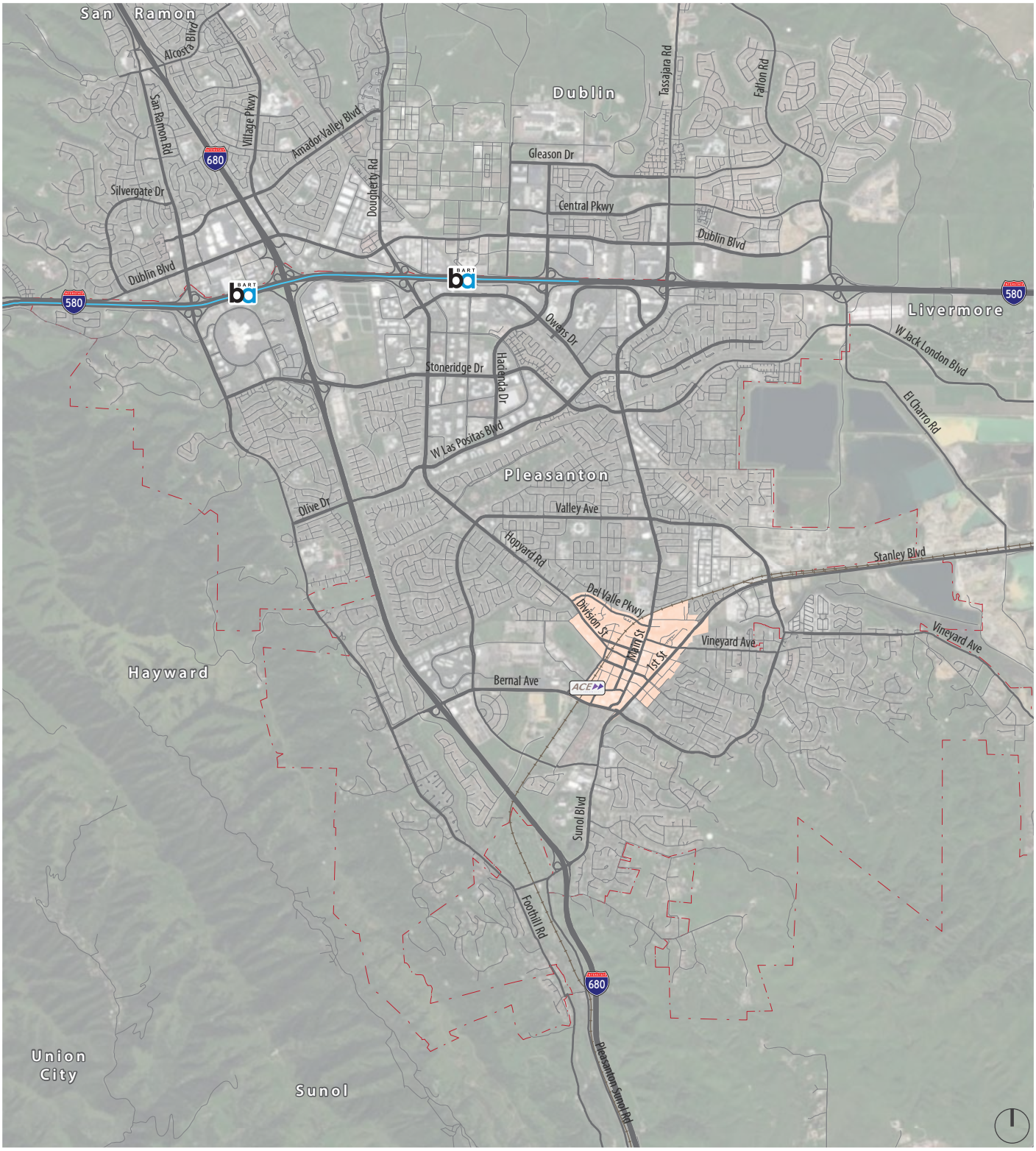
- Land Use Changes
- Analysis scenarios and locations
- Significance criteria, specifically the VMT criteria

Please call Kathrin at 925-930-7100 with questions or comments.

Attachments:

Figure 1	Regional Location Map
Figure 2	Study Area
Figure 3	Travel Analysis Zone Map
Figure 4	Intersection Analysis Locations
Attachment A	Land Use Changes by TAZ

[3] Major transit stop is defined in CEQA Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.



LEGEND

Specific Plan Area

Figure 1

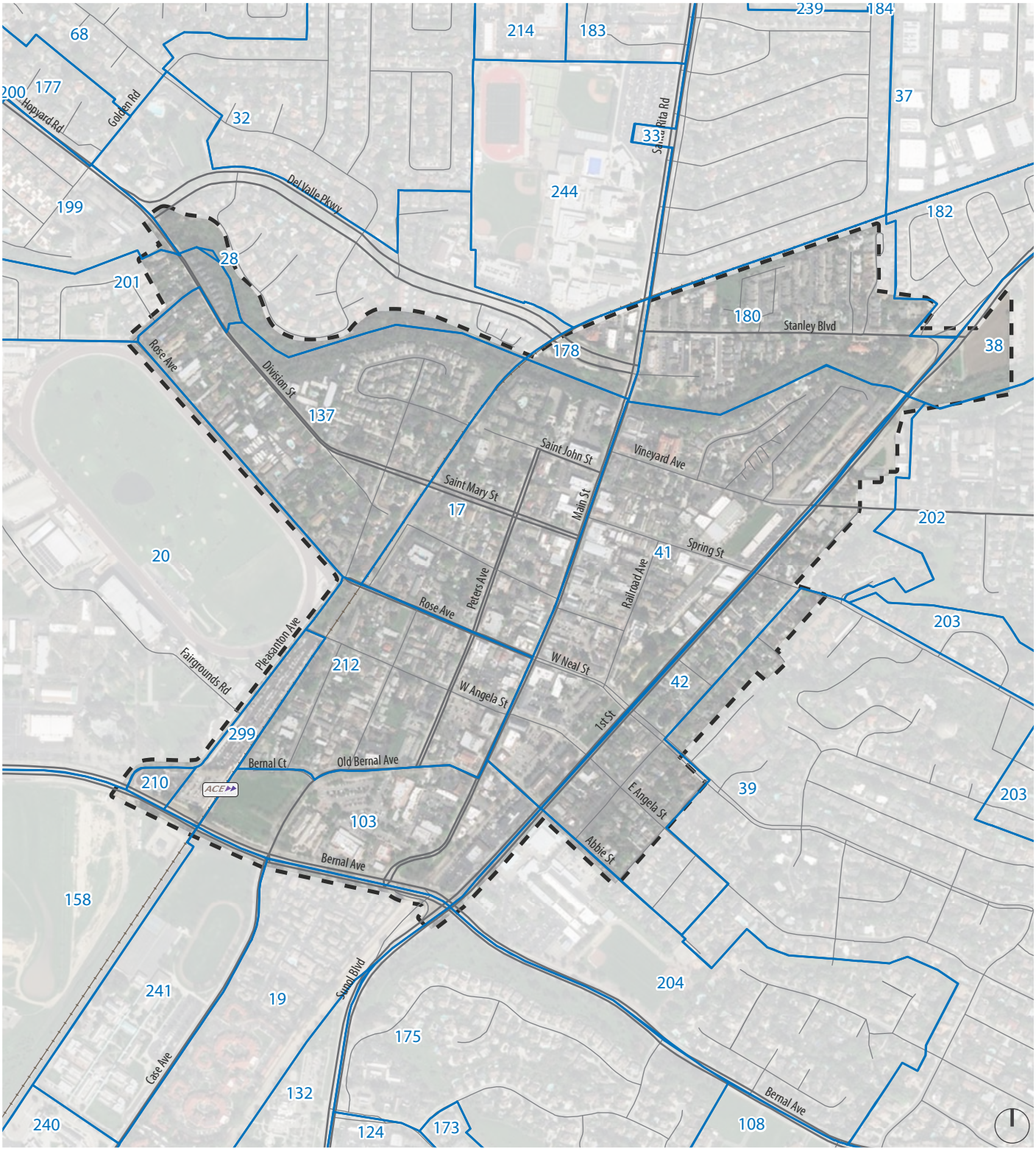
Project Site Vicinity

LEGEND

Specific Plan Area

Figure 2

Specific Plan Area



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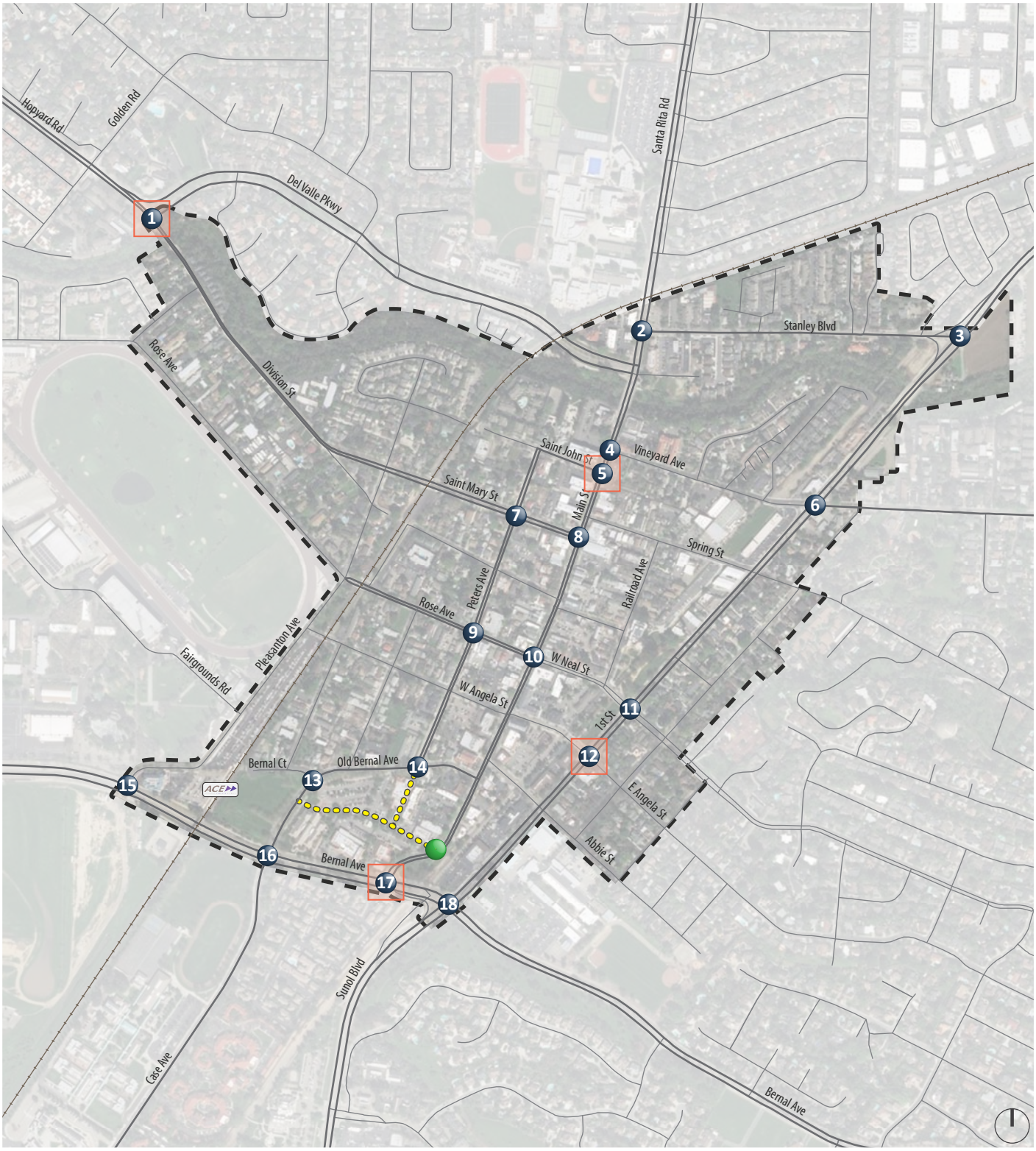
Specific Plan Area

Traffic Analysis Zone (TAZ)

Figure 3

Downtown Specific Plan Area TAZs



LEGEND

Specific Plan Area | Future Roadway | # Study Intersection | Future Intersection | Existing or Projected Deficiency

Figure 4

Study Intersection Locations

FEHR PEERS

Attachment A
Land Use Summary by TAZ[1]

TAZ	Land Use	Unit	Existing	No Project Growth Increment		With Specific Plan	
				Approved	Buildout	Growth Increment	Notes
17	Apartments	Dwelling Unit	56	3	20	42	Replaces Approved/Buildout growth
	Auto Care/Service Center	1,000 square feet	2	0	0	0	No Change
	Bank	1,000 square feet	14.74	0	0	0	No Change
	Community Center	1,000 square feet	3.9	0	0	0	No Change
	Condo/Townhouse	Dwelling Unit	28	0	0	0	No Change
	Elderly Housing - Attached	Dwelling Unit	20	0	0	0	No Change
	Gas Station w/ convenience mart	Fueling Positions	0.5	0	0	0	No Change
	Hotel/Motel	Rooms	39	0	0	0	No Change
	Industrial Park	1,000 square feet	0	0.12	0	0	No Change
	Medical-Dental Office	1,000 square feet	2.2	0	0	0	No Change
	Neighborhood Park	Acres	0.6	0	0	0	No Change
	Office	1,000 square feet	73.91	0	24.95	9.38	Replaces Buildout growth
	Restaurant - High Turnover	1,000 square feet	10.25	1.98	0	1.169	In addition to Approved growth
	Restaurant - Quality	1,000 square feet	33.72	0	0	0	No Change

Attachment A
Land Use Summary by TAZ[1]

TAZ	Land Use	Unit	Existing	No Project Growth Increment		With Specific Plan	
				Approved	Buildout	Growth Increment	Notes
38	Single Family Homes	Dwelling Unit	60	1	0	0	No Change
	Shopping Center	1,000 square feet	43.84	5.3	20	35	Replaces Approved/Buildout growth could ultimately include restaurants and other downtown commercial uses
	Auto Care/Service Center	1,000 square feet	139.41	9.13	0	0	No Change
	Church/Synagogue/Religious	1,000 square feet	9.74	0	0	0	No Change
	Gas Station w/mart & carwash	Fueling Positions	16	0	0	0	No Change
	Industrial Park	1,000 square feet	183.1	28.7	95.87	0	No Change
	Neighborhood Shopping Center	1,000 square feet	19.43	31.33	0	0	No Change
	Office	1,000 square feet	21.36	0	0	0	No Change
	Restaurant - with Drive-through	1,000 square feet	4.9	0	0	0	No Change
	Self-Storage	1,000 square feet	81.95	0	0	0	No Change
	SF Units	Dwelling Unit	2	0	0	87	Reflects approved project
	Shopping Center	1,000 square feet	43.63	0	83.17	-65.43	Reflects Retail that would not be constructed to allow development of residential project

Attachment A
Land Use Summary by TAZ[1]

TAZ	Land Use	Unit	Existing	No Project Growth Increment		With Specific Plan	
				Approved	Buildout	Growth Increment	Notes
41	Apartments	Dwelling Unit	45	0	12	55	
	Auto Dealer	1,000 square feet	15	0	0	0	No Change
	Bank	1,000 square feet	10.45	0	0	0	No Change
	Gas Station w/ convenience mart	Fueling Positions	12	0	0	0	No Change
	Industrial Park	1,000 square feet	10.26	0	0	0	No Change
	Live (Amphi)theater	Seats	230	0	0	0	No Change
	Medical-Dental Office	1,000 square feet	14.28	0	0	0	No Change
	Mortuary	1,000 square feet	10.45	0	0	0	No Change
	Neighborhood Park	Acres	1.5	0	0	0	No Change
	Office	1,000 square feet	129.73	11.68	45.4	18.489	Replaces Approved/Buildout growth
	Restaurant - High Turnover	1,000 square feet	32.99	0	0	0	No Change
	Restaurant - Quality	1,000 square feet	13.11	0	0	0	No Change
	SF Units	Dwelling Unit	33	0	2	0	No Change

Attachment A
Land Use Summary by TAZ[1]

TAZ	Land Use	Unit	Existing	No Project Growth Increment		With Specific Plan	
				Approved	Buildout	Growth Increment	Notes
	Shopping Center	1,000 square feet	172.41	7.56	30	302	Replaces Approved/Buildout growth could ultimately include restaurants and other downtown commercial uses
42	Warehouse	1,000 square feet	3	0	0		No Change
	Apartments	Dwelling Unit	0	1	0	10	Replaces Approved growth
	Church/Synagogue/Religious	1,000 square feet	6.2	0	0		No Change
	Elderly Housing - Attached	Dwelling Unit	90	95	0		No Change
	Gas/Service Station	Fueling Positions	8	0	0		No Change
	SF Units	Dwelling Unit	279	1	1		No Change
103	Apartments	Dwelling Unit	0	0	50	125	Civic Center Development
	Bank	1,000 square feet	3.01	0	0	0	No Change
	Neighborhood Park	Acres	6.7	0	0	0	No Change
	Office	1,000 square feet	3.23	0	0	67	Civic Center Development
	Public/Institutional	1,000 square feet	99.07	0	47.42	97.488	Civic Center Development; increment of growth

Attachment A
Land Use Summary by TAZ[1]

TAZ	Land Use	Unit	Existing	No Project Growth Increment		With Specific Plan	
				Approved	Buildout	Growth Increment	Notes
	Restaurant - High Turnover	1,000 square feet	3.67	0	0	0	No Change
	Restaurant - Quality	1,000 square feet	2.2	0	0	0	No Change
	Shopping Center	1,000 square feet	85.71	0	0	1.2744	Civic Center Development
178	Shopping Center	1,000 square feet	16.06	0	0	0.954	
180	Apartments	Dwelling Unit	8	0	0	16	
	Auto Care/Service Center	1,000 square feet	0	5.58	0	0	No Change
	Bank	1,000 square feet	16.4	0	0	0	No Change
	Car Wash	Wash Stalls	1	0	0	0	No Change
	Condo/Townhouse	Dwelling Unit	75	0	0	0	No Change
	Elderly Housing - Attached	Dwelling Unit	86	0	0	0	No Change
	Medical-Dental Office	1,000 square feet	1.34	0	0	0	No Change
	Mobile Home	Dwelling Unit	32	0	0	0	No Change
	Office	1,000 square feet	0	0	3.51	0	No Change
	SF Units	Dwelling Unit	43	12	0	0	No Change

Attachment A
Land Use Summary by TAZ[1]

TAZ	Land Use	Unit	Existing	No Project Growth Increment		With Specific Plan	
				Approved	Buildout	Growth Increment	Notes
	Shopping Center	1,000 square feet	2	1	0	25.384	Replaces Approved growth could ultimately include restaurants and other downtown commercial uses
212	Apartments	Dwelling Unit	68	0	45	31	Replaces Buildout Growth
	Bank	1,000 square feet	15.5	0	0	0	No Change
	Community Center	1,000 square feet	10.2	0	0	0	No Change
	Condo/Townhouse	Dwelling Unit	22	0	0	0	No Change
	Office	1,000 square feet	9.81	1.51	0	9.675	Replaces Approved growth
	Restaurant - High Turnover	1,000 square feet	9.51	0	0		No Change
	Restaurant - Quality	1,000 square feet	5.65	0	0		No Change
	SF Units	Dwelling Unit	80	0	0		No Change
	Shopping Center	1,000 square feet	14.63	3.74	0	0	No Change

Notes: 1. TAZs 28, 39, 137, 201, 210 and 299 not included in this table as no land use changes are proposed as part of the Specific Plan.
Source: City of Pleasanton Travel Demand Model, Dyett & Bhatia, August 2018

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Appendix E

MODELING RESULTS

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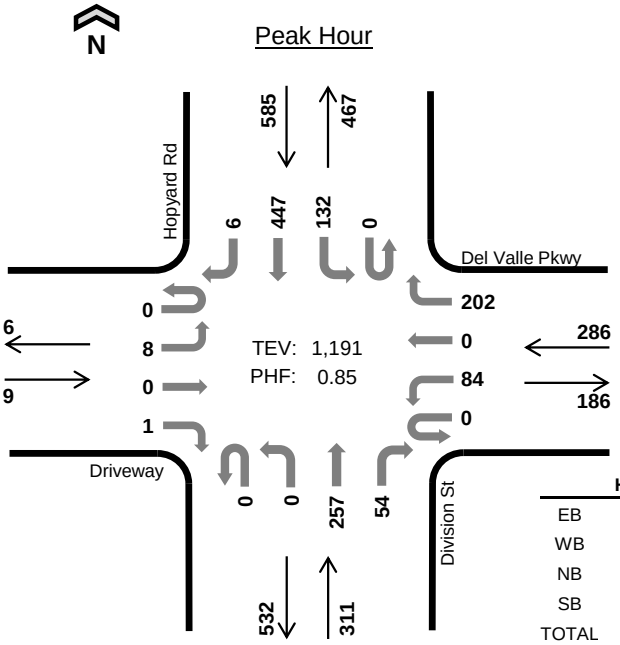
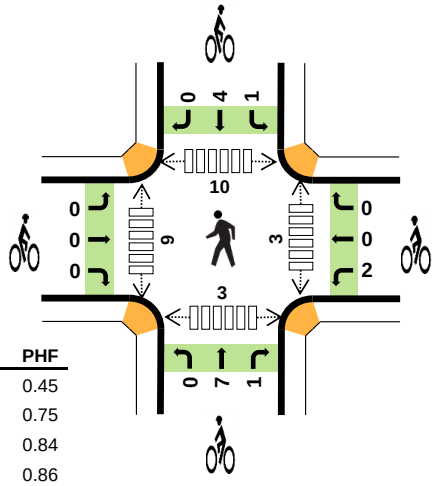
Division St
Del Valle Pkwy

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	0.0%	0.45
WB	0.3%	0.75
NB	0.6%	0.84
SB	1.9%	0.86
TOTAL	1.2%	0.85



Two-Hour Count Summaries

Interval Start	Driveway (Eastbound)				Del Valle Pkwy (Westbound)				Division St (Northbound)				Hopyard Rd (Southbound)				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	0	0	0	3	0	13	0	0	23	2	0	9	33	0	85	0
7:15 AM	0	1	0	0	0	7	0	22	0	0	25	8	0	24	62	0	149	0
7:30 AM	**0**	**3**	**0**	**0**	**0**	**20**	**0**	**42**	**0**	**0**	**44**	**20**	**0**	**47**	**95**	**1**	**272**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**28**	**0**	**67**	**0**	**0**	**62**	**28**	**0**	**50**	**116**	**1**	**352**	858
8:00 AM	**0**	**5**	**0**	**0**	**0**	**19**	**0**	**54**	**0**	**0**	**59**	**5**	**0**	**26**	**142**	**2**	**312**	1,085
8:15 AM	**0**	**0**	**0**	**1**	**0**	**17**	**0**	**39**	**0**	**0**	**92**	**1**	**0**	**9**	**94**	**2**	**255**	**1,191**
8:30 AM	0	2	0	1	0	10	0	22	0	0	64	4	0	21	79	1	204	1,123
8:45 AM	0	1	0	0	1	6	0	24	0	0	58	8	0	26	55	1	180	951
Count Total	0	14	0	2	1	110	0	283	0	0	427	76	0	212	676	8	1,809	0
Peak Hour All	**0**	**8**	**0**	**1**	**0**	**84**	**0**	**202**	**0**	**0**	**257**	**54**	**0**	**132**	**447**	**6**	**1,191**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**5**	**5**	**1**	**14**	**0**
Peak Hour HV%	**-**	**0%**	**-**	**0%**	**-**	**0%**	**-**	**0%**	**-**	**-**	**1%**	**0%**	**-**	**4%**	**1%**	**17%**	**1%**	**0**

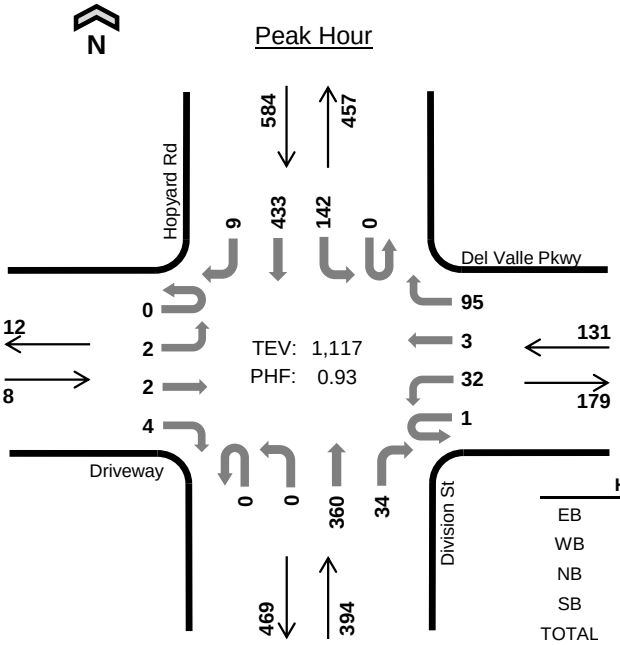
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	4	*4*	0	0	1	0	*1*	0	2	0	0	*2*
7:15 AM	0	0	1	2	*3*	0	0	0	0	*0*	0	3	2	0	*5*
7:30 AM	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**2**	**0**	***3***	**0**	**0**	**4**	**0**	*4*
7:45 AM	**0**	**0**	**1**	**5**	***6***	**0**	**1**	**1**	**1**	***3***	**0**	**6**	**5**	**1**	*12*
8:00 AM	**0**	**0**	**0**	**3**	***3***	**0**	**0**	**4**	**2**	***6***	**1**	**2**	**1**	**0**	*4*
8:15 AM	**0**	**1**	**1**	**3**	***5***	**0**	**0**	**1**	**2**	***3***	**2**	**1**	**0**	**2**	***5***
8:30 AM	0	0	1	5	*6*	0	0	0	1	*1*	2	0	2	5	*9*
8:45 AM	0	0	1	1	*2*	0	2	1	1	*4*	1	1	1	0	*3*
Count Total	0	1	5	23	*29*	0	4	10	7	*21*	6	15	15	8	*44*
Peak Hour	**0**	**1**	**2**	**11**	***14***	**0**	**2**	**8**	**5**	***15***	**3**	**9**	**10**	**3**	***25***

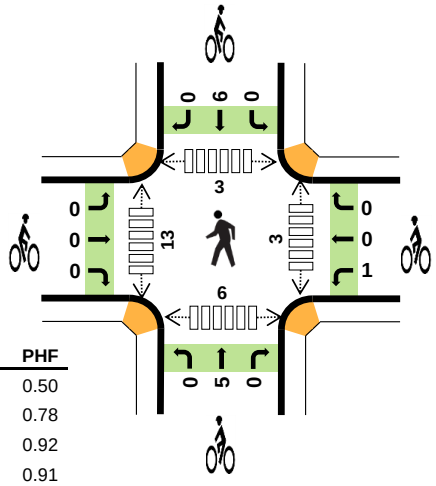
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Division St
Del Valle Pkwy

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	0.0%	0.50
WB	0.0%	0.78
NB	0.0%	0.92
SB	0.0%	0.91
TOTAL	0.0%	0.93



Two-Hour Count Summaries

Interval Start	Driveway Eastbound				Del Valle Pkwy Westbound				Division St Northbound				Hopyard Rd Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	0	0	1	9	0	33	0	0	79	3	0	30	77	0	234	0
4:15 PM	0	0	0	0	0	2	1	22	0	1	67	7	0	24	76	1	201	0
4:30 PM	0	0	0	0	0	5	0	22	0	0	82	12	0	29	78	1	229	0
4:45 PM	0	1	1	2	2	5	0	23	0	1	58	3	0	33	91	0	220	884
5:00 PM	**0**	**0**	**0**	**0**	**0**	**10**	**1**	**22**	**0**	**0**	**88**	**8**	**0**	**25**	**102**	**1**	**257**	907
5:15 PM	**0**	**0**	**1**	**3**	**0**	**7**	**1**	**34**	**0**	**0**	**85**	**8**	**0**	**40**	**117**	**4**	**300**	1,006
5:30 PM	**0**	**2**	**0**	**0**	**1**	**10**	**1**	**17**	**0**	**0**	**89**	**9**	**0**	**38**	**103**	**4**	**274**	1,051
5:45 PM	**0**	**0**	**1**	**1**	**0**	**5**	**0**	**22**	**0**	**0**	**98**	**9**	**0**	**39**	**111**	**0**	**286**	**1,117**
Count Total	0	5	3	6	4	53	4	195	0	2	646	59	0	258	755	11	2,001	0
Peak Hour All	**0**	**2**	**2**	**4**	**1**	**32**	**3**	**95**	**0**	**0**	**360**	**34**	**0**	**142**	**433**	**9**	**1,117**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**-**	**-**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	2	*2*	2	1	0	2	*5*
4:15 PM	0	0	0	2	*2*	0	0	1	1	*2*	1	4	0	2	*7*
4:30 PM	0	2	1	1	*4*	0	0	2	1	*3*	0	0	0	3	*3*
4:45 PM	0	0	0	0	*0*	0	0	2	0	*2*	2	3	0	0	*5*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**6**	***7***	**0**	**7**	**0**	**3**	*10*
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**0**	***2***	**0**	**5**	**1**	**0**	*6*
5:30 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**0**	***2***	**2**	**1**	**0**	**2**	*5*
5:45 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***	**1**	**0**	**2**	**1**	***4***
Count Total	0	2	1	3	*6*	0	1	10	10	*21*	8	21	3	13	*45*
Peak Hour	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**5**	**6**	***12***	**3**	**13**	**3**	**6**	***25***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Del Valle Pkwy				Division St				Hopyard Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:30 PM	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	0	4	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	6
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	0	0	0	1	0	1	0	0	1	0	0	1	2	0	6	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Two-Hour Count Summaries - Bikes

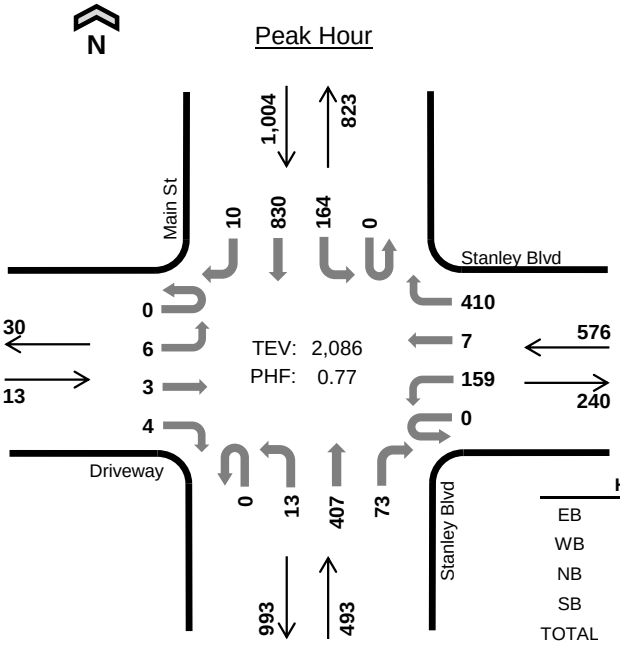
Interval Start	Driveway			Del Valle Pkwy			Division St			Hopyard Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	0
4:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	9
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**6**	**0**	**7**	14
5:15 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	14
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	13
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**12**
Count Total	0	0	0	1	0	0	0	10	0	0	10	0	21	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**6**	**0**	**12**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

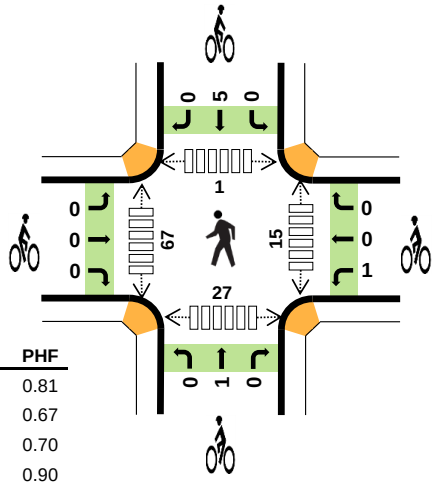
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Main St
Stanley Blvd

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	0.0%	0.81
WB	0.3%	0.67
NB	2.8%	0.70
SB	1.1%	0.90
TOTAL	1.3%	0.77



Two-Hour Count Summaries

Interval Start	Driveway Eastbound				Stanley Blvd Westbound				Stanley Blvd Northbound				Main St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	26	0	15	0	0	37	5	0	8	129	0	220	0
7:15 AM	0	0	1	0	0	35	0	38	0	0	44	12	0	12	161	0	303	0
7:30 AM	**0**	**0**	**1**	**1**	**0**	**44**	**5**	**114**	**0**	**2**	**97**	**11**	**0**	**27**	**216**	**1**	**519**	0
7:45 AM	**0**	**2**	**1**	**1**	**0**	**41**	**1**	**174**	**0**	**6**	**148**	**22**	**0**	**61**	**214**	**4**	**675**	1,717
8:00 AM	**0**	**2**	**1**	**0**	**0**	**34**	**1**	**74**	**0**	**4**	**75**	**24**	**0**	**42**	**229**	**4**	**490**	1,987
8:15 AM	**0**	**2**	**0**	**2**	**0**	**40**	**0**	**48**	**0**	**1**	**87**	**16**	**0**	**34**	**171**	**1**	**402**	**2,086**
8:30 AM	0	0	0	0	0	38	0	38	0	0	61	16	0	16	127	2	298	1,865
8:45 AM	0	3	0	1	0	26	0	33	0	1	58	22	0	17	130	0	291	1,481
Count Total	0	9	4	5	0	284	7	534	0	14	607	128	0	217	1,377	12	3,198	0
Peak Hour All	**0**	**6**	**3**	**4**	**0**	**159**	**7**	**410**	**0**	**13**	**407**	**73**	**0**	**164**	**830**	**10**	**2,086**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**12**	**2**	**0**	**0**	**11**	**0**	**27**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**3%**	**3%**	**-**	**0%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	1	3	*4*	0	0	0	0	*0*	1	3	0	2	*6*
7:15 AM	1	2	1	2	*6*	0	0	1	0	*1*	3	3	0	0	*6*
7:30 AM	**0**	**0**	**3**	**3**	***6***	**0**	**0**	**0**	**2**	***2***	**3**	**18**	**0**	**11**	*32*
7:45 AM	**0**	**2**	**2**	**2**	***6***	**0**	**0**	**0**	**2**	***2***	**5**	**32**	**0**	**13**	*50*
8:00 AM	**0**	**0**	**7**	**5**	***12***	**0**	**1**	**1**	**1**	***3***	**5**	**9**	**1**	**2**	*17*
8:15 AM	**0**	**0**	**2**	**1**	***3***	**0**	**0**	**0**	**0**	***0***	**2**	**8**	**0**	**1**	***11***
8:30 AM	0	0	1	7	*8*	0	0	0	0	*0*	3	5	0	1	*9*
8:45 AM	0	2	2	2	*6*	0	1	2	1	*4*	2	6	0	3	*11*
Count Total	1	6	19	25	*51*	0	2	4	6	*12*	24	84	1	33	*142*
Peak Hour	**0**	**2**	**14**	**11**	***27***	**0**	**1**	**1**	**5**	***7***	**15**	**67**	**1**	**27**	***110***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Stanley Blvd				Stanley Blvd				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	0
7:15 AM	0	0	1	0	0	1	0	1	0	0	1	0	0	0	2	0	6	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**3**	**0**	**6**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**6**	22
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**5**	**0**	**12**	30
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**3**	**27**
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5	1	8	29
8:45 AM	0	0	0	0	0	1	0	1	0	0	2	0	0	0	2	0	6	29
Count Total	0	0	1	0	0	2	0	4	0	0	17	2	0	1	23	1	51	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**12**	**2**	**0**	**0**	**11**	**0**	**27**	**0**

Two-Hour Count Summaries - Bikes

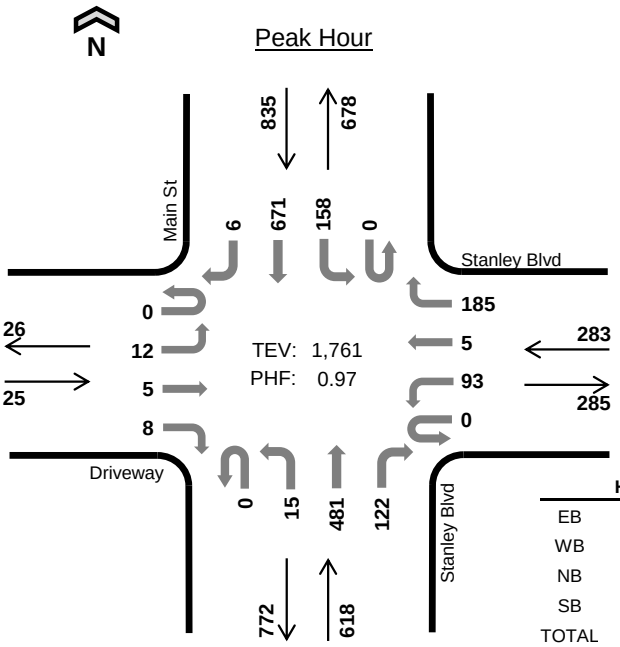
Interval Start	Driveway			Stanley Blvd			Stanley Blvd			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	5
8:00 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	8
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
8:45 AM	0	0	0	1	0	0	0	2	0	0	1	0	4	7
Count Total	0	0	0	2	0	0	0	4	0	0	6	0	12	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**0**	**7**	**0**

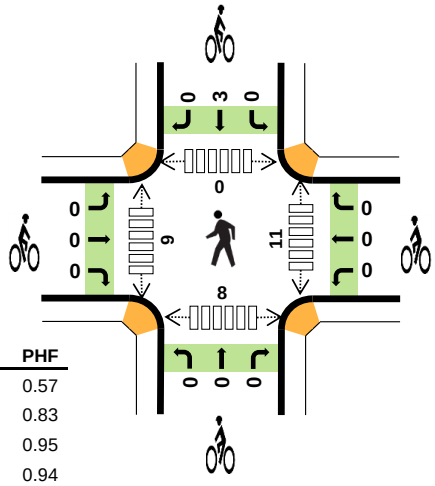
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Main St
Stanley Blvd

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM





	HV %:	PHF
EB	0.0%	0.57
WB	0.0%	0.83
NB	0.6%	0.95
SB	0.5%	0.94
TOTAL	0.5%	0.97

Two-Hour Count Summaries

Interval Start		Driveway Eastbound				Stanley Blvd Westbound				Stanley Blvd Northbound				Main St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	3	0	2	0	21	0	38	0	4	124	32	0	29	139	2	394	0
4:15 PM		0	5	4	1	0	17	4	24	0	4	129	27	0	30	144	2	391	0
4:30 PM		0	3	3	4	0	22	3	39	0	3	149	28	0	20	156	1	431	0
4:45 PM		0	3	0	0	0	29	0	26	0	8	113	39	0	51	154	4	427	1,643
5:00 PM		**0**	**4**	**3**	**4**	**0**	**30**	**3**	**52**	**0**	**3**	**113**	**33**	**0**	**35**	**160**	**0**	**440**	1,689
5:15 PM		**0**	**4**	**0**	**1**	**0**	**23**	**0**	**48**	**0**	**3**	**126**	**33**	**0**	**44**	**170**	**3**	**455**	1,753
5:30 PM		**0**	**2**	**0**	**1**	**0**	**16**	**0**	**42**	**0**	**5**	**123**	**29**	**0**	**46**	**154**	**1**	**419**	1,741
5:45 PM		**0**	**2**	**2**	**2**	**0**	**24**	**2**	**43**	**0**	**4**	**119**	**27**	**0**	**33**	**187**	**2**	**447**	**1,761**
Count Total		0	26	12	15	0	182	12	312	0	34	996	248	0	288	1,264	15	3,404	0
Peak Hour	**All**	**0**	**12**	**5**	**8**	**0**	**93**	**5**	**185**	**0**	**15**	**481**	**122**	**0**	**158**	**671**	**6**	**1,761**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**0**	**8**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**1%**	**0%**	**-**	**0%**	**1%**	**0%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	2	*3*	0	0	0	0	*0*	2	8	0	6	*16*
4:15 PM	0	1	1	3	*5*	0	0	2	0	*2*	1	4	0	1	*6*
4:30 PM	0	0	2	2	*4*	0	0	0	2	*2*	2	5	1	2	*10*
4:45 PM	0	0	2	2	*4*	0	0	0	0	*0*	1	2	0	0	*3*
5:00 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**1**	***1***	**3**	**3**	**0**	**0**	*6*
5:15 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**0**	*2*
5:30 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**2**	***2***	**5**	**3**	**0**	**4**	*12*
5:45 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**2**	**2**	**0**	**4**	***8***
Count Total	0	1	10	13	*24*	0	0	2	5	*7*	17	28	1	17	*63*
Peak Hour	**0**	**0**	**4**	**4**	***8***	**0**	**0**	**0**	**3**	***3***	**11**	**9**	**0**	**8**	***28***

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Stanley Blvd				Stanley Blvd				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	3	0	5	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	4	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	16
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	15
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	12
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	10
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**8**
Count Total	0	0	0	0	0	1	0	0	0	0	9	1	0	0	13	0	24	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**0**	**8**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Stanley Blvd			Stanley Blvd			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	3
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
Count Total	0	0	0	0	0	0	0	2	0	0	5	0	7	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	**0**

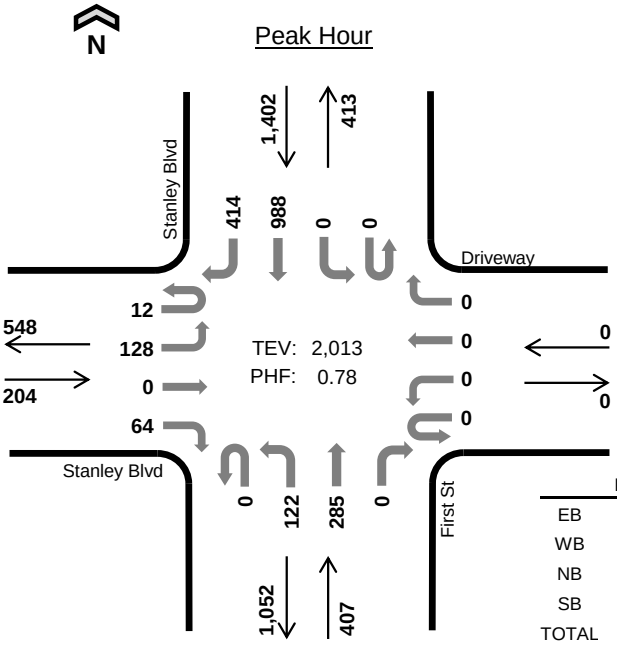
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

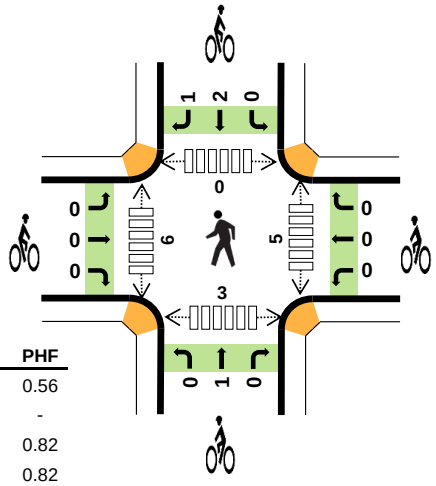
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

First St
Stanley Blvd

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM

Peak Hour





	HV %:	PHF
EB	0.5%	0.56
WB	-	-
NB	3.7%	0.82
SB	1.9%	0.82
TOTAL	2.1%	0.78

Two-Hour Count Summaries

Interval Start		Stanley Blvd Eastbound				Driveway Westbound				First St Northbound				Stanley Blvd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	11	0	6	0	0	0	0	0	9	56	0	0	0	222	24	328	0
7:15 AM		**5**	**8**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**15**	**54**	**0**	**0**	**0**	**273**	**50**	**409**	0
7:30 AM		**1**	**22**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**39**	**61**	**0**	**0**	**0**	**219**	**147**	**502**	0
7:45 AM		**3**	**64**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**43**	**81**	**0**	**0**	**0**	**277**	**150**	**642**	1,881
8:00 AM		**3**	**34**	**0**	**23**	**0**	**0**	**0**	**0**	**0**	**25**	**89**	**0**	**0**	**0**	**219**	**67**	**460**	**2,013**
8:15 AM		3	27	0	22	0	0	0	0	0	27	93	0	0	0	182	45	399	2,003
8:30 AM		4	18	0	7	0	0	0	0	0	24	88	0	0	0	221	38	400	1,901
8:45 AM		2	28	0	8	0	0	0	0	0	23	68	0	0	0	219	36	384	1,643
Count Total		21	212	0	107	0	0	0	0	0	205	590	0	0	0	1,832	557	3,524	0
Peak Hour	**All**	**12**	**128**	**0**	**64**	**0**	**0**	**0**	**0**	**0**	**122**	**285**	**0**	**0**	**0**	**988**	**414**	**2,013**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**13**	**0**	**0**	**0**	**26**	**0**	**42**	**0**
	HV%	**0%**	**1%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**2%**	**5%**	**-**	**-**	**-**	**3%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	3	3	*6*	0	0	0	0	*0*	1	0	0	0	*1*
7:15 AM	**0**	**0**	**4**	**11**	***15***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**1**	*1*
7:30 AM	**1**	**0**	**3**	**3**	***7***	**0**	**0**	**0**	**2**	***2***	**1**	**5**	**0**	**2**	*8*
7:45 AM	**0**	**0**	**4**	**4**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**0**	**4**	**8**	***12***	**0**	**0**	**0**	**1**	***1***	**4**	**1**	**0**	**0**	***5***
8:15 AM	0	0	4	7	*11*	0	0	0	0	*0*	0	0	0	1	*1*
8:30 AM	2	0	6	2	*10*	0	0	0	0	*0*	2	1	0	0	*3*
8:45 AM	0	0	2	7	*9*	0	0	1	0	*1*	1	1	0	1	*3*
Count Total	3	0	30	45	*78*	0	0	2	3	*5*	9	8	0	5	*22*
Peak Hour	**1**	**0**	**15**	**26**	***42***	**0**	**0**	**1**	**3**	***4***	**5**	**6**	**0**	**3**	***14***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Stanley Blvd				Driveway				First St				Stanley Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	6	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**11**	**0**	**15**	0
7:30 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**7**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**4**	**0**	**8**	36
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**8**	**0**	**12**	**42**
8:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	6	1	11	38
8:30 AM	0	1	0	1	0	0	0	0	0	0	6	0	0	0	2	0	10	41
8:45 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	6	1	9	42
Count Total	0	2	0	1	0	0	0	0	0	3	27	0	0	0	43	2	78	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**13**	**0**	**0**	**0**	**26**	**0**	**42**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Stanley Blvd			Driveway			First St			Stanley Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**2**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**4**
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1	2
Count Total	0	0	0	0	0	0	1	1	0	0	2	1	5	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**1**	**4**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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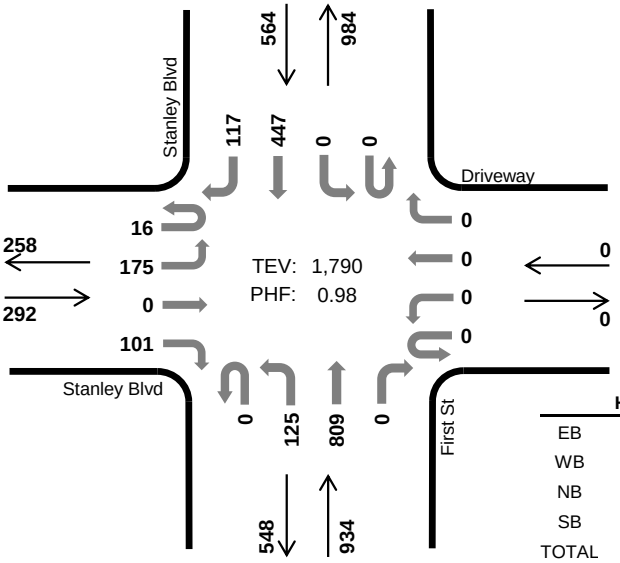
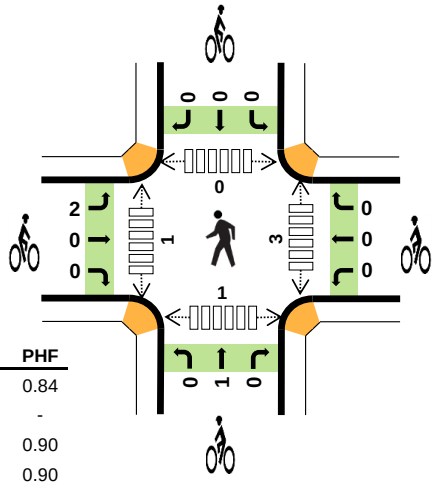
First St
Stanley Blvd

Peak Hour

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	0.0%	0.84
WB	-	-
NB	1.8%	0.90
SB	1.4%	0.90
TOTAL	1.4%	0.98

Two-Hour Count Summaries

Interval Start		Stanley Blvd Eastbound				Driveway Westbound				First St Northbound				Stanley Blvd Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		1	35	0	20	0	0	0	0	0	13	201	0	0	0	100	40	410	0
4:15 PM		3	43	0	23	0	0	0	0	0	15	178	0	0	0	87	24	373	0
4:30 PM		4	33	0	16	0	0	0	0	0	29	184	0	0	0	97	28	391	0
4:45 PM		**5**	**53**	**0**	**26**	**0**	**0**	**0**	**0**	**0**	**26**	**179**	**0**	**0**	**0**	**112**	**29**	**430**	1,604
5:00 PM		**5**	**30**	**0**	**19**	**0**	**0**	**0**	**0**	**0**	**31**	**205**	**0**	**0**	**0**	**124**	**33**	**447**	1,641
5:15 PM		**3**	**55**	**0**	**29**	**0**	**0**	**0**	**0**	**0**	**26**	**208**	**0**	**0**	**0**	**101**	**34**	**456**	1,724
5:30 PM		**3**	**37**	**0**	**27**	**0**	**0**	**0**	**0**	**0**	**42**	**217**	**0**	**0**	**0**	**110**	**21**	**457**	**1,790**
5:45 PM		7	23	0	24	0	0	0	0	0	28	186	0	0	0	91	25	384	1,744
Count Total		31	309	0	184	0	0	0	0	0	210	1,558	0	0	0	822	234	3,348	0
Peak Hour	**All**	**16**	**175**	**0**	**101**	**0**	**0**	**0**	**0**	**0**	**125**	**809**	**0**	**0**	**0**	**447**	**117**	**1,790**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**16**	**0**	**0**	**0**	**7**	**1**	**25**	**0**
	HV%	**0%**	**0%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**1%**	**2%**	**-**	**-**	**-**	**2%**	**1%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	3	4	*7*	0	0	0	2	*2*	1	0	0	0	*1*
4:15 PM	0	0	2	2	*4*	0	0	0	0	*0*	0	8	0	0	*8*
4:30 PM	1	0	3	2	*6*	0	0	0	0	*0*	1	5	0	1	*7*
4:45 PM	**0**	**0**	**4**	**5**	***9***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
5:00 PM	**0**	**0**	**4**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	*2*
5:15 PM	**0**	**0**	**4**	**1**	***5***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**1**	*1*
5:30 PM	**0**	**0**	**5**	**1**	***6***	**2**	**0**	**0**	**0**	***2***	**0**	**1**	**0**	**0**	***1***
5:45 PM	0	0	4	1	*5*	0	0	0	0	*0*	0	2	0	1	*3*
Count Total	1	0	29	17	*47*	2	0	1	2	*5*	5	16	0	3	*24*
Peak Hour	**0**	**0**	**17**	**8**	***25***	**2**	**0**	**1**	**0**	***3***	**3**	**1**	**0**	**1**	***5***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Stanley Blvd				Driveway				First St				Stanley Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	7	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	1	4	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	3	0	0	0	2	0	6	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**4**	**1**	**9**	26
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**5**	24
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**5**	25
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**6**	**25**
5:45 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	5	21
Count Total	0	1	0	0	0	0	0	0	0	1	28	0	0	0	15	2	47	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**16**	**0**	**0**	**0**	**7**	**1**	**25**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Stanley Blvd			Driveway			First St			Stanley Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	1
5:30 PM	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	2	0	0	0	0	0	0	1	0	0	2	0	5	0
Peak Hour	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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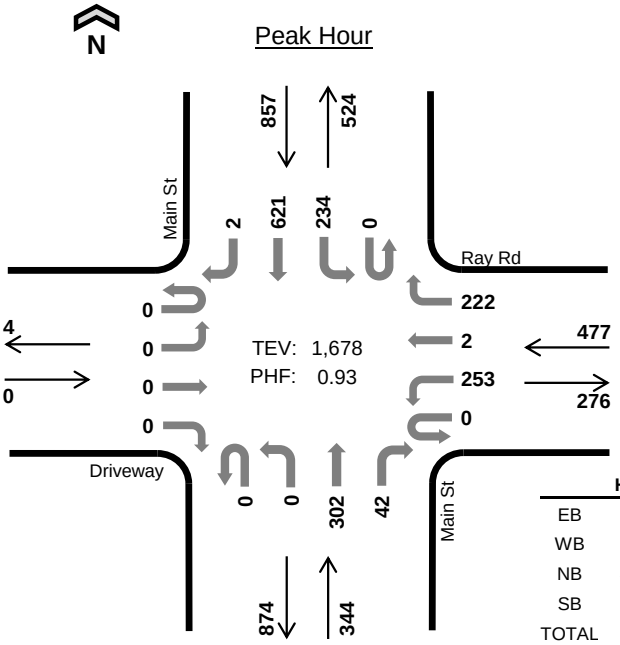
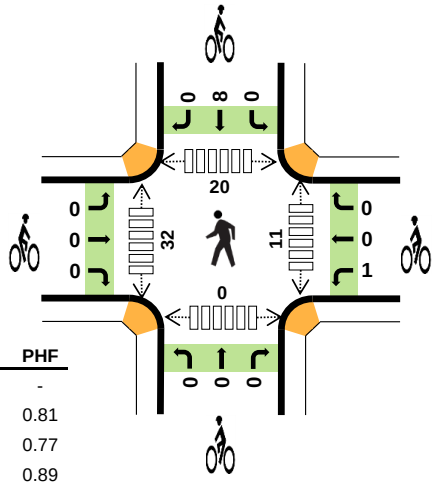
Main St
Ray Rd

Peak Hour

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	-	-
WB	0.6%	0.81
NB	4.1%	0.77
SB	1.5%	0.89
TOTAL	1.8%	0.93



Two-Hour Count Summaries

Interval Start	Driveway Eastbound				Ray Rd Westbound				Main St Northbound				Main St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	0	0	25	1	18	0	0	26	9	0	20	114	1	215	0
7:15 AM	0	0	0	2	0	61	1	28	0	0	42	6	0	33	141	1	315	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**57**	**0**	**61**	**0**	**0**	**74**	**9**	**0**	**45**	**171**	**0**	**417**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**49**	**0**	**98**	**0**	**0**	**98**	**14**	**0**	**62**	**130**	**0**	**451**	1,398
8:00 AM	**0**	**0**	**0**	**0**	**0**	**74**	**2**	**30**	**0**	**0**	**53**	**5**	**0**	**69**	**170**	**2**	**405**	1,588
8:15 AM	**0**	**0**	**0**	**0**	**0**	**73**	**0**	**33**	**0**	**0**	**77**	**14**	**0**	**58**	**150**	**0**	**405**	**1,678**
8:30 AM	0	0	0	0	0	49	0	27	0	0	52	11	0	34	123	0	296	1,557
8:45 AM	0	0	0	1	0	56	0	25	0	1	51	10	0	39	107	1	291	1,397
Count Total	0	1	0	3	0	444	4	320	0	1	473	78	0	360	1,106	5	2,795	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**253**	**2**	**222**	**0**	**0**	**302**	**42**	**0**	**234**	**621**	**2**	**1,678**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**13**	**1**	**0**	**1**	**12**	**0**	**30**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**1%**	**0%**	**0%**	**-**	**-**	**4%**	**2%**	**-**	**0%**	**2%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	3	3	*6*	0	1	0	0	*1*	4	1	0	0	*5*
7:15 AM	1	1	2	3	*7*	0	0	1	0	*1*	1	3	1	1	*6*
7:30 AM	**0**	**0**	**3**	**3**	***6***	**0**	**1**	**0**	**1**	***2***	**3**	**7**	**4**	**0**	*14*
7:45 AM	**0**	**0**	**4**	**3**	***7***	**0**	**0**	**0**	**3**	***3***	**4**	**13**	**7**	**0**	*24*
8:00 AM	**0**	**1**	**4**	**6**	***11***	**0**	**0**	**0**	**4**	***4***	**0**	**6**	**7**	**0**	*13*
8:15 AM	**0**	**2**	**3**	**1**	***6***	**0**	**0**	**0**	**0**	***0***	**4**	**6**	**2**	**0**	***12***
8:30 AM	0	0	1	7	*8*	0	0	0	2	*2*	1	0	1	0	*2*
8:45 AM	0	0	3	3	*6*	0	1	1	1	*3*	1	2	1	0	*4*
Count Total	1	4	23	29	*57*	0	3	2	11	*16*	18	38	23	1	*80*
Peak Hour	**0**	**3**	**14**	**13**	***30***	**0**	**1**	**0**	**8**	***9***	**11**	**32**	**20**	**0**	***63***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Ray Rd				Main St				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	1	0	2	1	0	6	0
7:15 AM	0	0	0	1	0	0	1	0	0	0	2	0	0	1	2	0	7	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**6**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**1**	**2**	**0**	**7**	26
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**11**	31
8:15 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**1**	**0**	**6**	**30**
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	6	0	8	32
8:45 AM	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3	0	6	31
Count Total	0	0	0	1	0	2	1	1	0	0	20	3	0	5	24	0	57	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**13**	**1**	**0**	**1**	**12**	**0**	**30**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Ray Rd			Main St			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	7
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**4**	10
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	2	9
8:45 AM	0	0	0	0	0	1	0	1	0	0	1	0	3	9
Count Total	0	0	0	2	0	1	0	2	0	2	9	0	16	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**9**	**0**

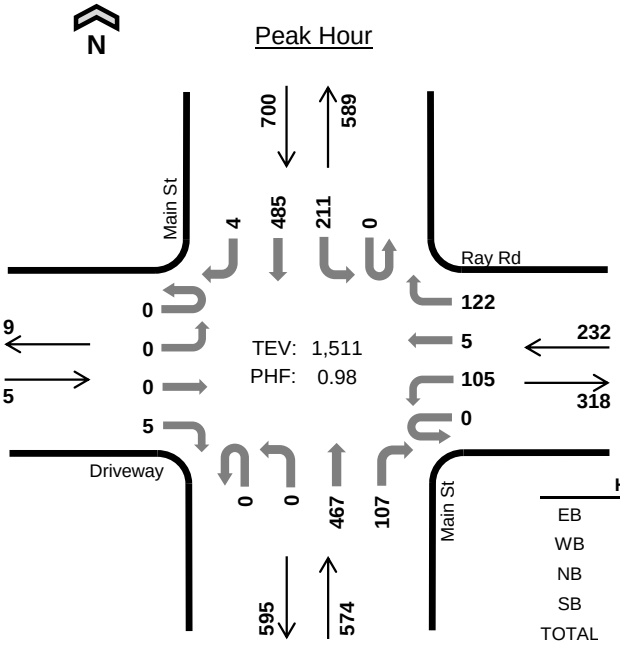
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

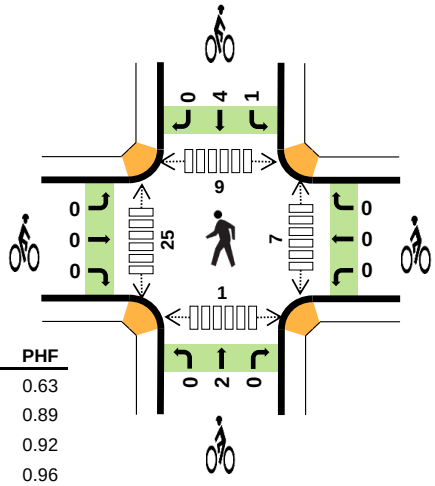
Main St
Ray Rd

Peak Hour

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	0.0%	0.63
WB	0.0%	0.89
NB	0.7%	0.92
SB	0.9%	0.96
TOTAL	0.7%	0.98



Two-Hour Count Summaries

Interval Start		Driveway Eastbound				Ray Rd Westbound				Main St Northbound				Main St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	1	0	13	1	26	0	0	116	11	0	38	97	1	304	0
4:15 PM		0	0	0	2	0	24	1	37	0	0	106	23	0	48	117	2	360	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**15**	**1**	**30**	**0**	**0**	**131**	**25**	**0**	**50**	**109**	**3**	**364**	0
4:45 PM		**0**	**0**	**0**	**1**	**0**	**26**	**0**	**36**	**0**	**0**	**108**	**26**	**0**	**63**	**119**	**1**	**380**	1,408
5:00 PM		**0**	**0**	**0**	**2**	**0**	**34**	**1**	**30**	**0**	**0**	**107**	**29**	**0**	**44**	**133**	**0**	**380**	1,484
5:15 PM		**0**	**0**	**0**	**2**	**0**	**30**	**3**	**26**	**0**	**0**	**121**	**27**	**0**	**54**	**124**	**0**	**387**	**1,511**
5:30 PM		0	0	0	0	0	25	0	30	0	2	107	24	0	61	113	2	364	1,511
5:45 PM		0	0	0	2	0	21	0	23	0	0	126	18	0	48	129	2	369	1,500
Count Total		0	0	0	10	0	188	7	238	0	2	922	183	0	406	941	11	2,908	0
Peak Hour	**All**	**0**	**0**	**0**	**5**	**0**	**105**	**5**	**122**	**0**	**0**	**467**	**107**	**0**	**211**	**485**	**4**	**1,511**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**10**	**0**
	HV%	**-**	**-**	**-**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**-**	**1%**	**0%**	**-**	**0%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	1	*2*	0	1	0	1	*2*	6	5	5	0	*16*
4:15 PM	0	1	1	4	*6*	0	1	0	0	*1*	8	8	0	0	*16*
4:30 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**1**	***1***	**3**	**7**	**1**	**0**	*11*
4:45 PM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**2**	***2***	**0**	**14**	**3**	**0**	*17*
5:00 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**1**	***1***	**3**	**3**	**4**	**0**	*10*
5:15 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**2**	**1**	***3***	**1**	**1**	**1**	**1**	***4***
5:30 PM	0	0	1	1	*2*	0	0	2	1	*3*	4	14	10	0	*28*
5:45 PM	0	0	1	1	*2*	0	0	0	0	*0*	4	9	6	0	*19*
Count Total	0	1	8	13	*22*	0	2	4	7	*13*	29	61	30	1	*121*
Peak Hour	**0**	**0**	**4**	**6**	***10***	**0**	**0**	**2**	**5**	***7***	**7**	**25**	**9**	**1**	***42***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Ray Rd				Main St				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	1	3	0	6	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	14
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	14
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**10**
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	9
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	8
Count Total	0	0	0	0	0	1	0	0	0	0	8	0	0	1	12	0	22	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**10**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Ray Rd			Main St			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	1	0	0	0	0	0	0	1	0	2	0
4:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**3**	**7**
5:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3	9
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Count Total	0	0	0	2	0	0	0	4	0	1	6	0	13	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**4**	**0**	**7**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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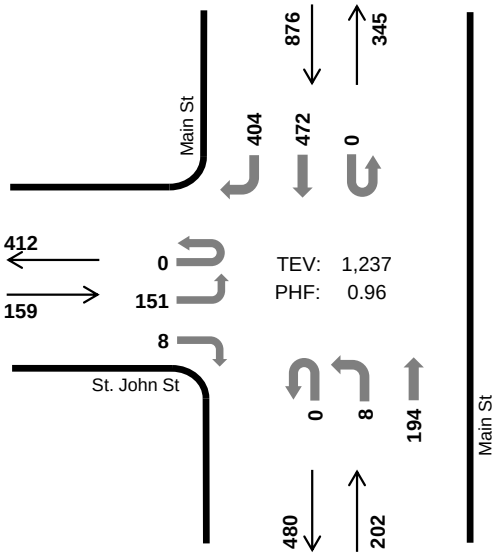
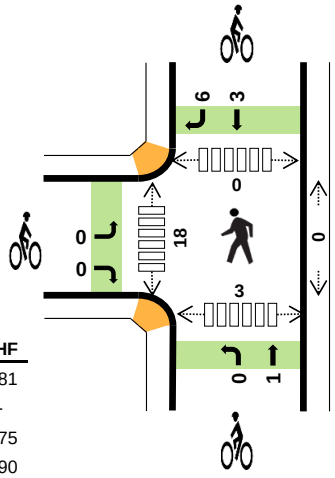
Main St
St. John St

Peak Hour

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	3.8%	0.81
WB	-	-
NB	3.5%	0.75
SB	1.6%	0.90
TOTAL	2.2%	0.96

Two-Hour Count Summaries

Interval Start	St. John St Eastbound				0 Westbound				Main St Northbound				Main St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	16	0	2	0	0	0	0	0	1	19	0	0	0	98	40	176	0
7:15 AM	0	15	0	0	0	0	0	0	0	0	33	0	0	0	133	70	251	0
7:30 AM	**0**	**39**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**44**	**0**	**0**	**0**	**115**	**114**	**314**	0
7:45 AM	**0**	**48**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**65**	**0**	**0**	**0**	**104**	**76**	**296**	1,037
8:00 AM	**0**	**32**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**2**	**26**	**0**	**0**	**0**	**124**	**118**	**305**	1,166
8:15 AM	**0**	**32**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**3**	**59**	**0**	**0**	**0**	**129**	**96**	**322**	**1,237**
8:30 AM	0	28	0	1	0	0	0	0	0	1	35	0	0	0	111	60	236	1,159
8:45 AM	0	21	0	3	0	0	0	0	0	2	40	0	0	0	102	62	230	1,093
Count Total	0	231	0	14	0	0	0	0	0	12	321	0	0	0	916	636	2,130	0
Peak Hour All	**0**	**151**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**8**	**194**	**0**	**0**	**0**	**472**	**404**	**1,237**	**0**
Peak Hour HV	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**7**	**7**	**27**	**0**
Peak Hour HV%	**-**	**4%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**4%**	**-**	**-**	**-**	**1%**	**2%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	0	1	1	*5*	0	0	0	1	*1*	0	1	0	0	*1*
7:15 AM	2	0	1	3	*6*	0	0	1	0	*1*	0	3	0	0	*3*
7:30 AM	**1**	**0**	**1**	**3**	***5***	**0**	**0**	**0**	**2**	***2***	**0**	**6**	**0**	**2**	*8*
7:45 AM	**3**	**0**	**1**	**2**	***6***	**0**	**0**	**1**	**3**	***4***	**0**	**5**	**0**	**0**	*5*
8:00 AM	**1**	**0**	**3**	**6**	***10***	**0**	**0**	**0**	**4**	***4***	**0**	**4**	**0**	**0**	*4*
8:15 AM	**1**	**0**	**2**	**3**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**1**	***4***
8:30 AM	1	0	0	6	*7*	0	0	0	0	*0*	0	1	0	0	*1*
8:45 AM	1	0	2	3	*6*	0	0	1	1	*2*	0	2	0	1	*3*
Count Total	13	0	11	27	*51*	0	0	3	11	*14*	0	25	0	4	*29*
Peak Hr	**6**	**0**	**7**	**14**	***27***	**0**	**0**	**1**	**9**	***10***	**0**	**18**	**0**	**3**	***21***

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	St. John St				0				Main St				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	1	5	0
7:15 AM	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	3	6	0
7:30 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**2**	**5**	0
7:45 AM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**6**	22
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**3**	**10**	27
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**1**	**6**	**27**
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	2	7	29
8:45 AM	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	1	6	29
Count Total	0	13	0	0	0	0	0	0	0	1	10	0	0	0	13	14	51	0
Peak Hour	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**7**	**7**	**27**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	St. John St			0			Main St			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**2**	**4**	8
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**4**	11
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	8
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	6
Count Total	0	0	0	0	0	0	0	3	0	0	4	7	14	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**6**	**10**	**0**

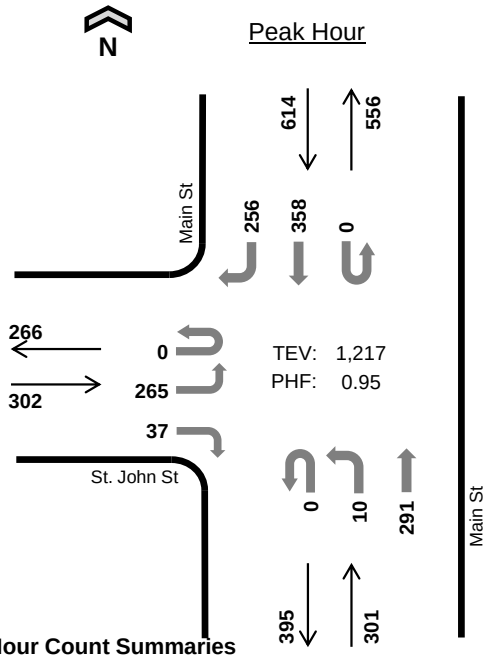
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

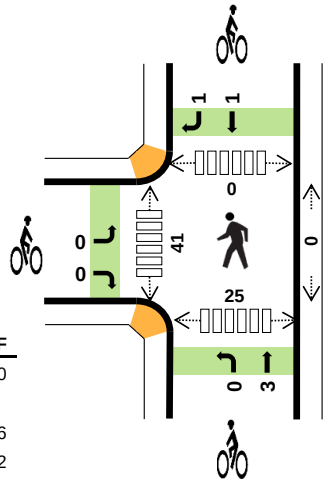
Main St
St. John St

Peak Hour

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	1.3%	0.90
WB	-	-
NB	0.0%	0.96
SB	0.7%	0.92
TOTAL	0.7%	0.95



Two-Hour Count Summaries

Interval Start	St. John St Eastbound				0 Westbound				Main St Northbound				Main St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	48	0	5	0	0	0	0	0	0	77	0	0	0	73	36	239	0
4:15 PM	0	50	0	2	0	0	0	0	0	3	83	0	0	0	92	53	283	0
4:30 PM	0	72	0	4	0	0	0	0	0	4	81	0	0	0	80	43	284	0
4:45 PM	0	59	0	7	0	0	0	0	0	2	77	0	0	0	96	51	292	1,098
5:00 PM	**0**	**61**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**4**	**72**	**0**	**0**	**0**	**92**	**75**	**315**	1,174
5:15 PM	**0**	**75**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**3**	**75**	**0**	**0**	**0**	**91**	**67**	**320**	1,211
5:30 PM	**0**	**61**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**2**	**69**	**0**	**0**	**0**	**84**	**51**	**275**	1,202
5:45 PM	**0**	**68**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**1**	**75**	**0**	**0**	**0**	**91**	**63**	**307**	**1,217**
Count Total	0	494	0	55	0	0	0	0	0	19	609	0	0	0	699	439	2,315	0
Peak Hour **All**	**0**	**265**	**0**	**37**	**0**	**0**	**0**	**0**	**0**	**10**	**291**	**0**	**0**	**0**	**358**	**256**	**1,217**	**0**
Peak Hour **HV**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**8**	**0**
Peak Hour **HV%**	**-**	**2%**	**-**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**0%**	**-**	**-**	**-**	**0%**	**2%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	0	1	*2*	0	0	0	2	*2*	0	7	0	4	*11*
4:15 PM	1	0	0	4	*5*	0	0	0	1	*1*	0	9	0	3	*12*
4:30 PM	1	0	0	2	*3*	0	0	0	1	*1*	0	11	0	3	*14*
4:45 PM	1	0	0	2	*3*	0	0	0	2	*2*	0	9	0	6	*15*
5:00 PM	**1**	**0**	**0**	**1**	***2***	**0**	**0**	**0**	**1**	***1***	**0**	**4**	**0**	**9**	*13*
5:15 PM	**1**	**0**	**0**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**1**	*4*
5:30 PM	**1**	**0**	**0**	**1**	***2***	**0**	**0**	**3**	**1**	***4***	**0**	**17**	**0**	**5**	*22*
5:45 PM	**1**	**0**	**0**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**17**	**0**	**10**	***27***
Count Total	8	0	0	13	*21*	0	0	3	8	*11*	0	77	0	41	*118*
Peak Hr	**4**	**0**	**0**	**4**	***8***	**0**	**0**	**3**	**2**	***5***	**0**	**41**	**0**	**25**	***66***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	St. John St				0				Main St				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1	5	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	13
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	13
5:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	10
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	9
5:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**8**
Count Total	0	8	0	0	0	0	0	0	0	0	0	0	0	0	5	8	21	0
Peak Hour	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**8**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	St. John St			0			Main St			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**4**	7
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**
Count Total	0	0	0	0	0	0	0	3	0	0	5	3	11	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**1**	**5**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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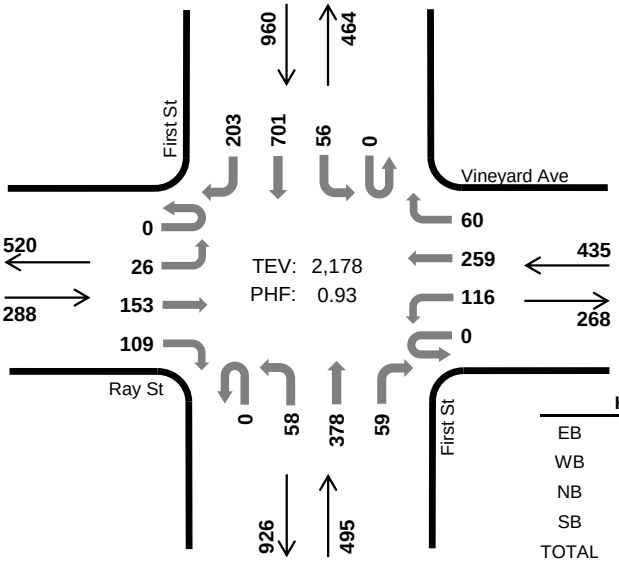
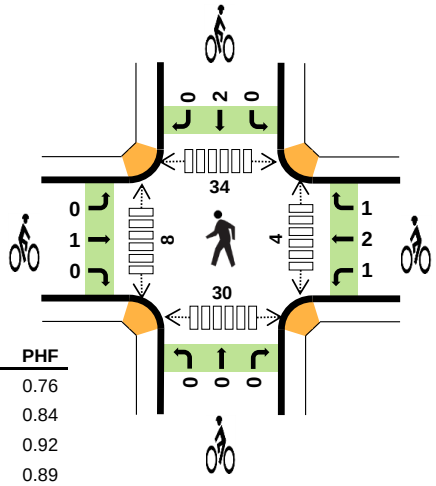
First St
Vineyard Ave

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

Peak Hour





	HV %:	PHF
EB	0.7%	0.76
WB	0.5%	0.84
NB	3.4%	0.92
SB	2.2%	0.89
TOTAL	1.9%	0.93

Two-Hour Count Summaries

Interval Start		Ray St Eastbound				Vineyard Ave Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	2	7	16	0	22	20	5	0	6	58	8	0	5	195	17	361	0
7:15 AM		0	8	17	30	0	26	36	9	0	9	55	10	0	6	204	42	452	0
7:30 AM		**0**	**4**	**22**	**26**	**0**	**18**	**68**	**13**	**0**	**20**	**99**	**16**	**0**	**7**	**183**	**43**	**519**	0
7:45 AM		**0**	**6**	**43**	**20**	**0**	**23**	**73**	**22**	**0**	**24**	**96**	**10**	**0**	**18**	**196**	**54**	**585**	1,917
8:00 AM		**0**	**7**	**58**	**30**	**0**	**30**	**49**	**10**	**0**	**11**	**92**	**15**	**0**	**18**	**184**	**68**	**572**	2,128
8:15 AM		**0**	**9**	**30**	**33**	**0**	**45**	**69**	**15**	**0**	**3**	**91**	**18**	**0**	**13**	**138**	**38**	**502**	**2,178**
8:30 AM		0	9	14	24	0	25	31	6	0	0	102	23	0	4	192	47	477	2,136
8:45 AM		0	2	15	30	0	14	29	4	0	1	81	12	0	3	172	41	404	1,955
Count Total		0	47	206	209	0	203	375	84	0	74	674	112	0	74	1,464	350	3,872	0
Peak Hour	**All**	**0**	**26**	**153**	**109**	**0**	**116**	**259**	**60**	**0**	**58**	**378**	**59**	**0**	**56**	**701**	**203**	**2,178**	**0**
	HV	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**14**	**3**	**0**	**1**	**17**	**3**	**42**	**0**
	HV%	**-**	**0%**	**1%**	**1%**	**-**	**0%**	**0%**	**3%**	**-**	**0%**	**4%**	**5%**	**-**	**2%**	**2%**	**1%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	6	2	*8*	0	1	0	0	*1*	1	2	1	0	*4*
7:15 AM	3	2	3	11	*19*	0	0	0	0	*0*	1	0	3	7	*11*
7:30 AM	**0**	**0**	**4**	**3**	***7***	**0**	**2**	**0**	**1**	***3***	**0**	**0**	**11**	**7**	*18*
7:45 AM	**1**	**2**	**3**	**3**	***9***	**1**	**2**	**0**	**0**	***3***	**3**	**4**	**15**	**9**	*31*
8:00 AM	**0**	**0**	**6**	**10**	***16***	**0**	**0**	**0**	**1**	***1***	**1**	**1**	**5**	**9**	*16*
8:15 AM	**1**	**0**	**4**	**5**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**3**	**5**	***11***
8:30 AM	2	1	7	3	*13*	0	1	0	0	*1*	0	0	2	4	*6*
8:45 AM	2	1	2	5	*10*	0	2	0	0	*2*	0	2	3	4	*9*
Count Total	9	6	35	42	*92*	1	8	0	2	*11*	6	12	43	45	*106*
Peak Hour	**2**	**2**	**17**	**21**	***42***	**1**	**4**	**0**	**2**	***7***	**4**	**8**	**34**	**30**	***76***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Ray St Eastbound				Vineyard Ave Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	4	2	0	0	2	0	8	0
7:15 AM	0	0	3	0	0	1	0	1	0	0	3	0	0	0	11	0	19	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**2**	**1**	**7**	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**1**	**0**	**0**	**3**	**0**	**9**	43
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**0**	**0**	**9**	**1**	**16**	51
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**1**	**3**	**1**	**10**	**42**
8:30 AM	0	1	0	1	0	0	0	1	0	0	6	1	0	0	3	0	13	48
8:45 AM	0	0	0	2	0	1	0	0	0	0	0	2	0	0	4	1	10	49
Count Total	0	1	4	4	0	2	0	4	0	0	27	8	0	1	37	4	92	0
Peak Hour	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**14**	**3**	**0**	**1**	**17**	**3**	**42**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Ray St Eastbound			Vineyard Ave Westbound			First St Northbound			First St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	0
7:45 AM	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	7
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	7
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	5
8:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2	4
Count Total	0	1	0	1	6	1	0	0	0	0	2	0	11	0
Peak Hour	**0**	**1**	**0**	**1**	**2**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**7**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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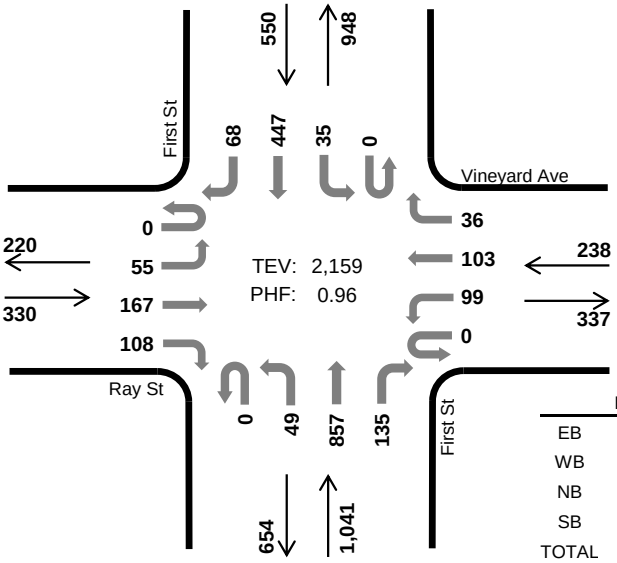
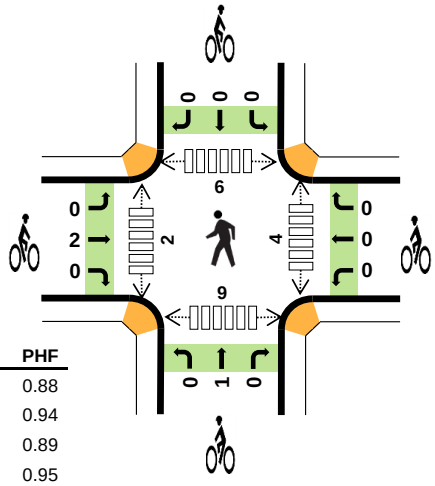
First St
Vineyard Ave

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour



	HV %:	PHF
EB	0.0%	0.88
WB	0.8%	0.94
NB	2.0%	0.89
SB	1.3%	0.95
TOTAL	1.4%	0.96



Two-Hour Count Summaries

Interval Start	Ray St Eastbound				Vineyard Ave Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	15	28	13	0	21	31	11	0	12	174	20	0	11	89	12	437	0
4:15 PM	0	15	21	30	0	14	22	8	0	17	190	30	0	13	94	17	471	0
4:30 PM	0	12	36	20	0	32	26	9	0	16	165	34	0	11	86	13	460	0
4:45 PM	**0**	**11**	**44**	**34**	**0**	**17**	**35**	**6**	**0**	**8**	**207**	**33**	**0**	**11**	**118**	**15**	**539**	1,907
5:00 PM	**0**	**13**	**35**	**28**	**0**	**30**	**27**	**6**	**0**	**13**	**203**	**31**	**0**	**8**	**112**	**19**	**525**	1,995
5:15 PM	**0**	**13**	**37**	**21**	**0**	**27**	**25**	**5**	**0**	**11**	**251**	**31**	**0**	**7**	**113**	**19**	**560**	2,084
5:30 PM	**0**	**18**	**51**	**25**	**0**	**25**	**16**	**19**	**0**	**17**	**196**	**40**	**0**	**9**	**104**	**15**	**535**	**2,159**
5:45 PM	0	9	27	31	0	13	15	11	0	9	218	34	0	15	97	11	490	2,110
Count Total	0	106	279	202	0	179	197	75	0	103	1,604	253	0	85	813	121	4,017	0
Peak Hour All	**0**	**55**	**167**	**108**	**0**	**99**	**103**	**36**	**0**	**49**	**857**	**135**	**0**	**35**	**447**	**68**	**2,159**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**17**	**4**	**0**	**0**	**7**	**0**	**30**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**1%**	**1%**	**0%**	**-**	**0%**	**2%**	**3%**	**-**	**0%**	**2%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	3	3	*6*	0	1	0	0	*1*	0	2	2	9	*13*
4:15 PM	1	1	2	1	*5*	0	0	0	0	*0*	1	6	1	6	*14*
4:30 PM	0	1	5	2	*8*	0	0	1	0	*1*	1	0	2	8	*11*
4:45 PM	**0**	**1**	**7**	**4**	***12***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**5**	**2**	*8*
5:00 PM	**0**	**1**	**5**	**1**	***7***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**3**	*5*
5:15 PM	**0**	**0**	**4**	**1**	***5***	**1**	**0**	**1**	**0**	***2***	**2**	**0**	**0**	**2**	*4*
5:30 PM	**0**	**0**	**5**	**1**	***6***	**1**	**0**	**0**	**0**	***1***	**0**	**2**	**0**	**2**	***4***
5:45 PM	0	1	3	1	*5*	0	0	0	0	*0*	1	0	0	5	*6*
Count Total	1	5	34	14	*54*	2	1	2	0	*5*	7	10	11	37	*65*
Peak Hour	**0**	**2**	**21**	**7**	***30***	**2**	**0**	**1**	**0**	***3***	**4**	**2**	**6**	**9**	***21***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Ray St Eastbound				Vineyard Ave Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	6	0
4:15 PM	0	0	1	0	0	0	1	0	0	0	2	0	0	0	1	0	5	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	4	1	0	0	2	0	8	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**4**	**3**	**0**	**0**	**4**	**0**	**12**	31
5:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**7**	32
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**5**	32
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**1**	**0**	**6**	**30**
5:45 PM	0	0	0	0	0	1	0	0	0	0	3	0	0	0	1	0	5	23
Count Total	0	0	1	0	0	3	2	0	0	0	29	5	0	0	14	0	54	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**17**	**4**	**0**	**0**	**7**	**0**	**30**	**0**

Two-Hour Count Summaries - Bikes

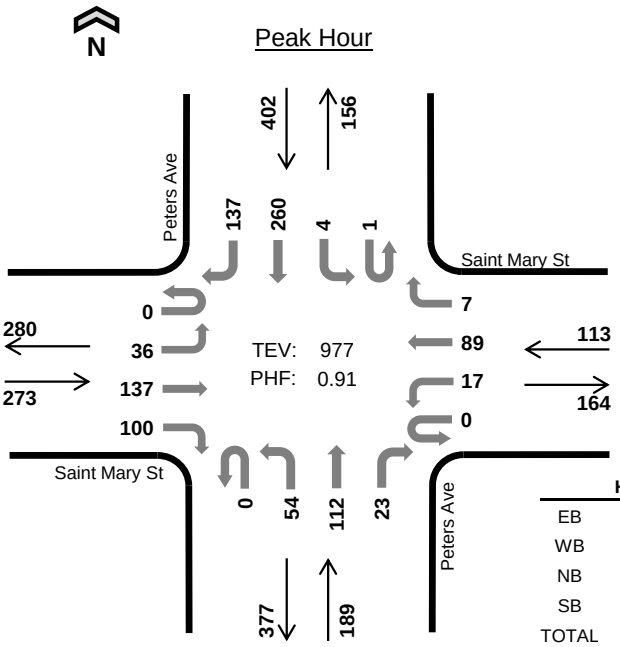
Interval Start	Ray St Eastbound			Vineyard Ave Westbound			First St Northbound			First St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	3
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	2	0	0	1	0	0	2	0	0	0	0	5	0
Peak Hour	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

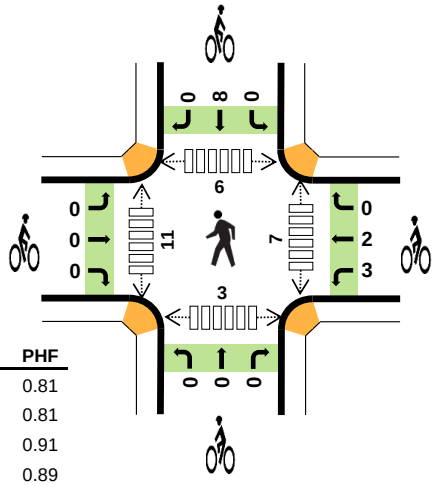
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Peters Ave
Saint Mary St

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	2.2%	0.81
WB	1.8%	0.81
NB	3.7%	0.91
SB	1.5%	0.89
TOTAL	2.1%	0.91



Two-Hour Count Summaries

Interval Start	Saint Mary St Eastbound				Saint Mary St Westbound				Peters Ave Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	3	12	7	0	0	5	2	0	6	10	0	0	0	25	14	84	0
7:15 AM	0	6	16	15	0	5	9	0	0	9	13	1	0	1	52	20	147	0
7:30 AM	**0**	**2**	**21**	**16**	**0**	**8**	**20**	**2**	**0**	**13**	**34**	**2**	**1**	**1**	**67**	**39**	**226**	0
7:45 AM	**0**	**15**	**38**	**23**	**0**	**0**	**18**	**0**	**0**	**11**	**32**	**3**	**0**	**0**	**56**	**32**	**228**	685
8:00 AM	**0**	**11**	**45**	**28**	**0**	**6**	**20**	**4**	**0**	**18**	**20**	**4**	**0**	**2**	**70**	**41**	**269**	870
8:15 AM	**0**	**8**	**33**	**33**	**0**	**3**	**31**	**1**	**0**	**12**	**26**	**14**	**0**	**1**	**67**	**25**	**254**	**977**
8:30 AM	0	7	31	18	0	4	19	2	0	13	26	1	0	2	45	24	192	943
8:45 AM	0	3	28	13	0	5	18	2	0	17	18	6	0	1	42	20	173	888
Count Total	0	55	224	153	0	31	140	13	0	99	179	31	1	8	424	215	1,573	0
Peak Hour All	**0**	**36**	**137**	**100**	**0**	**17**	**89**	**7**	**0**	**54**	**112**	**23**	**1**	**4**	**260**	**137**	**977**	**0**
Peak Hour HV	**0**	**0**	**3**	**3**	**0**	**0**	**0**	**2**	**0**	**1**	**5**	**1**	**0**	**1**	**5**	**0**	**21**	**0**
Peak Hour HV%	**-**	**0%**	**2%**	**3%**	**-**	**0%**	**0%**	**29%**	**-**	**2%**	**4%**	**4%**	**0%**	**25%**	**2%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	0	1	2	*4*	0	0	0	1	*1*	0	1	0	3	*4*
7:15 AM	0	1	2	3	*6*	0	0	0	0	*0*	0	2	0	3	*5*
7:30 AM	**2**	**1**	**1**	**1**	***5***	**0**	**1**	**0**	**3**	***4***	**2**	**0**	**2**	**0**	*4*
7:45 AM	**1**	**0**	**3**	**2**	***6***	**0**	**0**	**0**	**2**	***2***	**0**	**4**	**0**	**0**	*4*
8:00 AM	**1**	**1**	**0**	**2**	***4***	**0**	**4**	**0**	**2**	***6***	**4**	**5**	**2**	**2**	*13*
8:15 AM	**2**	**0**	**3**	**1**	***6***	**0**	**0**	**0**	**1**	***1***	**1**	**2**	**2**	**1**	***6***
8:30 AM	4	1	1	5	*11*	0	0	0	0	*0*	1	0	4	2	*7*
8:45 AM	0	1	2	1	*4*	1	0	0	2	*3*	1	1	0	4	*6*
Count Total	11	5	13	17	*46*	1	5	0	11	*17*	9	15	10	15	*49*
Peak Hour	**6**	**2**	**7**	**6**	***21***	**0**	**5**	**0**	**8**	***13***	**7**	**11**	**6**	**3**	***27***

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Saint Mary St Eastbound				Saint Mary St Westbound				Peters Ave Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	2	0	4	0
7:15 AM	0	0	0	0	0	0	1	0	0	0	2	0	0	1	1	1	6	0
7:30 AM	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**5**	0
7:45 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**6**	21
8:00 AM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**4**	21
8:15 AM	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**1**	**0**	**0**	**6**	**21**
8:30 AM	0	0	3	1	0	0	1	0	0	0	1	0	0	0	3	2	11	27
8:45 AM	0	0	0	0	0	0	1	0	0	0	1	1	0	0	1	0	4	25
Count Total	0	1	6	4	0	0	3	2	0	1	10	2	0	2	12	3	46	0
Peak Hour	**0**	**0**	**3**	**3**	**0**	**0**	**0**	**2**	**0**	**1**	**5**	**1**	**0**	**1**	**5**	**0**	**21**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Saint Mary St Eastbound			Saint Mary St Westbound			Peters Ave Northbound			Peters Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**4**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	7
8:00 AM	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**6**	12
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**13**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	9
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	2	3	10
Count Total	0	0	1	3	2	0	0	0	0	0	9	2	17	0
Peak Hour	**0**	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**13**	**0**

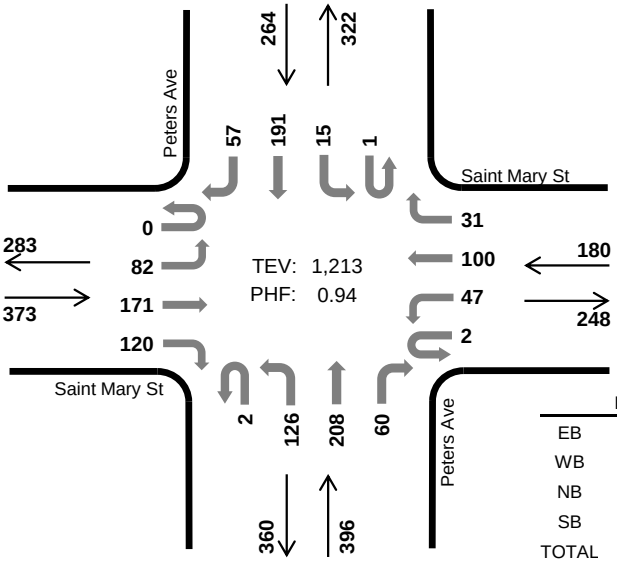
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

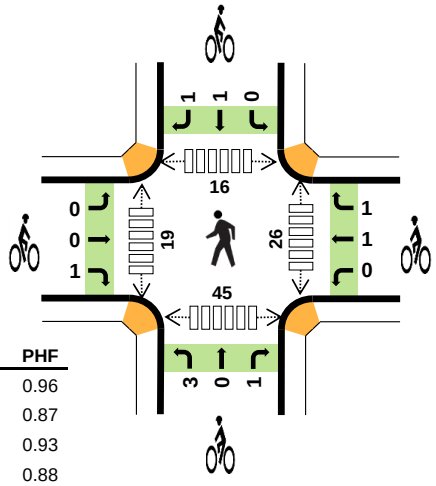
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Peters Ave
Saint Mary St

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Peak Hour





	HV %:	PHF
EB	0.0%	0.96
WB	1.1%	0.87
NB	1.5%	0.93
SB	1.5%	0.88
TOTAL	1.0%	0.94

Two-Hour Count Summaries

Interval Start		Saint Mary St Eastbound				Saint Mary St Westbound				Peters Ave Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	7	28	32	0	6	26	5	0	38	40	8	0	2	28	10	230	0
4:15 PM		0	8	27	24	0	6	14	2	0	19	39	4	0	0	33	17	193	0
4:30 PM		0	17	37	25	0	12	19	2	0	22	66	9	0	4	33	16	262	0
4:45 PM		0	26	26	39	0	7	19	5	0	19	40	12	0	2	35	18	248	933
5:00 PM		**0**	**24**	**39**	**32**	**1**	**11**	**31**	**9**	**0**	**30**	**54**	**16**	**1**	**3**	**55**	**16**	**322**	1,025
5:15 PM		**0**	**15**	**40**	**31**	**0**	**11**	**22**	**10**	**0**	**37**	**56**	**13**	**0**	**2**	**58**	**13**	**308**	1,140
5:30 PM		**0**	**19**	**52**	**26**	**1**	**15**	**20**	**4**	**2**	**30**	**51**	**10**	**0**	**4**	**33**	**16**	**283**	1,161
5:45 PM		**0**	**24**	**40**	**31**	**0**	**10**	**27**	**8**	**0**	**29**	**47**	**21**	**0**	**6**	**45**	**12**	**300**	**1,213**
Count Total		0	140	289	240	2	78	178	45	2	224	393	93	1	23	320	118	2,146	0
Peak Hour	**All**	**0**	**82**	**171**	**120**	**2**	**47**	**100**	**31**	**2**	**126**	**208**	**60**	**1**	**15**	**191**	**57**	**1,213**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**4**	**1**	**0**	**0**	**4**	**0**	**12**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**0%**	**2%**	**1%**	**0%**	**50%**	**0%**	**2%**	**2%**	**0%**	**0%**	**2%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	1	*2*	0	0	0	1	*1*	2	1	1	9	*13*
4:15 PM	0	1	1	1	*3*	0	0	0	1	*1*	4	0	3	4	*11*
4:30 PM	0	1	1	1	*3*	1	0	0	0	*1*	13	0	16	3	*32*
4:45 PM	0	0	1	1	*2*	0	1	2	0	*3*	3	6	4	9	*22*
5:00 PM	**0**	**2**	**1**	**1**	***4***	**0**	**0**	**0**	**2**	***2***	**4**	**7**	**8**	**11**	*30*
5:15 PM	**0**	**0**	**2**	**1**	***3***	**1**	**0**	**0**	**0**	***1***	**3**	**0**	**1**	**19**	*23*
5:30 PM	**0**	**0**	**2**	**1**	***3***	**0**	**2**	**3**	**0**	***5***	**4**	**2**	**1**	**1**	*8*
5:45 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**1**	**0**	***1***	**15**	**10**	**6**	**14**	***45***
Count Total	0	4	10	8	*22*	2	3	6	4	*15*	48	26	40	70	*184*
Peak Hour	**0**	**2**	**6**	**4**	***12***	**1**	**2**	**4**	**2**	***9***	**26**	**19**	**16**	**45**	***106***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Saint Mary St Eastbound				Saint Mary St Westbound				Peters Ave Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	3	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	3	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	10
5:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**4**	12
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**3**	12
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**3**	12
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**12**
Count Total	0	0	0	0	0	3	1	0	1	0	8	1	0	0	8	0	22	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**4**	**1**	**0**	**0**	**4**	**0**	**12**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Saint Mary St Eastbound			Saint Mary St Westbound			Peters Ave Northbound			Peters Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	0	0	1	0	2	0	0	0	0	0	3	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**2**	7
5:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	7
5:30 PM	**0**	**0**	**0**	**0**	**1**	**1**	**2**	**0**	**1**	**0**	**0**	**0**	**5**	11
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**9**
Count Total	0	1	1	0	2	1	5	0	1	0	1	3	15	0
Peak Hour	**0**	**0**	**1**	**0**	**1**	**1**	**3**	**0**	**1**	**0**	**1**	**1**	**9**	**0**

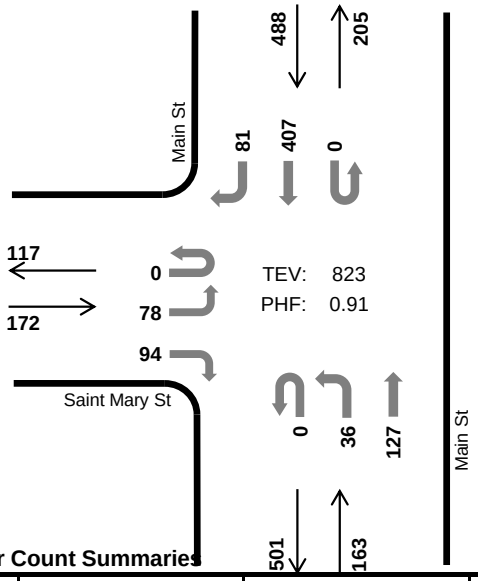
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

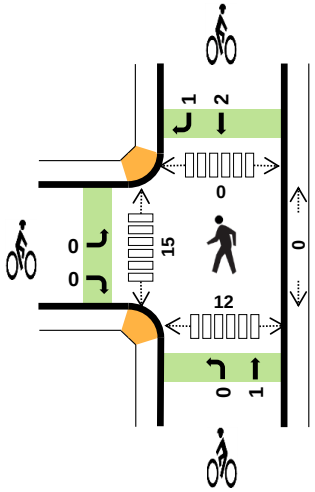
Main St
Saint Mary St

Peak Hour

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	2.9%	0.86
WB	-	-
NB	1.8%	0.89
SB	2.3%	0.90
TOTAL	2.3%	0.91



Two-Hour Count Summaries

Interval Start	Saint Mary St Eastbound				0 Westbound				Main St Northbound				Main St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	8	0	6	0	0	0	0	0	3	12	0	0	0	96	5	130	0
7:15 AM	0	10	0	7	0	0	0	0	0	5	31	0	0	0	114	13	180	0
7:30 AM	0	12	0	13	0	0	0	0	0	3	28	0	0	0	106	20	182	0
7:45 AM	0	23	0	17	0	0	0	0	0	5	44	0	0	0	90	12	191	683
8:00 AM	**0**	**31**	**0**	**19**	**0**	**0**	**0**	**0**	**0**	**8**	**25**	**0**	**0**	**0**	**108**	**22**	**213**	766
8:15 AM	**0**	**24**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**7**	**39**	**0**	**0**	**0**	**110**	**26**	**227**	813
8:30 AM	**0**	**11**	**0**	**27**	**0**	**0**	**0**	**0**	**0**	**11**	**29**	**0**	**0**	**0**	**93**	**19**	**190**	821
8:45 AM	**0**	**12**	**0**	**27**	**0**	**0**	**0**	**0**	**0**	**10**	**34**	**0**	**0**	**0**	**96**	**14**	**193**	**823**
Count Total	0	131	0	137	0	0	0	0	0	52	242	0	0	0	813	131	1,506	0
Peak Hour All	**0**	**78**	**0**	**94**	**0**	**0**	**0**	**0**	**0**	**36**	**127**	**0**	**0**	**0**	**407**	**81**	**823**	**0**
Peak Hour HV	**0**	**2**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**9**	**2**	**19**	**0**
Peak Hour HV%	**-**	**3%**	**-**	**3%**	**-**	**-**	**-**	**-**	**-**	**0%**	**2%**	**-**	**-**	**-**	**2%**	**2%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	2	0	*2*	0	0	0	0	*0*	0	1	0	2	*3*
7:15 AM	0	0	1	1	*2*	0	0	1	0	*1*	0	4	0	2	*6*
7:30 AM	2	0	1	1	*4*	0	0	2	0	*2*	0	5	0	3	*8*
7:45 AM	1	0	1	1	*3*	0	0	0	1	*1*	0	4	0	0	*4*
8:00 AM	**1**	**0**	**1**	**3**	***5***	**0**	**0**	**0**	**1**	***1***	**0**	**8**	**0**	**1**	*9*
8:15 AM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**0**	**1**	***1***	**0**	**4**	**0**	**2**	*6*
8:30 AM	**3**	**0**	**1**	**4**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**7**	*9*
8:45 AM	**1**	**0**	**0**	**2**	***3***	**0**	**0**	**1**	**1**	***2***	**0**	**1**	**0**	**2**	***3***
Count Total	8	0	8	14	*30*	0	0	4	4	*8*	0	29	0	19	*48*
Peak Hr	**5**	**0**	**3**	**11**	***19***	**0**	**0**	**1**	**3**	***4***	**0**	**15**	**0**	**12**	***27***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Saint Mary St				0				Main St				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0
7:30 AM	0	1	0	1	0	0	0	0	0	0	1	0	0	0	1	0	4	0
7:45 AM	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	3	11
8:00 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**1**	**5**	14
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	15
8:30 AM	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**1**	**8**	19
8:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**3**	**19**
Count Total	0	3	0	5	0	0	0	0	0	1	7	0	0	0	11	3	30	0
Peak Hour	**0**	**2**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**9**	**2**	**19**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Saint Mary St			0			Main St			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	4
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	5
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	5
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**2**	**4**
Count Total	0	0	0	0	0	0	1	3	0	0	3	1	8	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**1**	**4**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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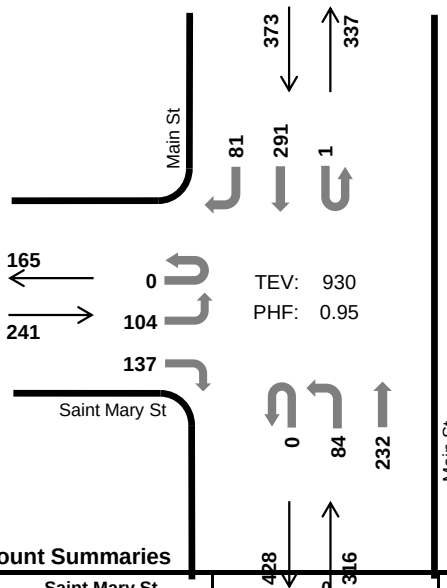
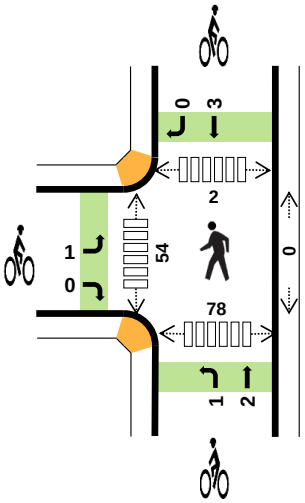
Main St
Saint Mary St

Peak Hour

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	0.4%	0.87
WB	-	-
NB	0.0%	0.96
SB	0.3%	0.85
TOTAL	0.2%	0.95



Two-Hour Count Summaries

Interval Start	Saint Mary St Eastbound				Saint Mary St Westbound				Main St Northbound				Main St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	15	0	25	0	0	0	0	0	22	69	0	1	0	58	13	203	0
4:15 PM	0	14	0	17	0	0	0	0	0	4	67	0	0	0	63	16	181	0
4:30 PM	0	21	0	25	0	0	0	0	0	20	76	0	0	0	64	15	221	0
4:45 PM	0	18	0	26	0	0	0	0	0	12	62	0	0	0	70	21	209	814
5:00 PM	**0**	**26**	**0**	**30**	**0**	**0**	**0**	**0**	**0**	**19**	**57**	**0**	**1**	**0**	**86**	**23**	**242**	853
5:15 PM	**0**	**20**	**0**	**30**	**0**	**0**	**0**	**0**	**0**	**19**	**61**	**0**	**0**	**0**	**71**	**24**	**225**	897
5:30 PM	**0**	**31**	**0**	**35**	**0**	**0**	**0**	**0**	**0**	**18**	**64**	**0**	**0**	**0**	**53**	**16**	**217**	893
5:45 PM	**0**	**27**	**0**	**42**	**0**	**0**	**0**	**0**	**0**	**28**	**50**	**0**	**0**	**0**	**81**	**18**	**246**	**930**
Count Total	0	172	0	230	0	0	0	0	0	142	506	0	2	0	546	146	1,744	0
Peak Hour **All**	**0**	**104**	**0**	**137**	**0**	**0**	**0**	**0**	**0**	**84**	**232**	**0**	**1**	**0**	**291**	**81**	**930**	**0**
Peak Hour **HV**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**
Peak Hour **HV%**	**-**	**0%**	**-**	**1%**	**-**	**-**	**-**	**-**	**-**	**0%**	**0%**	**-**	**0%**	**-**	**0%**	**1%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	0	0	0	*1*	0	0	0	1	*1*	0	12	0	14	*26*
4:15 PM	0	0	0	3	*3*	0	0	0	0	*0*	0	12	0	9	*21*
4:30 PM	0	0	1	1	*2*	1	0	0	1	*2*	0	27	0	10	*37*
4:45 PM	0	0	0	0	*0*	1	0	1	1	*3*	0	15	0	4	*19*
5:00 PM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**8**	**0**	**19**	*27*
5:15 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**8**	**0**	**21**	*29*
5:30 PM	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**2**	**1**	***4***	**0**	**19**	**2**	**23**	*44*
5:45 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**2**	***3***	**0**	**19**	**0**	**15**	***34***
Count Total	2	0	1	5	*8*	3	0	4	6	*13*	0	120	2	115	*237*
Peak Hr	**1**	**0**	**0**	**1**	***2***	**1**	**0**	**3**	**3**	***7***	**0**	**54**	**2**	**78**	***134***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Saint Mary St				0				Main St				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	6
5:15 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	4
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
Count Total	0	0	0	2	0	0	0	0	0	1	0	0	0	0	2	3	8	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Saint Mary St			0			Main St			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	1	0	0	0	0	0	0	0	0	0	1	0	2	0
4:45 PM	0	0	1	0	0	0	1	0	0	0	0	1	3	6
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
5:30 PM	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**4**	7
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**	**7**
Count Total	2	0	1	0	0	0	2	2	0	0	5	1	13	0
Peak Hour	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**3**	**0**	**7**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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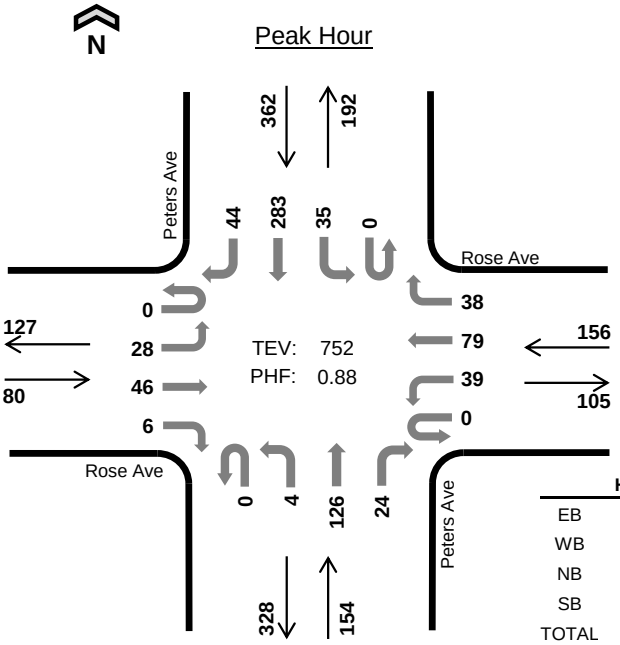
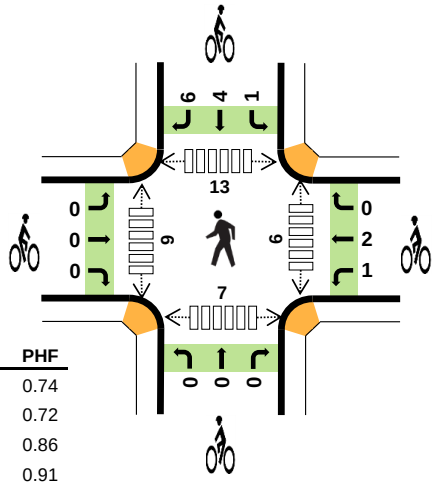
Peters Ave
Rose Ave

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	0.0%	0.74
WB	2.6%	0.72
NB	1.3%	0.86
SB	2.2%	0.91
TOTAL	1.9%	0.88

Two-Hour Count Summaries

Interval Start		Rose Ave Eastbound				Rose Ave Westbound				Peters Ave Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	2	6	0	0	0	11	4	0	0	11	2	0	2	22	4	64	0
7:15 AM		0	1	4	2	0	13	13	5	0	0	15	4	0	6	60	5	128	0
7:30 AM		**0**	**9**	**4**	**3**	**0**	**9**	**18**	**6**	**0**	**0**	**37**	**7**	**0**	**4**	**72**	**9**	**178**	0
7:45 AM		**0**	**7**	**10**	**2**	**0**	**2**	**14**	**4**	**0**	**2**	**28**	**3**	**0**	**11**	**62**	**8**	**153**	523
8:00 AM		**0**	**3**	**24**	**0**	**0**	**15**	**20**	**14**	**0**	**0**	**25**	**7**	**0**	**11**	**72**	**16**	**207**	666
8:15 AM		**0**	**9**	**8**	**1**	**0**	**13**	**27**	**14**	**0**	**2**	**36**	**7**	**0**	**9**	**77**	**11**	**214**	**752**
8:30 AM		0	6	9	3	0	4	15	7	0	1	28	11	0	8	45	8	145	719
8:45 AM		0	3	4	3	0	3	8	10	0	0	25	3	0	9	37	9	114	680
Count Total		0	40	69	14	0	59	126	64	0	5	205	44	0	60	447	70	1,203	0
Peak Hour	**All**	**0**	**28**	**46**	**6**	**0**	**39**	**79**	**38**	**0**	**4**	**126**	**24**	**0**	**35**	**283**	**44**	**752**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**0**	**0**	**6**	**1**	**1**	**14**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**11%**	**-**	**0%**	**2%**	**0%**	**-**	**17%**	**0%**	**2%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	2	0	2	*5*	0	0	0	1	*1*	3	0	1	3	*7*
7:15 AM	0	4	0	2	*6*	0	1	0	0	*1*	1	4	2	2	*9*
7:30 AM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**2**	***2***	**1**	**1**	**0**	**1**	*3*
7:45 AM	**0**	**1**	**1**	**3**	***5***	**0**	**3**	**0**	**4**	***7***	**3**	**2**	**4**	**2**	*11*
8:00 AM	**0**	**1**	**0**	**2**	***3***	**0**	**0**	**0**	**5**	***5***	**0**	**4**	**6**	**1**	*11*
8:15 AM	**0**	**2**	**1**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**2**	**2**	**3**	**3**	***10***
8:30 AM	1	0	0	3	*4*	0	0	0	0	*0*	2	7	2	2	*13*
8:45 AM	2	1	1	1	*5*	1	0	0	1	*2*	0	5	3	4	*12*
Count Total	4	11	3	16	*34*	1	4	0	13	*18*	12	25	21	18	*76*
Peak Hour	**0**	**4**	**2**	**8**	***14***	**0**	**3**	**0**	**11**	***14***	**6**	**9**	**13**	**7**	***35***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Rose Ave Eastbound				Rose Ave Westbound				Peters Ave Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	1	1	0	0	0	0	0	1	1	0	5	0
7:15 AM	0	0	0	0	0	1	0	3	0	0	0	0	0	1	1	0	6	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**1**	**5**	17
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**3**	15
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**5**	**14**
8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2	0	4	17
8:45 AM	0	0	1	1	0	0	0	1	0	0	1	0	0	1	0	0	5	17
Count Total	0	0	3	1	0	1	1	9	0	0	3	0	0	10	5	1	34	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**0**	**0**	**6**	**1**	**1**	**14**	**0**

Two-Hour Count Summaries - Bikes

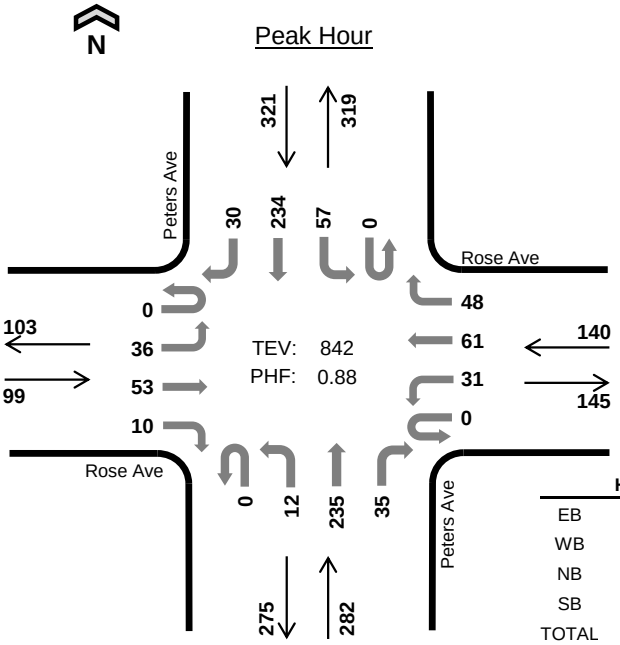
Interval Start	Rose Ave Eastbound			Rose Ave Westbound			Peters Ave Northbound			Peters Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**2**	0
7:45 AM	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**7**	11
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**5**	15
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	12
8:45 AM	0	0	1	0	0	0	0	0	0	1	0	0	2	7
Count Total	0	0	1	1	3	0	0	0	0	2	4	7	18	0
Peak Hour	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**1**	**4**	**6**	**14**	**0**

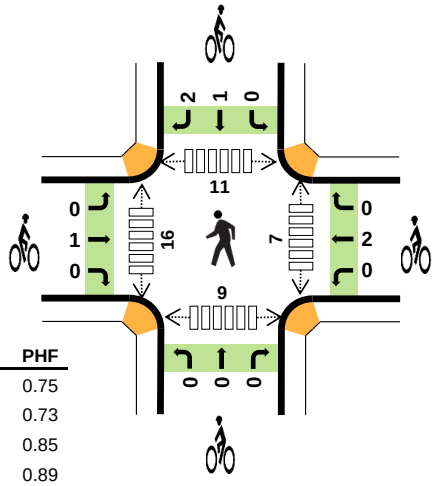
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Peters Ave
Rose Ave

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV %:	PHF
EB	0.0%	0.75
WB	3.6%	0.73
NB	0.0%	0.85
SB	1.2%	0.89
TOTAL	1.2%	0.88

Two-Hour Count Summaries

Interval Start	Rose Ave Eastbound				Rose Ave Westbound				Peters Ave Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	12	0	0	2	12	20	0	3	52	5	0	17	43	4	172	0
4:15 PM	0	4	9	3	0	5	11	10	0	2	48	10	0	13	45	3	163	0
4:30 PM	**0**	**9**	**21**	**3**	**0**	**6**	**11**	**10**	**0**	**4**	**70**	**9**	**0**	**12**	**49**	**2**	**206**	0
4:45 PM	**0**	**11**	**7**	**1**	**0**	**13**	**15**	**7**	**0**	**1**	**46**	**11**	**0**	**24**	**52**	**6**	**194**	735
5:00 PM	**0**	**11**	**13**	**2**	**0**	**8**	**22**	**18**	**0**	**5**	**68**	**5**	**0**	**7**	**67**	**12**	**238**	801
5:15 PM	**0**	**5**	**12**	**4**	**0**	**4**	**13**	**13**	**0**	**2**	**51**	**10**	**0**	**14**	**66**	**10**	**204**	**842**
5:30 PM	0	16	14	3	0	3	9	22	0	2	52	4	0	9	44	6	184	820
5:45 PM	0	13	10	2	0	8	16	18	0	1	36	4	0	8	64	6	186	812
Count Total	0	71	98	18	0	49	109	118	0	20	423	58	0	104	430	49	1,547	0
Peak Hour All	**0**	**36**	**53**	**10**	**0**	**31**	**61**	**48**	**0**	**12**	**235**	**35**	**0**	**57**	**234**	**30**	**842**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**10**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**3%**	**0%**	**8%**	**-**	**0%**	**0%**	**0%**	**-**	**7%**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	2	0	1	*3*	1	0	0	0	*1*	2	7	6	5	*20*
4:15 PM	0	0	0	2	*2*	0	0	0	0	*0*	9	3	1	4	*17*
4:30 PM	**0**	**1**	**0**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**2**	**3**	**2**	**4**	*11*
4:45 PM	**0**	**2**	**0**	**1**	***3***	**0**	**1**	**0**	**0**	***1***	**2**	**6**	**2**	**0**	*10*
5:00 PM	**0**	**1**	**0**	**2**	***3***	**1**	**1**	**0**	**0**	***2***	**2**	**3**	**4**	**3**	*12*
5:15 PM	**0**	**1**	**0**	**1**	***2***	**0**	**0**	**0**	**3**	***3***	**1**	**4**	**3**	**2**	***10***
5:30 PM	0	1	0	1	*2*	2	0	1	0	*3*	3	6	0	4	*13*
5:45 PM	0	1	0	1	*2*	1	0	1	0	*2*	5	8	0	6	*19*
Count Total	0	9	0	10	*19*	5	2	2	3	*12*	26	40	18	28	*112*
Peak Hour	**0**	**5**	**0**	**5**	***10***	**1**	**2**	**0**	**3**	***6***	**7**	**16**	**11**	**9**	***43***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Rose Ave Eastbound				Rose Ave Westbound				Peters Ave Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	3	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	10
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**3**	10
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**10**
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	10
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	9
Count Total	0	0	0	0	0	1	0	8	0	0	0	0	0	9	1	0	19	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**10**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Rose Ave Eastbound			Rose Ave Westbound			Peters Ave Northbound			Peters Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**3**	**6**
5:30 PM	1	1	0	0	0	0	0	1	0	0	0	0	3	9
5:45 PM	0	1	0	0	0	0	0	1	0	0	0	0	2	10
Count Total	1	4	0	0	2	0	0	2	0	0	1	2	12	0
Peak Hour	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**6**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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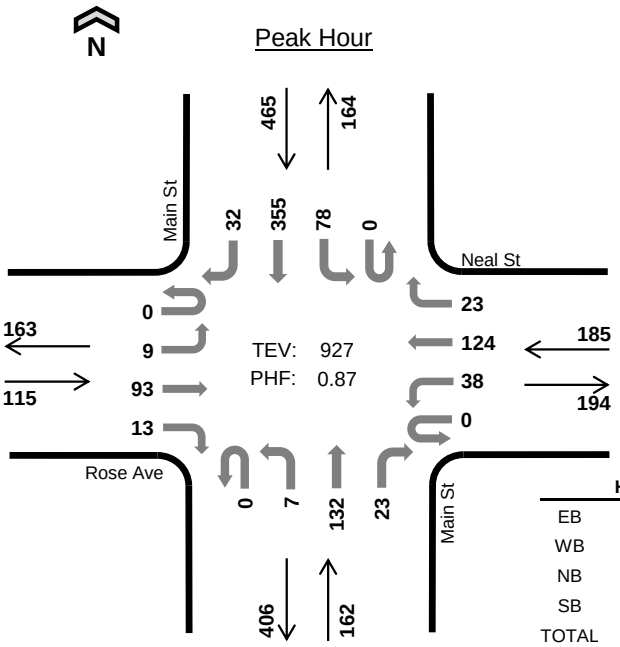
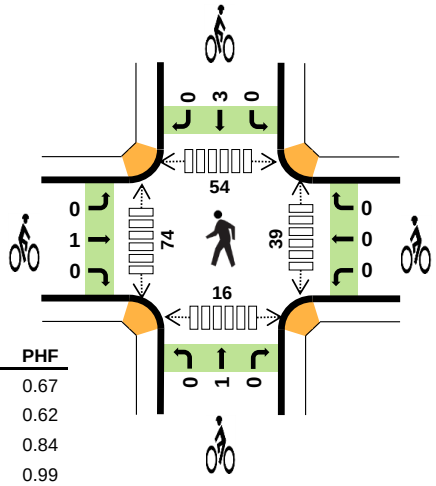
Main St
Rose Ave



Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	6.1%	0.67
WB	3.2%	0.62
NB	3.1%	0.84
SB	2.4%	0.99
TOTAL	3.1%	0.87

Two-Hour Count Summaries

Interval Start	Rose Ave Eastbound				Neal St Westbound				Main St Northbound				Main St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	9	2	0	6	8	1	0	1	9	1	0	9	95	4	145	0
7:15 AM	0	1	8	1	0	7	26	7	0	1	26	1	0	12	97	6	193	0
7:30 AM	0	3	13	3	0	9	26	5	0	0	20	8	0	19	92	6	204	0
7:45 AM	0	3	17	3	0	14	16	10	0	1	34	2	0	17	73	5	195	737
8:00 AM	**0**	**5**	**37**	**1**	**0**	**6**	**36**	**5**	**0**	**2**	**22**	**6**	**0**	**21**	**86**	**7**	**234**	826
8:15 AM	**0**	**2**	**19**	**4**	**0**	**19**	**51**	**5**	**0**	**3**	**41**	**4**	**0**	**19**	**90**	**8**	**265**	898
8:30 AM	**0**	**1**	**25**	**5**	**0**	**12**	**19**	**5**	**0**	**1**	**37**	**7**	**0**	**20**	**92**	**6**	**230**	924
8:45 AM	**0**	**1**	**12**	**3**	**0**	**1**	**18**	**8**	**0**	**1**	**32**	**6**	**0**	**18**	**87**	**11**	**198**	**927**
Count Total	0	16	140	22	0	74	200	46	0	10	221	35	0	135	712	53	1,664	0
Peak Hour All	**0**	**9**	**93**	**13**	**0**	**38**	**124**	**23**	**0**	**7**	**132**	**23**	**0**	**78**	**355**	**32**	**927**	**0**
Peak Hour HV	**0**	**0**	**7**	**0**	**0**	**1**	**5**	**0**	**0**	**1**	**3**	**1**	**0**	**3**	**8**	**0**	**29**	**0**
Peak Hour HV%	**-**	**0%**	**8%**	**0%**	**-**	**3%**	**4%**	**0%**	**-**	**14%**	**2%**	**4%**	**-**	**4%**	**2%**	**0%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	3	0	0	*5*	0	0	0	0	*0*	1	10	2	2	*15*
7:15 AM	1	3	3	2	*9*	0	2	0	0	*2*	2	17	8	3	*30*
7:30 AM	1	1	1	1	*4*	0	0	1	0	*1*	3	17	11	1	*32*
7:45 AM	2	1	1	2	*6*	0	3	0	0	*3*	1	20	4	6	*31*
8:00 AM	**2**	**1**	**1**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**2**	**18**	**9**	**1**	*30*
8:15 AM	**1**	**3**	**1**	**1**	***6***	**0**	**0**	**0**	**2**	***2***	**14**	**17**	**23**	**5**	*59*
8:30 AM	**2**	**0**	**2**	**6**	***10***	**0**	**0**	**0**	**0**	***0***	**14**	**19**	**13**	**5**	*51*
8:45 AM	**2**	**2**	**1**	**2**	***7***	**1**	**0**	**1**	**1**	***3***	**9**	**20**	**9**	**5**	***43***
Count Total	13	14	10	16	*53*	1	5	2	3	*11*	46	138	79	28	*291*
Peak Hour	**7**	**6**	**5**	**11**	***29***	**1**	**0**	**1**	**3**	***5***	**39**	**74**	**54**	**16**	***183***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Rose Ave				Neal St				Main St				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	0	0	0	2	1	0	0	0	0	0	0	0	0	5	0
7:15 AM	0	0	1	0	0	0	3	0	0	1	2	0	0	2	0	0	9	0
7:30 AM	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	0	4	0
7:45 AM	0	0	2	0	0	0	1	0	0	0	1	0	0	0	2	0	6	24
8:00 AM	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**6**	25
8:15 AM	**0**	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**6**	22
8:30 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**4**	**0**	**10**	28
8:45 AM	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**7**	**29**
Count Total	0	0	13	0	0	2	11	1	0	2	7	1	0	5	11	0	53	0
Peak Hour	**0**	**0**	**7**	**0**	**0**	**1**	**5**	**0**	**0**	**1**	**3**	**1**	**0**	**3**	**8**	**0**	**29**	**0**

Two-Hour Count Summaries - Bikes

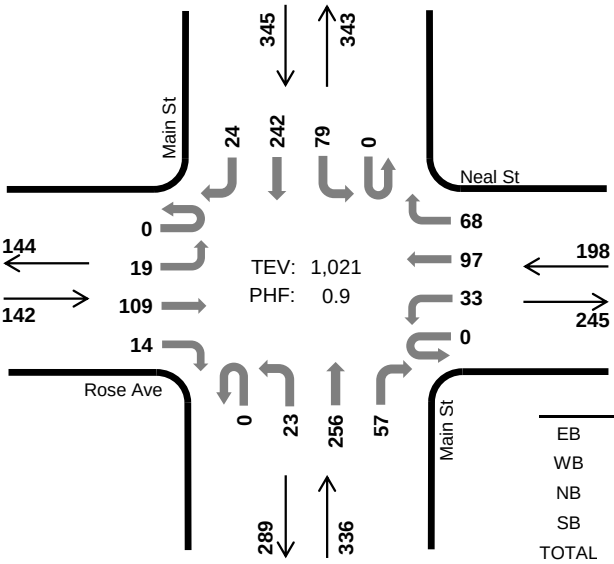
Interval Start	Rose Ave			Neal St			Main St			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	1	0	0	0	0	0	0	2	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:45 AM	0	0	0	0	3	0	0	0	0	0	0	0	3	6
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	6
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	6
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
8:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	**5**
Count Total	0	1	0	0	4	1	0	2	0	0	3	0	11	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**5**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

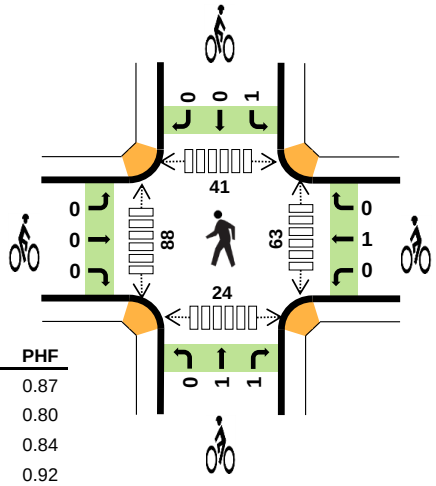
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Main St
Rose Ave

Peak Hour



Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	2.8%	0.87
WB	1.5%	0.80
NB	0.3%	0.84
SB	0.3%	0.92
TOTAL	0.9%	0.90

Two-Hour Count Summaries

Interval Start	Rose Ave Eastbound				Neal St Westbound				Main St Northbound				Main St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	9	24	4	0	10	24	14	0	4	72	15	0	21	54	8	259	0
4:15 PM	0	6	22	3	0	3	21	10	0	2	49	17	0	22	49	4	208	0
4:30 PM	**0**	**8**	**31**	**2**	**0**	**10**	**21**	**15**	**0**	**1**	**65**	**13**	**0**	**14**	**59**	**6**	**245**	0
4:45 PM	**0**	**6**	**27**	**7**	**0**	**6**	**24**	**13**	**0**	**5**	**58**	**15**	**0**	**18**	**58**	**7**	**244**	956
5:00 PM	**0**	**3**	**25**	**1**	**0**	**9**	**33**	**20**	**0**	**11**	**70**	**19**	**0**	**24**	**65**	**5**	**285**	982
5:15 PM	**0**	**2**	**26**	**4**	**0**	**8**	**19**	**20**	**0**	**6**	**63**	**10**	**0**	**23**	**60**	**6**	**247**	**1,021**
5:30 PM	0	4	21	4	0	9	21	9	0	7	58	19	0	19	42	12	225	1,001
5:45 PM	0	3	13	7	0	7	24	9	0	5	66	9	0	24	58	15	240	997
Count Total	0	41	189	32	0	62	187	110	0	41	501	117	0	165	445	63	1,953	0
Peak Hour All	**0**	**19**	**109**	**14**	**0**	**33**	**97**	**68**	**0**	**23**	**256**	**57**	**0**	**79**	**242**	**24**	**1,021**	**0**
Peak Hour HV	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**9**	**0**
Peak Hour HV%	**-**	**0%**	**4%**	**0%**	**-**	**0%**	**3%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	2	2	1	*6*	1	0	0	0	*1*	16	9	15	6	*46*
4:15 PM	2	1	0	2	*5*	0	0	0	0	*0*	23	25	11	8	*67*
4:30 PM	**1**	**0**	**1**	**0**	***2***	**0**	**0**	**0**	**1**	***1***	**18**	**26**	**10**	**7**	*61*
4:45 PM	**1**	**2**	**0**	**0**	***3***	**0**	**0**	**1**	**0**	***1***	**9**	**27**	**9**	**4**	*49*
5:00 PM	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**0**	**0**	***1***	**26**	**13**	**6**	**8**	*53*
5:15 PM	**1**	**1**	**0**	**1**	***3***	**0**	**0**	**1**	**0**	***1***	**10**	**22**	**16**	**5**	***53***
5:30 PM	1	1	0	0	*2*	1	0	1	1	*3*	19	27	18	4	*68*
5:45 PM	1	1	0	0	*2*	1	0	0	1	*2*	32	28	15	7	*82*
Count Total	9	8	3	4	*24*	3	1	3	3	*10*	153	177	100	49	*479*
Peak Hour	**4**	**3**	**1**	**1**	***9***	**0**	**1**	**2**	**1**	***4***	**63**	**88**	**41**	**24**	***216***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Rose Ave				Neal St				Main St				Main St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	1	0	0	0	2	0	0	0	1	1	0	0	1	0	6	0
4:15 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	1	1	0	5	0
4:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	0
4:45 PM	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	16
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	11
5:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**9**
5:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	9
5:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	8
Count Total	0	0	9	0	0	0	8	0	0	0	2	1	0	1	3	0	24	0
Peak Hour	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**9**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Rose Ave			Neal St			Main St			Main St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	3
5:00 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**4**
5:30 PM	1	0	0	0	0	0	0	1	0	0	1	0	3	6
5:45 PM	1	0	0	0	0	0	0	0	0	0	1	0	2	7
Count Total	2	1	0	0	1	0	0	2	1	1	2	0	10	0
Peak Hour	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**4**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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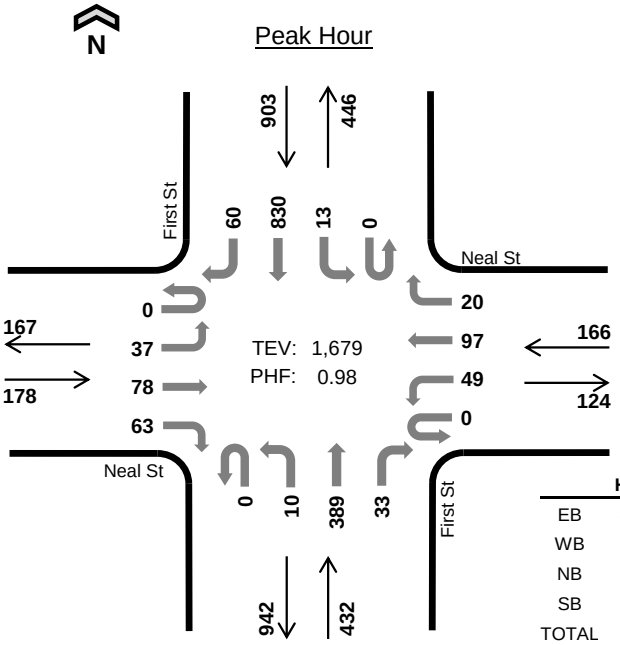
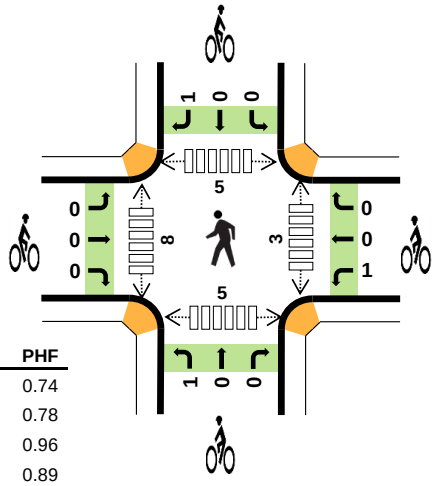
First St
Neal St

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	4.5%	0.74
WB	0.0%	0.78
NB	3.2%	0.96
SB	2.4%	0.89
TOTAL	2.6%	0.98

Two-Hour Count Summaries

Interval Start		Neal St Eastbound				Neal St Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	9	3	11	0	7	11	4	0	1	47	5	0	3	202	1	304	0
7:15 AM		0	4	2	13	0	7	17	2	0	1	75	4	0	2	236	10	373	0
7:30 AM		0	13	14	11	0	11	29	11	0	0	87	6	0	1	199	2	384	0
7:45 AM		**0**	**4**	**15**	**11**	**0**	**7**	**17**	**3**	**0**	**1**	**96**	**7**	**0**	**6**	**234**	**15**	**416**	1,477
8:00 AM		**0**	**14**	**28**	**18**	**0**	**14**	**32**	**7**	**0**	**2**	**101**	**9**	**0**	**1**	**189**	**13**	**428**	1,601
8:15 AM		**0**	**6**	**13**	**20**	**0**	**16**	**30**	**5**	**0**	**5**	**97**	**7**	**0**	**5**	**213**	**13**	**430**	1,658
8:30 AM		**0**	**13**	**22**	**14**	**0**	**12**	**18**	**5**	**0**	**2**	**95**	**10**	**0**	**1**	**194**	**19**	**405**	**1,679**
8:45 AM		0	5	14	16	0	8	12	5	0	5	76	0	0	7	203	5	356	1,619
Count Total		0	68	111	114	0	82	166	42	0	17	674	48	0	26	1,670	78	3,096	0
Peak Hour	**All**	**0**	**37**	**78**	**63**	**0**	**49**	**97**	**20**	**0**	**10**	**389**	**33**	**0**	**13**	**830**	**60**	**1,679**	**0**
	HV	**0**	**6**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**18**	**4**	**44**	**0**
	HV%	**-**	**16%**	**0%**	**3%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**4%**	**0%**	**-**	**0%**	**2%**	**7%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	2	3	1	*8*	0	0	0	0	*0*	3	1	2	0	*6*
7:15 AM	1	0	3	13	*17*	0	1	0	0	*1*	0	2	2	2	*6*
7:30 AM	1	1	2	3	*7*	0	3	0	0	*3*	1	2	3	1	*7*
7:45 AM	**1**	**0**	**2**	**3**	***6***	**0**	**0**	**1**	**0**	***1***	**0**	**2**	**0**	**0**	*2*
8:00 AM	**2**	**0**	**4**	**8**	***14***	**0**	**0**	**0**	**1**	***1***	**1**	**3**	**0**	**2**	*6*
8:15 AM	**2**	**0**	**4**	**8**	***14***	**0**	**1**	**0**	**0**	***1***	**0**	**3**	**4**	**2**	*9*
8:30 AM	**3**	**0**	**4**	**3**	***10***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**1**	***4***
8:45 AM	2	0	3	7	*12*	0	1	0	0	*1*	1	2	3	0	*6*
Count Total	14	3	25	46	*88*	0	6	1	1	*8*	8	15	15	8	*46*
Peak Hour	**8**	**0**	**14**	**22**	***44***	**0**	**1**	**1**	**1**	***3***	**3**	**8**	**5**	**5**	***21***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Neal St Eastbound				Neal St Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	2	0	0	0	0	2	0	0	1	2	0	0	0	1	0	8	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	3	0	0	0	11	2	17	0
7:30 AM	0	1	0	0	0	0	1	0	0	0	2	0	0	0	3	0	7	0
7:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**1**	**6**	38
8:00 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**2**	**14**	44
8:15 AM	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**7**	**1**	**14**	41
8:30 AM	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**3**	**0**	**10**	**44**
8:45 AM	0	0	1	1	0	0	0	0	0	0	3	0	0	0	6	1	12	50
Count Total	0	10	1	3	0	0	3	0	0	1	24	0	0	0	39	7	88	0
Peak Hour	**0**	**6**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**18**	**4**	**44**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Neal St Eastbound			Neal St Westbound			First St Northbound			First St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30 AM	0	0	0	0	3	0	0	0	0	0	0	0	3	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	5
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	6
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	6
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
8:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	3
Count Total	0	0	0	2	4	0	1	0	0	0	0	1	8	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**3**	**0**

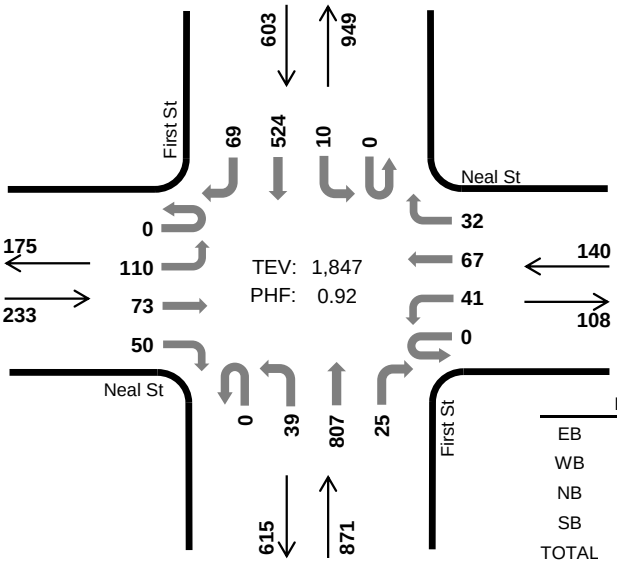
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

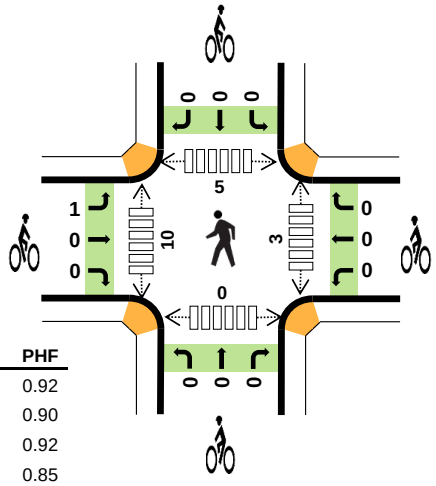
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

First St
Neal St

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour





	HV %:	PHF
EB	2.1%	0.92
WB	1.4%	0.90
NB	1.8%	0.92
SB	1.3%	0.85
TOTAL	1.7%	0.92

Two-Hour Count Summaries

Interval Start	Neal St Eastbound				Neal St Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	15	19	13	0	5	7	5	0	6	193	7	0	0	112	25	407	0
4:15 PM	0	26	19	15	0	17	13	8	0	3	159	5	0	1	107	14	387	0
4:30 PM	0	19	20	15	0	8	9	6	0	7	207	3	0	2	118	13	427	0
4:45 PM	**0**	**32**	**12**	**16**	**0**	**11**	**14**	**11**	**0**	**12**	**172**	**10**	**0**	**2**	**115**	**22**	**429**	1,650
5:00 PM	**0**	**28**	**17**	**18**	**0**	**5**	**22**	**2**	**0**	**13**	**219**	**2**	**0**	**1**	**158**	**18**	**503**	1,746
5:15 PM	**0**	**27**	**23**	**8**	**0**	**15**	**15**	**9**	**0**	**7**	**195**	**4**	**0**	**4**	**131**	**18**	**456**	1,815
5:30 PM	**0**	**23**	**21**	**8**	**0**	**10**	**16**	**10**	**0**	**7**	**221**	**9**	**0**	**3**	**120**	**11**	**459**	**1,847**
5:45 PM	0	25	14	11	0	14	8	4	0	10	199	7	0	4	109	12	417	1,835
Count Total	0	195	145	104	0	85	104	55	0	65	1,565	47	0	17	970	133	3,485	0
Peak Hour All	**0**	**110**	**73**	**50**	**0**	**41**	**67**	**32**	**0**	**39**	**807**	**25**	**0**	**10**	**524**	**69**	**1,847**	**0**
Peak Hour HV	**0**	**4**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**3**	**5**	**31**	**0**
Peak Hour HV%	**-**	**4%**	**1%**	**0%**	**-**	**5%**	**0%**	**0%**	**-**	**0%**	**2%**	**0%**	**-**	**0%**	**1%**	**7%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	0	2	4	*8*	0	0	0	0	*0*	0	2	2	0	*4*
4:15 PM	2	1	1	1	*5*	0	0	1	1	*2*	1	4	1	3	*9*
4:30 PM	1	0	4	3	*8*	0	0	0	0	*0*	1	2	1	1	*5*
4:45 PM	**1**	**2**	**5**	**3**	***11***	**0**	**0**	**0**	**0**	***0***	**1**	**4**	**4**	**0**	*9*
5:00 PM	**1**	**0**	**4**	**2**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
5:15 PM	**1**	**0**	**3**	**2**	***6***	**1**	**0**	**0**	**0**	***1***	**2**	**2**	**1**	**0**	*5*
5:30 PM	**2**	**0**	**4**	**1**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
5:45 PM	1	0	2	2	*5*	0	0	0	0	*0*	0	4	0	1	*5*
Count Total	11	3	25	18	*57*	1	0	1	1	*3*	5	22	9	5	*41*
Peak Hour	**5**	**2**	**16**	**8**	***31***	**1**	**0**	**0**	**0**	***1***	**3**	**10**	**5**	**0**	***18***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Neal St Eastbound				Neal St Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	0	0	0	0	0	0	0	0	2	0	0	0	2	2	8	0
4:15 PM	0	1	1	0	0	1	0	0	0	0	1	0	0	0	0	1	5	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	4	0	0	0	3	0	8	0
4:45 PM	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**2**	**11**	32
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**0**	**7**	31
5:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**2**	**6**	32
5:30 PM	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**1**	**7**	**31**
5:45 PM	0	1	0	0	0	0	0	0	0	0	2	0	0	0	2	0	5	25
Count Total	0	9	2	0	0	3	0	0	0	0	25	0	0	0	10	8	57	0
Peak Hour	**0**	**4**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**3**	**5**	**31**	**0**

Two-Hour Count Summaries - Bikes

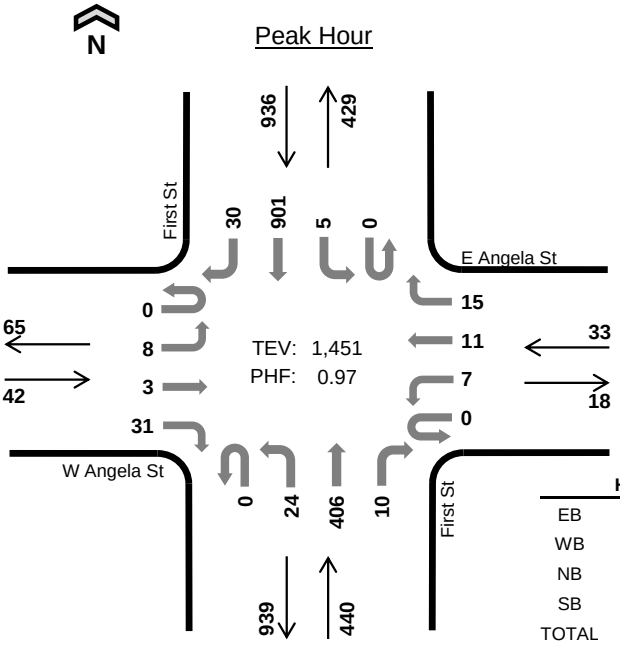
Interval Start	Neal St Eastbound			Neal St Westbound			First St Northbound			First St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:15 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	1	0	0	0	0	0	0	1	0	0	1	0	3	0
Peak Hour	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

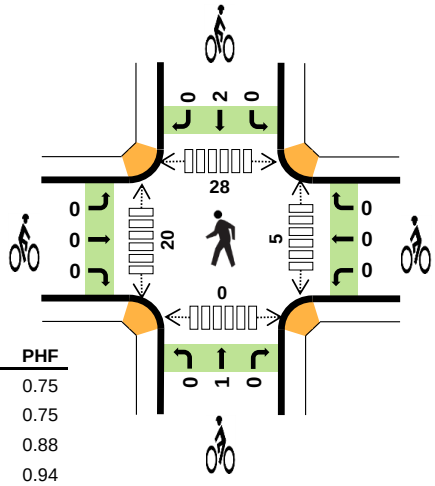
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

First St
E Angela St

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM





	HV %:	PHF
EB	4.8%	0.75
WB	6.1%	0.75
NB	3.2%	0.88
SB	2.2%	0.94
TOTAL	2.7%	0.97

Two-Hour Count Summaries

Interval Start		W Angela St Eastbound				E Angela St Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	5	0	1	0	0	0	1	53	0	0	0	220	4	284	0
7:15 AM		0	1	0	8	0	4	1	2	0	3	78	1	0	0	242	6	346	0
7:30 AM		0	0	0	3	0	1	5	1	0	5	96	0	0	2	218	6	337	0
7:45 AM		**0**	**1**	**0**	**9**	**0**	**1**	**1**	**6**	**0**	**9**	**92**	**0**	**0**	**0**	**244**	**4**	**367**	1,334
8:00 AM		**0**	**3**	**3**	**8**	**0**	**2**	**5**	**2**	**0**	**8**	**113**	**4**	**0**	**0**	**210**	**9**	**367**	1,417
8:15 AM		**0**	**1**	**0**	**8**	**0**	**1**	**4**	**6**	**0**	**4**	**99**	**3**	**0**	**5**	**237**	**7**	**375**	1,446
8:30 AM		**0**	**3**	**0**	**6**	**0**	**3**	**1**	**1**	**0**	**3**	**102**	**3**	**0**	**0**	**210**	**10**	**342**	**1,451**
8:45 AM		0	1	0	4	0	2	1	0	0	6	79	1	0	2	215	11	322	1,406
Count Total		0	10	3	51	0	15	18	18	0	39	712	12	0	9	1,796	57	2,740	0
Peak Hour	**All**	**0**	**8**	**3**	**31**	**0**	**7**	**11**	**15**	**0**	**24**	**406**	**10**	**0**	**5**	**901**	**30**	**1,451**	**0**
	HV	**0**	**0**	**1**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**13**	**1**	**0**	**0**	**20**	**1**	**39**	**0**
	HV%	**-**	**0%**	**33%**	**3%**	**-**	**29%**	**0%**	**0%**	**-**	**0%**	**3%**	**10%**	**-**	**0%**	**2%**	**3%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	3	2	*5*	0	0	0	0	*0*	4	3	2	0	*9*
7:15 AM	0	0	4	11	*15*	0	0	0	0	*0*	0	3	1	0	*4*
7:30 AM	0	0	2	3	*5*	0	1	0	0	*1*	2	3	4	0	*9*
7:45 AM	**0**	**0**	**1**	**2**	***3***	**0**	**0**	**1**	**0**	***1***	**1**	**2**	**4**	**0**	*7*
8:00 AM	**2**	**0**	**4**	**6**	***12***	**0**	**0**	**0**	**1**	***1***	**0**	**9**	**9**	**0**	*18*
8:15 AM	**0**	**0**	**5**	**8**	***13***	**0**	**0**	**0**	**0**	***0***	**1**	**4**	**9**	**0**	*14*
8:30 AM	**0**	**2**	**4**	**5**	***11***	**0**	**0**	**0**	**1**	***1***	**3**	**5**	**6**	**0**	***14***
8:45 AM	1	0	3	7	*11*	0	0	0	1	*1*	0	2	1	0	*3*
Count Total	3	2	26	44	*75*	0	1	1	3	*5*	11	31	36	0	*78*
Peak Hour	**2**	**2**	**14**	**21**	***39***	**0**	**0**	**1**	**2**	***3***	**5**	**20**	**28**	**0**	***53***

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Angela St Eastbound				E Angela St Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	5	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	11	0	15	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	5	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**3**	28
8:00 AM	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**6**	**0**	**12**	35
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**8**	**0**	**13**	33
8:30 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**4**	**1**	**11**	**39**
8:45 AM	0	0	0	1	0	0	0	0	0	0	3	0	0	0	7	0	11	47
Count Total	0	0	1	2	0	2	0	0	0	0	25	1	0	0	43	1	75	0
Peak Hour	**0**	**0**	**1**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**13**	**1**	**0**	**0**	**20**	**1**	**39**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W Angela St Eastbound			E Angela St Westbound			First St Northbound			First St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	3
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**3**
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	3
Count Total	0	0	0	0	1	0	0	1	0	0	3	0	5	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**3**	**0**

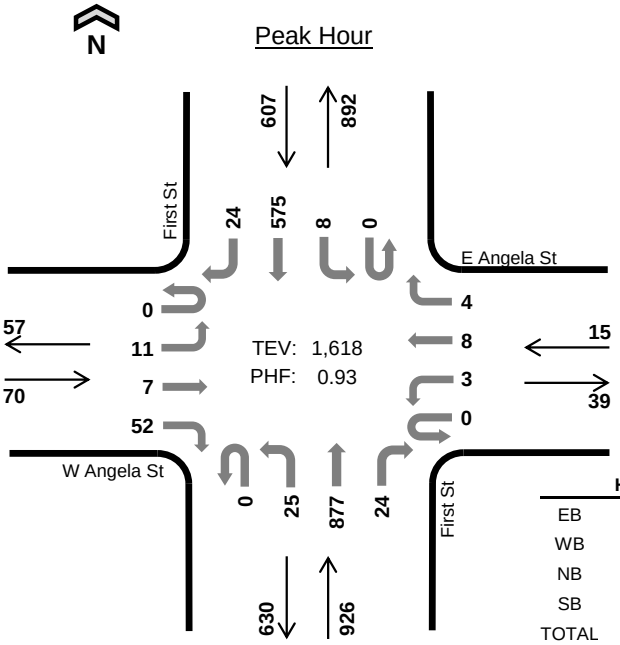
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

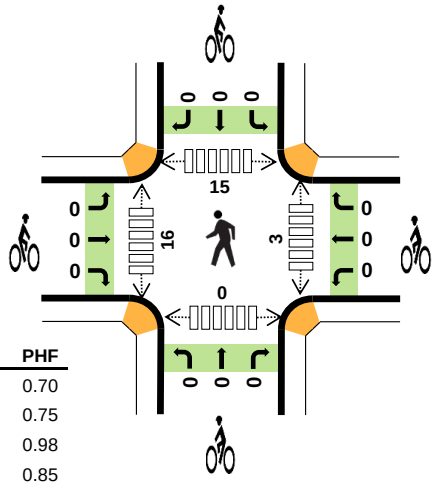
First St
E Angela St

Peak Hour

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM



	HV %:	PHF
EB	1.4%	0.70
WB	0.0%	0.75
NB	1.6%	0.98
SB	0.8%	0.85
TOTAL	1.3%	0.93



Two-Hour Count Summaries

Interval Start	W Angela St Eastbound				E Angela St Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	6	0	9	1	7	1	3	0	8	189	8	0	3	116	10	361	0
4:15 PM	0	6	2	9	0	1	1	1	0	5	166	7	0	2	134	5	339	0
4:30 PM	0	5	0	7	0	1	2	0	0	5	208	5	0	1	138	5	377	0
4:45 PM	1	2	0	10	0	2	1	3	0	10	198	5	0	3	124	12	371	1,448
5:00 PM	**0**	**2**	**1**	**14**	**0**	**0**	**3**	**1**	**0**	**7**	**224**	**5**	**0**	**2**	**164**	**13**	**436**	1,523
5:15 PM	**0**	**3**	**2**	**20**	**0**	**3**	**0**	**0**	**0**	**3**	**213**	**5**	**0**	**3**	**146**	**4**	**402**	1,586
5:30 PM	**0**	**2**	**0**	**7**	**0**	**0**	**4**	**1**	**0**	**8**	**221**	**7**	**0**	**1**	**136**	**4**	**391**	1,600
5:45 PM	**0**	**4**	**4**	**11**	**0**	**0**	**1**	**2**	**0**	**7**	**219**	**7**	**0**	**2**	**129**	**3**	**389**	**1,618**
Count Total	1	30	9	87	1	14	13	11	0	53	1,638	49	0	17	1,087	56	3,066	0
Peak Hour All	**0**	**11**	**7**	**52**	**0**	**3**	**8**	**4**	**0**	**25**	**877**	**24**	**0**	**8**	**575**	**24**	**1,618**	**0**
Peak Hour HV	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**2**	**0**	**0**	**5**	**0**	**21**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**2%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**1%**	**8%**	**-**	**0%**	**1%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	2	2	*4*	0	0	0	0	*0*	1	7	3	0	*11*
4:15 PM	0	1	2	2	*5*	0	0	1	1	*2*	1	3	0	0	*4*
4:30 PM	1	0	4	3	*8*	0	0	1	0	*1*	0	3	0	0	*3*
4:45 PM	1	0	6	4	*11*	0	0	0	0	*0*	1	5	3	0	*9*
5:00 PM	**0**	**0**	**3**	**2**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**3**	**0**	*6*
5:15 PM	**0**	**0**	**3**	**1**	***4***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**1**	**0**	*3*
5:30 PM	**1**	**0**	**4**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**1**	**7**	**7**	**0**	*15*
5:45 PM	**0**	**0**	**5**	**2**	***7***	**0**	**0**	**0**	**0**	***0***	**1**	**5**	**4**	**0**	***10***
Count Total	3	1	29	16	*49*	0	0	2	1	*3*	6	34	21	0	*61*
Peak Hour	**1**	**0**	**15**	**5**	***21***	**0**	**0**	**0**	**0**	***0***	**3**	**16**	**15**	**0**	***34***

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Angela St Eastbound				E Angela St Westbound				First St Northbound				First St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	0
4:15 PM	0	0	0	0	0	0	1	0	0	0	2	0	0	0	1	1	5	0
4:30 PM	0	0	0	1	0	0	0	0	0	0	4	0	0	0	3	0	8	0
4:45 PM	0	0	0	1	0	0	0	0	0	0	6	0	0	0	1	3	11	28
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**5**	29
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**4**	28
5:30 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**5**	25
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**0**	**0**	**2**	**0**	**7**	**21**
Count Total	0	0	0	3	0	0	1	0	0	0	27	2	0	0	12	4	49	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**13**	**2**	**0**	**0**	**5**	**0**	**21**	**0**

Two-Hour Count Summaries - Bikes

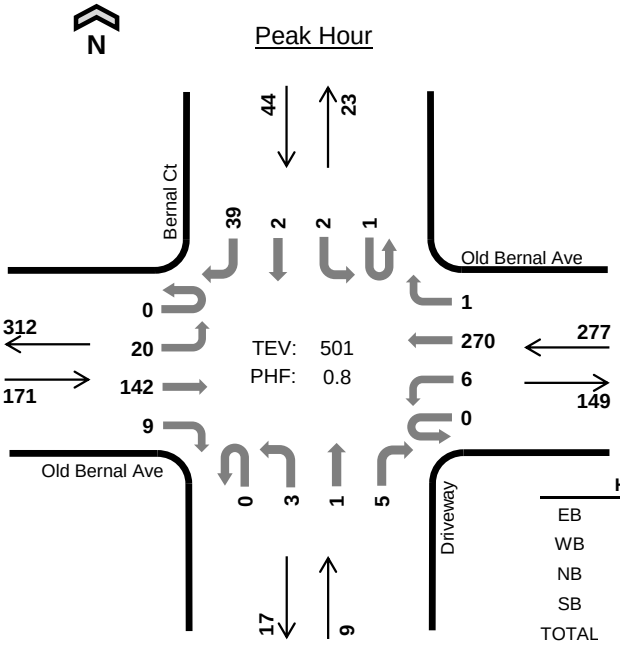
Interval Start	W Angela St Eastbound			E Angela St Westbound			First St Northbound			First St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0
4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	0	0	0	0	0	2	0	0	1	0	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

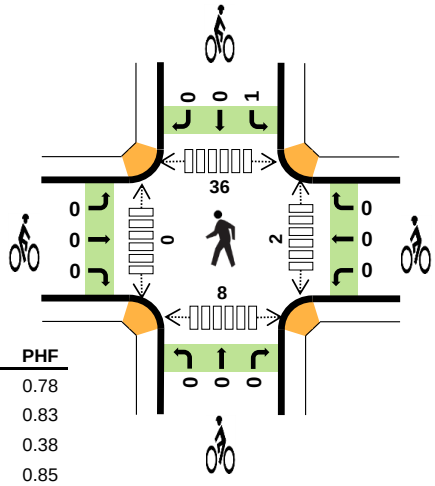
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Bernal Ct
Old Bernal Ave

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	0.0%	0.78
WB	0.4%	0.83
NB	0.0%	0.38
SB	2.3%	0.85
TOTAL	0.4%	0.80

Two-Hour Count Summaries

Interval Start		Old Bernal Ave Eastbound				Old Bernal Ave Westbound				Driveway Northbound				Bernal Ct Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	2	6	1	0	0	18	0	0	0	0	0	0	3	0	2	32	0
7:15 AM		0	1	18	1	0	3	65	0	0	0	0	0	0	1	0	4	93	0
7:30 AM		**0**	**4**	**36**	**1**	**0**	**0**	**72**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**8**	**122**	0
7:45 AM		**0**	**4**	**24**	**3**	**0**	**1**	**53**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**9**	**96**	343
8:00 AM		**0**	**6**	**36**	**2**	**0**	**0**	**67**	**0**	**0**	**1**	**1**	**0**	**0**	**2**	**1**	**10**	**126**	437
8:15 AM		**0**	**6**	**46**	**3**	**0**	**5**	**78**	**0**	**0**	**2**	**0**	**4**	**1**	**0**	**0**	**12**	**157**	**501**
8:30 AM		0	6	30	3	0	2	44	0	0	3	0	0	0	1	1	6	96	475
8:45 AM		0	0	11	7	0	0	26	1	0	1	0	1	0	0	0	3	50	429
Count Total		0	29	207	21	0	11	423	2	0	7	1	6	1	7	3	54	772	0
Peak Hour	**All**	**0**	**20**	**142**	**9**	**0**	**6**	**270**	**1**	**0**	**3**	**1**	**5**	**1**	**2**	**2**	**39**	**501**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**3%**	**0%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	1	0	0	2	*3*
7:15 AM	0	3	0	0	*3*	0	0	0	0	*0*	1	0	4	2	*7*
7:30 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**2**	*4*
7:45 AM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**6**	**3**	*9*
8:00 AM	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**13**	**1**	*16*
8:15 AM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**15**	**2**	***17***
8:30 AM	0	1	0	0	*1*	0	0	0	0	*0*	1	0	3	5	*9*
8:45 AM	0	0	0	0	*0*	0	0	0	1	*1*	0	0	2	1	*3*
Count Total	0	5	0	1	*6*	0	0	0	2	*2*	5	0	45	18	*68*
Peak Hour	**0**	**1**	**0**	**1**	***2***	**0**	**0**	**0**	**1**	***1***	**2**	**0**	**36**	**8**	***46***

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Old Bernal Ave Eastbound				Old Bernal Ave Westbound				Driveway Northbound				Bernal Ct Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	4
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Count Total	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	1	6	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**

Two-Hour Count Summaries - Bikes

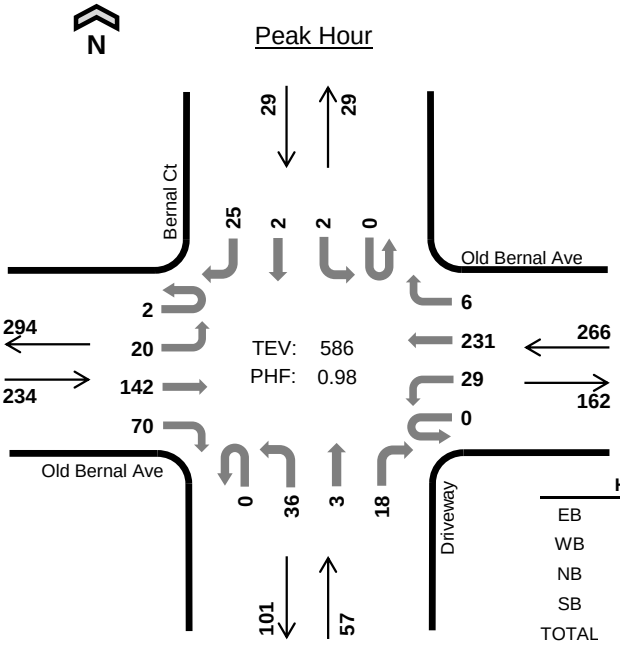
Interval Start	Old Bernal Ave Eastbound			Old Bernal Ave Westbound			Driveway Northbound			Bernal Ct Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	2
Count Total	0	0	0	0	0	0	0	0	0	1	0	1	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**

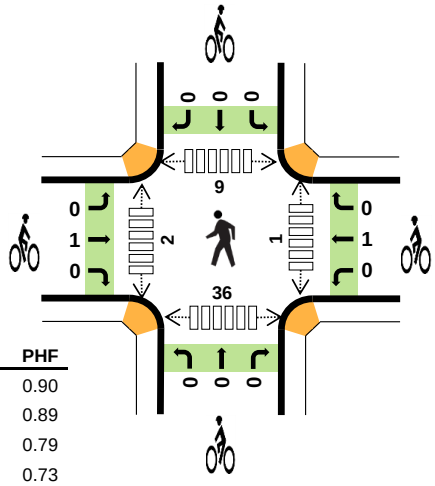
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Bernal Ct
Old Bernal Ave

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM





	HV %:	PHF
EB	0.4%	0.90
WB	0.4%	0.89
NB	1.8%	0.79
SB	0.0%	0.73
TOTAL	0.5%	0.98

Two-Hour Count Summaries

Interval Start		Old Bernal Ave Eastbound				Old Bernal Ave Westbound				Driveway Northbound				Bernal Ct Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	5	38	20	0	9	35	0	0	18	1	6	0	0	1	2	135	0
4:15 PM		0	3	38	18	0	14	42	0	0	14	0	2	0	0	1	0	132	0
4:30 PM		0	3	38	24	0	8	46	1	0	15	0	5	0	1	1	4	146	0
4:45 PM		0	4	33	10	0	8	48	0	0	12	3	8	0	0	0	3	129	542
5:00 PM		**0**	**4**	**34**	**11**	**0**	**9**	**65**	**1**	**0**	**9**	**0**	**9**	**0**	**0**	**0**	**3**	**145**	552
5:15 PM		**0**	**3**	**42**	**14**	**0**	**8**	**59**	**3**	**0**	**7**	**0**	**3**	**0**	**0**	**0**	**8**	**147**	567
5:30 PM		**1**	**8**	**30**	**22**	**0**	**5**	**56**	**1**	**0**	**12**	**2**	**4**	**0**	**1**	**2**	**5**	**149**	570
5:45 PM		**1**	**5**	**36**	**23**	**0**	**7**	**51**	**1**	**0**	**8**	**1**	**2**	**0**	**1**	**0**	**9**	**145**	**586**
Count Total		2	35	289	142	0	68	402	7	0	95	7	39	0	3	5	34	1,128	0
Peak Hour	**All**	**2**	**20**	**142**	**70**	**0**	**29**	**231**	**6**	**0**	**36**	**3**	**18**	**0**	**2**	**2**	**25**	**586**	**0**
	HV	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**
	HV%	**0%**	**0%**	**1%**	**0%**	**-**	**0%**	**0%**	**0%**	**-**	**3%**	**0%**	**0%**	**-**	**0%**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	6	4	*10*
4:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	2	6	*9*
4:30 PM	0	1	0	0	*1*	0	0	0	1	*1*	0	0	1	3	*4*
4:45 PM	2	0	0	0	*2*	0	0	0	0	*0*	0	0	1	2	*3*
5:00 PM	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**8**	*8*
5:15 PM	**1**	**1**	**0**	**0**	***2***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
5:30 PM	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***	**1**	**2**	**2**	**14**	*19*
5:45 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**7**	**14**	***21***
Count Total	3	2	1	0	*6*	1	1	0	1	*3*	1	3	19	51	*74*
Peak Hour	**1**	**1**	**1**	**0**	***3***	**1**	**1**	**0**	**0**	***2***	**1**	**2**	**9**	**36**	***48***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Old Bernal Ave				Old Bernal Ave				Driveway				Bernal Ct				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
4:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	4
5:15 PM	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	6
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	5
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
Count Total	0	0	2	1	0	0	2	0	0	1	0	0	0	0	0	0	6	0
Peak Hour	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**

Two-Hour Count Summaries - Bikes

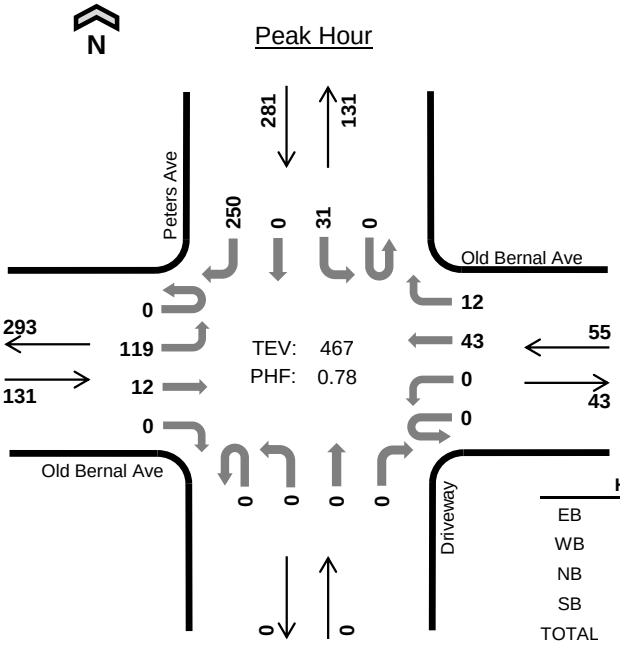
Interval Start	Old Bernal Ave			Old Bernal Ave			Driveway			Bernal Ct			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
Count Total	0	1	0	0	1	0	0	0	0	0	0	1	3	0
Peak Hour	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

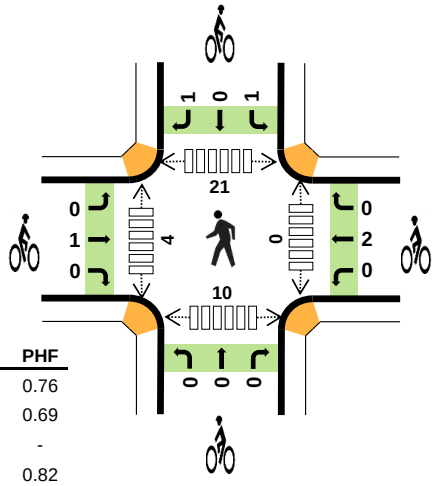
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Peters Ave
Old Bernal Ave

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM



	HV %:	PHF
EB	0.8%	0.76
WB	5.5%	0.69
NB	-	-
SB	0.7%	0.82
TOTAL	1.3%	0.78



Two-Hour Count Summaries

Interval Start		Old Bernal Ave Eastbound				Old Bernal Ave Westbound				Driveway Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	9	1	0	0	0	4	4	0	0	0	0	0	0	0	18	36	0
7:15 AM		0	18	5	0	0	0	5	1	0	0	1	0	0	3	0	67	100	0
7:30 AM		**0**	**30**	**1**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**62**	**104**	0
7:45 AM		**0**	**23**	**2**	**0**	**0**	**0**	**9**	**5**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**45**	**92**	332
8:00 AM		**0**	**26**	**6**	**0**	**0**	**0**	**14**	**2**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**68**	**122**	418
8:15 AM		**0**	**40**	**3**	**0**	**0**	**0**	**16**	**4**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**75**	**149**	**467**
8:30 AM		0	26	0	0	0	0	4	4	0	0	0	0	0	5	0	47	86	449
8:45 AM		0	16	2	0	0	0	2	3	0	0	0	0	0	4	0	26	53	410
Count Total		0	188	20	0	0	0	58	24	0	0	1	0	0	43	0	408	742	0
Peak Hour	**All**	**0**	**119**	**12**	**0**	**0**	**0**	**43**	**12**	**0**	**0**	**0**	**0**	**0**	**31**	**0**	**250**	**467**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**6**	**0**
	HV%	**-**	**1%**	**0%**	**-**	**-**	**-**	**2%**	**17%**	**-**	**-**	**-**	**-**	**-**	**6%**	**-**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	0	3	*3*	0	0	0	0	*0*	0	0	1	4	*5*
7:30 AM	**0**	**1**	**0**	**0**	***1***	**1**	**0**	**0**	**0**	***1***	**0**	**1**	**5**	**1**	*7*
7:45 AM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**1**	***1***	**0**	**2**	**5**	**2**	*9*
8:00 AM	**0**	**0**	**0**	**1**	***1***	**0**	**2**	**0**	**0**	***2***	**0**	**0**	**6**	**2**	*8*
8:15 AM	**0**	**2**	**0**	**1**	***3***	**0**	**0**	**0**	**1**	***1***	**0**	**1**	**5**	**5**	***11***
8:30 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	1	4	3	*8*
8:45 AM	0	0	0	0	*0*	0	0	0	1	*1*	0	0	3	3	*6*
Count Total	1	3	0	6	*10*	1	2	0	3	*6*	0	5	29	20	*54*
Peak Hour	**1**	**3**	**0**	**2**	***6***	**1**	**2**	**0**	**2**	***5***	**0**	**4**	**21**	**10**	***35***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Old Bernal Ave				Old Bernal Ave				Driveway				Peters Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
7:45 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	5
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	6
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**6**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	6
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Count Total	0	1	0	0	0	0	1	2	0	0	0	0	0	2	0	4	10	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**6**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Old Bernal Ave			Old Bernal Ave			Driveway			Peters Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	2
8:00 AM	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	4
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**5**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	4
Count Total	0	1	0	0	2	0	0	0	0	2	0	1	6	0
Peak Hour	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**5**	**0**

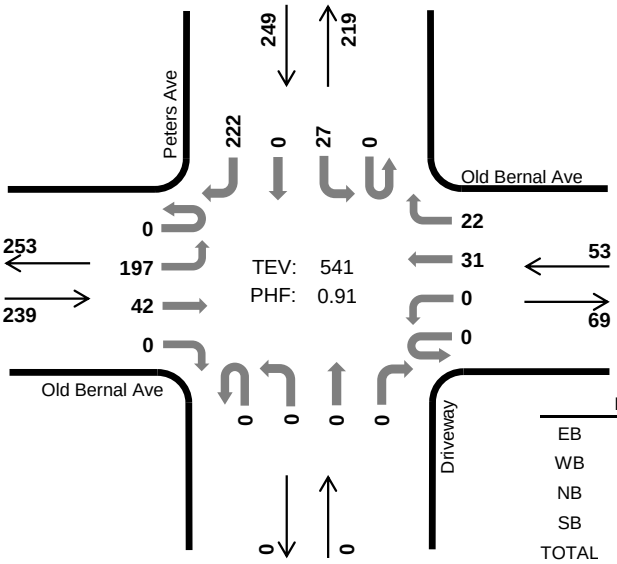
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

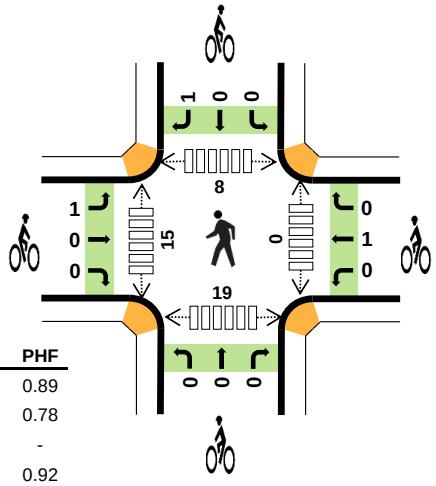
Project Manager: (415) 310-6469
project.manager.ca@idaxdata.com

Peters Ave
Old Bernal Ave

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Peak Hour





	HV %:	PHF
EB	0.4%	0.89
WB	1.9%	0.78
NB	-	-
SB	0.4%	0.92
TOTAL	0.6%	0.91

Two-Hour Count Summaries

Interval Start		Old Bernal Ave Eastbound				Old Bernal Ave Westbound				Driveway Northbound				Peters Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	42	17	0	0	0	8	7	0	0	0	0	0	5	0	35	114	0
4:15 PM		0	50	10	0	0	0	6	9	0	0	0	0	0	4	0	44	123	0
4:30 PM		**0**	**50**	**11**	**0**	**0**	**0**	**9**	**2**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**46**	**125**	0
4:45 PM		**0**	**41**	**4**	**0**	**0**	**0**	**7**	**10**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**53**	**123**	485
5:00 PM		**0**	**51**	**16**	**0**	**0**	**0**	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**61**	**145**	516
5:15 PM		**0**	**55**	**11**	**0**	**0**	**0**	**7**	**8**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**62**	**148**	**541**
5:30 PM		1	30	5	0	0	0	8	7	0	0	0	0	0	6	0	44	101	517
5:45 PM		0	35	12	0	0	0	5	8	0	0	0	0	0	9	0	54	123	517
Count Total		1	354	86	0	0	0	58	53	0	0	0	0	0	51	0	399	1,002	0
Peak Hour	**All**	**0**	**197**	**42**	**0**	**0**	**0**	**31**	**22**	**0**	**0**	**0**	**0**	**0**	**27**	**0**	**222**	**541**	**0**
	HV	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**
	HV%	**-**	**1%**	**0%**	**-**	**-**	**-**	**3%**	**0%**	**-**	**-**	**-**	**-**	**-**	**4%**	**-**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	2	0	6	*8*
4:15 PM	0	1	0	0	*1*	0	0	0	0	*0*	0	6	3	2	*11*
4:30 PM	**0**	**1**	**0**	**1**	***2***	**0**	**1**	**0**	**0**	***1***	**0**	**4**	**5**	**10**	*19*
4:45 PM	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***	**0**	**3**	**1**	**4**	*8*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**8**	**2**	**3**	*13*
5:15 PM	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**2**	***2***
5:30 PM	0	0	0	0	*0*	1	0	0	0	*1*	1	6	3	9	*19*
5:45 PM	0	0	0	0	*0*	1	0	0	0	*1*	0	2	2	8	*12*
Count Total	1	2	0	1	*4*	3	1	0	1	*5*	1	31	16	44	*92*
Peak Hour	**1**	**1**	**0**	**1**	***3***	**1**	**1**	**0**	**1**	***3***	**0**	**15**	**8**	**19**	***42***

Project Manager: (415) 310-6469
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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Old Bernal Ave				Old Bernal Ave				Driveway				Peters Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:15 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	1	0	0	0	0	1	1	0	0	0	0	0	1	0	0	4	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Old Bernal Ave			Old Bernal Ave			Driveway			Peters Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	2
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**3**
5:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	3
5:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	3
Count Total	3	0	0	0	1	0	0	0	0	0	0	1	5	0
Peak Hour	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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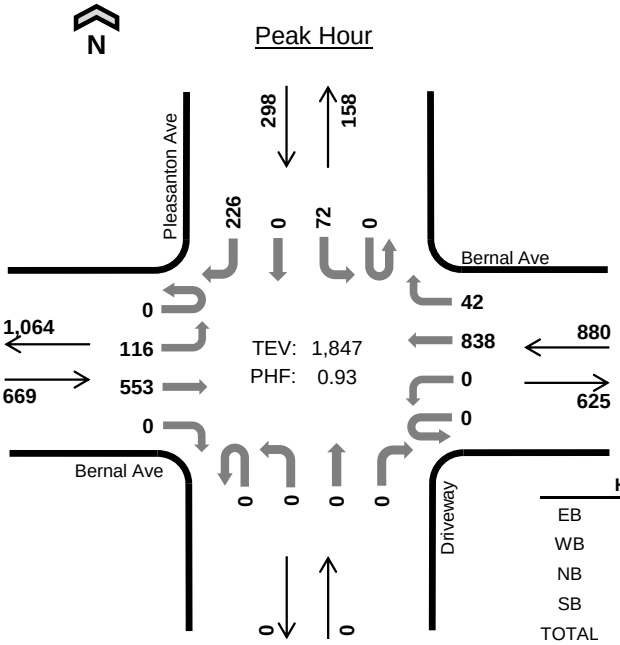
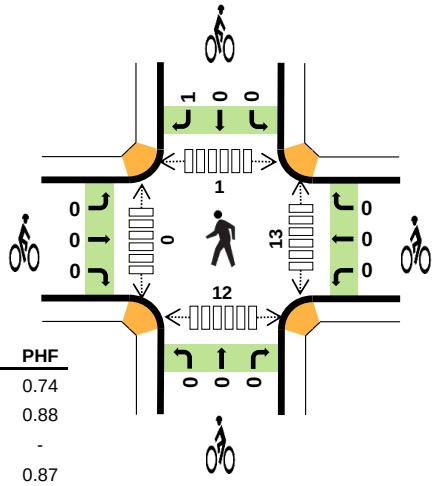
Pleasanton Ave
Bernal Ave

Date: 05-31-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM





	HV %:	PHF
EB	1.6%	0.74
WB	0.9%	0.88
NB	-	-
SB	3.0%	0.87
TOTAL	1.5%	0.93

Two-Hour Count Summaries

Interval Start	Bernal Ave Eastbound				Bernal Ave Westbound				Driveway Northbound				Pleasanton Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	5	47	0	0	0	144	3	0	0	0	0	0	10	0	45	254	0
7:15 AM	0	7	56	0	0	0	169	4	0	0	0	0	0	9	0	50	295	0
7:30 AM	**0**	**31**	**90**	**0**	**0**	**0**	**243**	**8**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**53**	**431**	0
7:45 AM	**0**	**41**	**141**	**0**	**0**	**0**	**198**	**19**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**54**	**467**	1,447
8:00 AM	**0**	**26**	**200**	**0**	**0**	**0**	**176**	**11**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**60**	**499**	1,692
8:15 AM	**0**	**18**	**122**	**0**	**0**	**0**	**221**	**4**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**59**	**450**	**1,847**
8:30 AM	0	14	79	0	0	0	191	2	0	0	0	0	0	16	0	39	341	1,757
8:45 AM	0	18	109	0	0	0	168	5	0	0	0	0	0	3	0	39	342	1,632
Count Total	0	160	844	0	0	0	1,510	56	0	0	0	0	0	110	0	399	3,079	0
Peak Hour All	**0**	**116**	**553**	**0**	**0**	**0**	**838**	**42**	**0**	**0**	**0**	**0**	**0**	**72**	**0**	**226**	**1,847**	**0**
Peak Hour HV	**0**	**8**	**3**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**28**	**0**
Peak Hour HV%	**-**	**7%**	**1%**	**-**	**-**	**-**	**1%**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**4%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	7	2	0	1	*10*	0	0	0	1	*1*	0	0	0	1	*1*
7:15 AM	2	2	0	2	*6*	0	0	0	0	*0*	3	0	0	4	*7*
7:30 AM	**3**	**1**	**0**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**4**	**0**	**0**	**4**	*8*
7:45 AM	**3**	**1**	**0**	**2**	***6***	**0**	**0**	**0**	**1**	***1***	**4**	**0**	**1**	**4**	*9*
8:00 AM	**2**	**3**	**0**	**3**	***8***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**2**	*5*
8:15 AM	**3**	**3**	**0**	**3**	***9***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**2**	***4***
8:30 AM	1	1	0	0	*2*	0	0	0	0	*0*	4	0	0	3	*7*
8:45 AM	2	1	0	0	*3*	0	0	0	1	*1*	1	0	1	3	*5*
Count Total	23	14	0	12	*49*	0	0	0	3	*3*	21	0	2	23	*46*
Peak Hour	**11**	**8**	**0**	**9**	***28***	**0**	**0**	**0**	**1**	***1***	**13**	**0**	**1**	**12**	***26***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Bernal Ave Eastbound				Bernal Ave Westbound				Driveway Northbound				Pleasanton Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	4	3	0	0	0	2	0	0	0	0	0	0	0	0	1	10	0
7:15 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	2	6	0
7:30 AM	**0**	**3**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5**	0
7:45 AM	**0**	**2**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**6**	27
8:00 AM	**0**	**1**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	25
8:15 AM	**0**	**2**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**9**	**28**
8:30 AM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	25
8:45 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	22
Count Total	0	13	10	0	0	0	14	0	0	0	0	0	0	0	0	12	49	0
Peak Hour	**0**	**8**	**3**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**28**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Bernal Ave Eastbound			Bernal Ave Westbound			Driveway Northbound			Pleasanton Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	2
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Count Total	0	0	0	0	0	0	0	0	0	0	0	3	3	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Project Manager: (415) 310-6469
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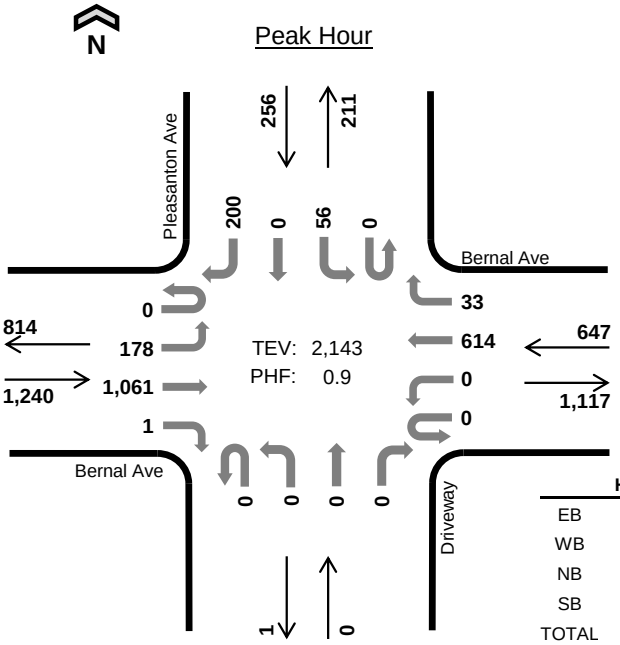
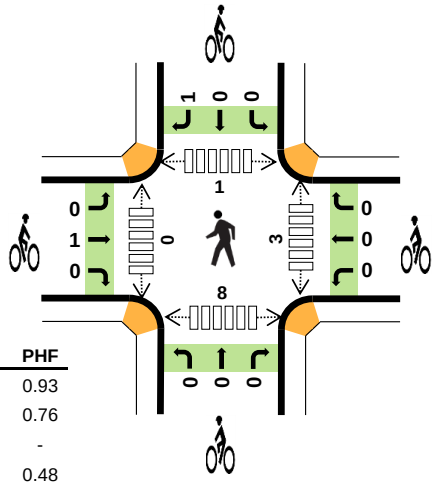
Pleasanton Ave
Bernal Ave

Date: 05-31-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM





	HV %:	PHF
EB	0.8%	0.93
WB	0.8%	0.76
NB	-	-
SB	2.7%	0.48
TOTAL	1.0%	0.90

Two-Hour Count Summaries

Interval Start		Bernal Ave Eastbound				Bernal Ave Westbound				Driveway Northbound				Pleasanton Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	30	191	0	0	0	162	7	0	0	0	0	0	10	0	38	438	0
4:15 PM		0	35	214	1	0	0	146	6	0	0	0	0	0	12	0	27	441	0
4:30 PM		0	37	222	0	0	0	166	8	0	0	0	1	0	20	0	72	526	0
4:45 PM		0	41	239	0	0	0	147	10	0	0	0	0	0	8	0	29	474	1,879
5:00 PM		**0**	**50**	**253**	**0**	**0**	**0**	**201**	**11**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**38**	**560**	2,001
5:15 PM		**0**	**37**	**252**	**0**	**0**	**0**	**169**	**9**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**24**	**501**	2,061
5:30 PM		**0**	**38**	**276**	**0**	**0**	**0**	**139**	**8**	**0**	**0**	**0**	**0**	**0**	**30**	**0**	**102**	**593**	2,128
5:45 PM		**0**	**53**	**280**	**1**	**0**	**0**	**105**	**5**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**36**	**489**	**2,143**
Count Total		0	321	1,927	2	0	0	1,235	64	0	0	0	1	0	106	0	366	4,022	0
Peak Hour	**All**	**0**	**178**	**1,061**	**1**	**0**	**0**	**614**	**33**	**0**	**0**	**0**	**0**	**0**	**56**	**0**	**200**	**2,143**	**0**
	HV	**0**	**5**	**5**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**22**	**0**
	HV%	**-**	**3%**	**0%**	**0%**	**-**	**-**	**1%**	**0%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**4%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	0	0	1	*3*	0	0	0	0	*0*	0	0	0	2	*2*
4:15 PM	4	2	0	4	*10*	2	0	0	0	*2*	3	0	0	5	*8*
4:30 PM	2	2	1	2	*7*	0	0	0	0	*0*	1	0	0	1	*2*
4:45 PM	1	1	0	1	*3*	0	0	0	1	*1*	2	0	0	4	*6*
5:00 PM	**2**	**2**	**0**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**1**	**0**	*2*
5:15 PM	**5**	**2**	**0**	**2**	***9***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**4**	*5*
5:30 PM	**1**	**0**	**0**	**2**	***3***	**0**	**0**	**0**	**1**	***1***	**1**	**0**	**0**	**3**	*4*
5:45 PM	**2**	**1**	**0**	**1**	***4***	**1**	**0**	**0**	**0**	***1***	**0**	**0**	**0**	**1**	***1***
Count Total	19	10	1	15	*45*	3	0	0	2	*5*	9	0	1	20	*30*
Peak Hour	**10**	**5**	**0**	**7**	***22***	**1**	**0**	**0**	**1**	***2***	**3**	**0**	**1**	**8**	***12***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Bernal Ave Eastbound				Bernal Ave Westbound				Driveway Northbound				Pleasanton Ave Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0
4:15 PM	0	2	1	1	0	0	2	0	0	0	0	0	0	2	0	2	10	0
4:30 PM	0	0	2	0	0	0	1	1	0	0	0	1	0	0	0	2	7	0
4:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	3	23
5:00 PM	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**6**	26
5:15 PM	**0**	**3**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**9**	25
5:30 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	21
5:45 PM	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**22**
Count Total	0	9	9	1	0	0	9	1	0	0	0	1	0	2	0	13	45	0
Peak Hour	**0**	**5**	**5**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**22**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Bernal Ave Eastbound			Bernal Ave Westbound			Driveway Northbound			Pleasanton Ave Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	2	0	0	0	0	0	0	0	0	0	0	0	2	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	3
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	2
5:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**
Count Total	2	1	0	0	0	0	0	0	0	0	0	2	5	0
Peak Hour	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Del Valle Pkwy				Division St				Hopyard Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**2**	**1**	**6**	13
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**3**	12
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**2**	**0**	**5**	**14**
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	6	20
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	16
Count Total	0	0	0	0	0	0	0	1	0	0	5	0	0	6	16	1	29	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**5**	**5**	**1**	**14**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Del Valle Pkwy			Division St			Hopyard Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	0
7:45 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**3**	7
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**2**	**0**	**6**	12
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**3**	**15**
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	13
8:45 AM	0	0	0	1	0	1	0	1	0	0	1	0	4	14
Count Total	0	0	0	3	0	1	0	9	1	1	6	0	21	0
Peak Hour	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**7**	**1**	**1**	**4**	**0**	**15**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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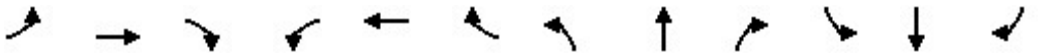


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	8	0	1	84	0	202	0	257	54	132	447	6
Future Volume (vph)	8	0	1	84	0	202	0	257	54	132	447	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	9	0	1	99	0	238	0	302	64	155	526	7

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	10	99	238	366	688
Volume Left (vph)	9	99	0	0	155
Volume Right (vph)	1	0	238	64	7
Hadj (s)	0.17	0.25	-0.55	-0.05	0.09
Departure Headway (s)	6.9	6.7	3.2	5.1	4.9
Degree Utilization, x	0.02	0.18	0.21	0.52	0.93
Capacity (veh/h)	480	510	1122	693	737
Control Delay (s)	10.0	11.2	7.1	13.4	39.3
Approach Delay (s)	10.0	8.3		13.4	39.3
Approach LOS	B	A		B	E

Intersection Summary				
Delay	24.9			
Level of Service	C			
Intersection Capacity Utilization	65.7%	ICU Level of Service	C	
Analysis Period (min)	15			

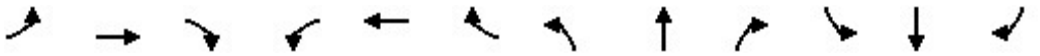
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Sign Control		Stop				Stop			Stop			Stop
Traffic Volume (vph)	2	2	4	1	32	3	95	0	360	34	142	433
Future Volume (vph)	2	2	4	1	32	3	95	0	360	34	142	433
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	2	2	4	0	34	3	102	0	387	37	153	466

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	8	37	102	424	629
Volume Left (vph)	2	34	0	0	153
Volume Right (vph)	4	0	102	37	10
Hadj (s)	-0.20	0.23	-0.55	0.00	0.09
Departure Headway (s)	6.2	6.5	3.2	4.7	4.6
Degree Utilization, x	0.01	0.07	0.09	0.56	0.81
Capacity (veh/h)	523	501	1121	742	770
Control Delay (s)	9.3	10.0	6.5	13.6	24.0
Approach Delay (s)	9.3	7.4		13.6	24.0
Approach LOS	A	A		B	C

Intersection Summary				
Delay	18.3			
Level of Service	C			
Intersection Capacity Utilization	68.8%	ICU Level of Service		C
Analysis Period (min)	15			

Movement	SBR
Lane Configurations	
Sign Control	
Traffic Volume (vph)	9
Future Volume (vph)	9
Peak Hour Factor	0.93
Hourly flow rate (vph)	10

Direction, Lane #



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	5	8	93	5	185	15	481	122	158	671	6
Future Volume (vph)	12	5	8	93	5	185	15	481	122	158	671	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1713			1749	1568	1752	3505	1505	1752	3499	
Flt Permitted		0.87			0.72	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1529			1316	1568	1752	3505	1505	1752	3499	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	12	5	8	96	5	191	15	496	126	163	692	6
RTOR Reduction (vph)	0	7	0	0	0	101	0	0	71	0	0	0
Lane Group Flow (vph)	0	18	0	0	101	90	15	496	55	163	698	0
Confl. Peds. (#/hr)			8	8					11			9
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		13.0			13.0	36.3	10.5	33.1	33.1	18.8	41.4	
Effective Green, g (s)		13.5			13.5	36.8	10.5	33.8	33.8	18.8	42.1	
Actuated g/C Ratio		0.17			0.17	0.47	0.13	0.43	0.43	0.24	0.54	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		264			227	738	235	1516	651	421	1886	
v/s Ratio Prot						0.06	0.01	0.14		c0.09	c0.20	
v/s Ratio Perm		0.01			c0.08				0.04			
v/c Ratio		0.07			0.44	0.12	0.06	0.33	0.08	0.39	0.37	
Uniform Delay, d1		27.0			28.9	11.6	29.5	14.6	13.0	24.8	10.4	
Progression Factor		1.00			1.00	1.00	1.25	0.91	0.79	1.00	1.00	
Incremental Delay, d2		0.0			0.5	0.0	0.0	0.1	0.1	0.2	0.1	
Delay (s)		27.1			29.5	11.6	37.0	13.4	10.3	25.0	10.5	
Level of Service		C			C	B	D	B	B	C	B	
Approach Delay (s)		27.1			17.8			13.3			13.2	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	12.5
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	16	175	0	101	0	0	0	125	809	0	0	447
Future Volume (vph)	16	175	0	101	0	0	0	125	809	0	0	447
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0				4.0	4.0			4.0
Lane Util. Factor		0.95	0.95	1.00				1.00	0.95			0.95
Frpb, ped/bikes		1.00	1.00	0.99				1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00	1.00				1.00	1.00			1.00
Frt		1.00	1.00	0.85				1.00	1.00			1.00
Flt Protected		0.95	0.95	1.00				0.95	1.00			1.00
Satd. Flow (prot)		1415	1415	1315				1752	3505			3505
Flt Permitted		0.95	0.95	1.00				0.95	1.00			1.00
Satd. Flow (perm)		1415	1415	1315				1752	3505			3505
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	16	179	0	103	0	0	0	128	826	0	0	456
RTOR Reduction (vph)	0	0	0	89	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	98	97	14	0	0	0	128	826	0	0	456
Confl. Peds. (#/hr)				1						3		
Confl. Bikes (#/hr)										1		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)		10	10	10								
Turn Type	Perm	Split	NA	Perm				Prot	NA		Prot	NA
Protected Phases		3	3		4	4		5	2		1	6
Permitted Phases	3			3								
Actuated Green, G (s)		15.6	15.6	15.6				13.9	94.5			76.6
Effective Green, g (s)		16.2	16.2	16.2				13.9	95.8			77.9
Actuated g/C Ratio		0.13	0.13	0.13				0.12	0.80			0.65
Clearance Time (s)		4.6	4.6	4.6				4.0	5.3			5.3
Vehicle Extension (s)		3.0	3.0	3.0				3.0	3.0			3.0
Lane Grp Cap (vph)		191	191	177				202	2798			2275
v/s Ratio Prot			0.07					c0.07	c0.24			0.13
v/s Ratio Perm		0.07		0.01								
v/c Ratio		0.51	0.51	0.08				0.63	0.30			0.20
Uniform Delay, d1		48.2	48.2	45.4				50.6	3.2			8.5
Progression Factor		1.00	1.00	1.00				0.65	3.03			1.00
Incremental Delay, d2		2.3	2.1	0.2				5.4	0.2			0.2
Delay (s)		50.6	50.3	45.6				38.5	9.9			8.7
Level of Service		D	D	D				D	A			A
Approach Delay (s)			48.8			0.0			13.7			8.5
Approach LOS			D			A			B			A

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	42.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	117
Future Volume (vph)	117
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.98
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1532
Flt Permitted	1.00
Satd. Flow (perm)	1532
Peak-hour factor, PHF	0.98
Adj. Flow (vph)	119
RTOR Reduction (vph)	42
Lane Group Flow (vph)	77
Confl. Peds. (#/hr)	1
Confl. Bikes (#/hr)	
Heavy Vehicles (%)	3%
Parking (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	76.6
Effective Green, g (s)	77.9
Actuated g/C Ratio	0.65
Clearance Time (s)	5.3
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	994
v/s Ratio Prot	
v/s Ratio Perm	0.05
v/c Ratio	0.08
Uniform Delay, d1	7.8
Progression Factor	1.00
Incremental Delay, d2	0.2
Delay (s)	7.9
Level of Service	A
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	5	105	5	122	0	467	107	211	504	4
Future Volume (vph)	0	0	5	105	5	122	0	467	107	211	504	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		3.0		4.0	3.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			0.98		1.00	0.95		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.97		1.00	1.00	
Flt Protected			1.00		0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1559		1761	1268		1516		1490	1565	
Flt Permitted			1.00		0.95	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1559		1761	1268		1516		191	1565	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	5	107	5	124	0	477	109	215	514	4
RTOR Reduction (vph)	0	0	4	0	0	109	0	6	0	0	0	0
Lane Group Flow (vph)	0	0	1	0	112	15	0	580	0	215	518	0
Confl. Peds. (#/hr)	9		1			9	25		7			25
Confl. Bikes (#/hr)									2			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			12.6		12.6	12.6		55.5		52.2	52.2	
Effective Green, g (s)			12.6		12.6	12.6		55.5		52.2	52.2	
Actuated g/C Ratio			0.12		0.12	0.12		0.53		0.50	0.50	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			187		211	152		801		316	778	
v/s Ratio Prot					c0.06			c0.38		0.12	c0.33	
v/s Ratio Perm			0.00			0.01				c0.22		
v/c Ratio			0.00		0.53	0.10		0.72		0.68	0.67	
Uniform Delay, d1			40.7		43.4	41.1		18.9		22.0	19.8	
Progression Factor			1.00		1.00	1.00		0.21		1.00	1.00	
Incremental Delay, d2			0.0		2.9	0.3		1.8		5.9	2.2	
Delay (s)			40.7		46.3	41.5		5.7		28.0	22.0	
Level of Service			D		D	D		A		C	C	
Approach Delay (s)		40.7			43.8			5.7			23.8	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

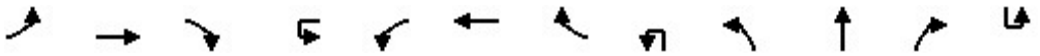
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	265	37	10	309	358	256
Future Volume (vph)	265	37	10	309	358	256
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.99			1.00	0.94	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.98			1.00	0.94	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1459			1563	1386	
Flt Permitted	0.96			0.98	1.00	
Satd. Flow (perm)	1459			1528	1386	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	279	39	11	325	377	269
RTOR Reduction (vph)	4	0	0	0	24	0
Lane Group Flow (vph)	314	0	0	336	622	0
Confl. Peds. (#/hr)		25	41			41
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	25.2			30.3	64.8	
Effective Green, g (s)	25.2			29.3	64.8	
Actuated g/C Ratio	0.24			0.28	0.62	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	350			426	855	
v/s Ratio Prot	c0.22				c0.45	
v/s Ratio Perm				0.22		
v/c Ratio	0.90			0.79	0.73	
Uniform Delay, d1	38.7			35.0	14.0	
Progression Factor	1.00			1.00	0.21	
Incremental Delay, d2	24.8			9.9	2.8	
Delay (s)	63.5			44.9	5.7	
Level of Service	E			D	A	
Approach Delay (s)	63.5			44.9	5.7	
Approach LOS	E			D	A	

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	167	108	99	103	36	49	857	135	35	447	68
Future Volume (vph)	55	167	108	99	103	36	49	857	135	35	447	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.96		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1718		1490	1800		1752	3416		1752	3505	1524
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1718		1490	1498		1752	3416		1752	3505	1524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	57	174	112	103	107	38	51	893	141	36	466	71
RTOR Reduction (vph)	0	20	0	0	11	0	0	8	0	0	0	36
Lane Group Flow (vph)	57	267	0	103	134	0	51	1026	0	36	466	36
Confl. Peds. (#/hr)			9			6			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	21.7	21.7		14.8	14.8		6.9	60.8		5.2	59.1	59.1
Effective Green, g (s)	22.0	22.0		15.1	15.1		6.9	61.7		5.2	60.0	60.0
Actuated g/C Ratio	0.18	0.18		0.13	0.13		0.06	0.51		0.04	0.50	0.50
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	321	314		187	226		100	1756		75	1752	762
v/s Ratio Prot	0.03	c0.16		0.07	c0.07		c0.03	c0.30		0.02	0.13	
v/s Ratio Perm												0.02
v/c Ratio	0.18	0.85		0.55	0.59		0.51	0.58		0.48	0.27	0.05
Uniform Delay, d1	41.4	47.4		49.3	49.5		54.9	20.2		56.1	17.3	15.4
Progression Factor	1.00	1.00		1.00	1.00		0.99	0.75		1.21	0.62	0.57
Incremental Delay, d2	0.3	19.4		3.5	4.1		2.4	0.8		4.7	0.4	0.1
Delay (s)	41.6	66.8		52.7	53.6		56.5	15.9		72.4	11.2	8.8
Level of Service	D	E		D	D		E	B		E	B	A
Approach Delay (s)		62.6			53.3			17.8			14.7	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Lane Configurations												
Sign Control		Stop				Stop				Stop		
Traffic Volume (vph)	82	171	120	2	47	100	31	2	126	208	60	1
Future Volume (vph)	82	171	120	2	47	100	31	2	126	208	60	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
Hourly flow rate (vph)	91	190	133	0	52	111	34	0	140	231	67	0

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	91	323	52	145	438	292
Volume Left (vph)	91	0	52	0	140	17
Volume Right (vph)	0	133	0	34	67	63
Hadj (s)	0.55	-0.24	0.55	-0.11	0.02	-0.07
Departure Headway (s)	8.2	7.3	8.7	8.0	6.7	7.0
Degree Utilization, x	0.21	0.66	0.13	0.32	0.82	0.57
Capacity (veh/h)	417	464	379	411	511	472
Control Delay (s)	12.1	22.2	11.8	13.6	33.1	18.9
Approach Delay (s)	19.9		13.1		33.1	18.9
Approach LOS	C		B		D	C

Intersection Summary				
Delay	23.0			
Level of Service	C			
Intersection Capacity Utilization	71.4%	ICU Level of Service	C	
Analysis Period (min)	15			

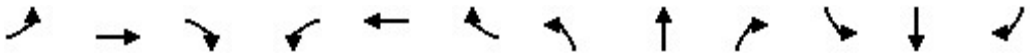
Movement	SBL	SBT	SBR
Lane Configurations			
Sign Control		Stop	
Traffic Volume (vph)	15	191	57
Future Volume (vph)	15	191	57
Peak Hour Factor	0.90	0.90	0.90
Hourly flow rate (vph)	17	212	63

Direction, Lane #

Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Sign Control	Stop			Stop		Stop	
Traffic Volume (vph)	104	137	84	232	1	291	81
Future Volume (vph)	104	137	84	232	1	291	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	109	144	88	244	0	306	85

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	109	144	88	244	391
Volume Left (vph)	109	0	88	0	0
Volume Right (vph)	0	144	0	0	85
Hadj (s)	0.55	-0.65	0.55	0.05	-0.08
Departure Headway (s)	6.9	5.7	6.3	5.8	5.5
Degree Utilization, x	0.21	0.23	0.15	0.39	0.59
Capacity (veh/h)	484	581	548	597	643
Control Delay (s)	10.6	9.2	9.3	11.3	16.1
Approach Delay (s)	9.8		10.8		16.1
Approach LOS	A		B		C

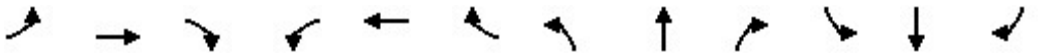
Intersection Summary			
Delay	12.6		
Level of Service	B		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	36	53	10	31	61	48	12	235	35	57	234	30
Future Volume (vph)	36	53	10	31	61	48	12	235	35	57	234	30
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
Hourly flow rate (vph)	41	60	11	35	69	55	14	267	40	65	266	34

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	112	159	321	365
Volume Left (vph)	41	35	14	65
Volume Right (vph)	11	55	40	34
Hadj (s)	0.07	-0.11	-0.02	0.03
Departure Headway (s)	6.1	5.8	5.3	5.3
Degree Utilization, x	0.19	0.26	0.47	0.53
Capacity (veh/h)	499	542	638	652
Control Delay (s)	10.6	10.9	12.9	14.1
Approach Delay (s)	10.6	10.9	12.9	14.1
Approach LOS	B	B	B	B

Intersection Summary				
Delay	12.7			
Level of Service	B			
Intersection Capacity Utilization	53.3%	ICU Level of Service	A	
Analysis Period (min)	15			



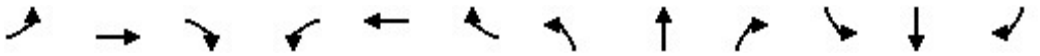
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	109	14	33	97	68	23	256	57	79	242	24
Future Volume (vph)	19	109	14	33	97	68	23	256	57	79	242	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.94	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1439	1532		1458	1432		1397	1501		1428	1531	
Flt Permitted	0.64	1.00		0.67	1.00		0.58	1.00		0.55	1.00	
Satd. Flow (perm)	972	1532		1028	1432		852	1501		831	1531	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	121	16	37	108	76	26	284	63	88	269	27
RTOR Reduction (vph)	0	8	0	0	44	0	0	10	0	0	4	0
Lane Group Flow (vph)	21	129	0	37	140	0	26	337	0	88	292	0
Confl. Peds. (#/hr)	41		24	24		41	88		63	63		88
Confl. Bikes (#/hr)						1			2			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	8.5	8.5		8.5	8.5		17.2	17.2		17.2	17.2	
Effective Green, g (s)	8.7	8.7		8.7	8.7		17.4	17.4		17.4	17.4	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.51	0.51		0.51	0.51	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	247	390		262	365		434	765		424	781	
v/s Ratio Prot		0.08			c0.10			c0.22			0.19	
v/s Ratio Perm	0.02			0.04			0.03			0.11		
v/c Ratio	0.09	0.33		0.14	0.38		0.06	0.44		0.21	0.37	
Uniform Delay, d1	9.7	10.3		9.8	10.5		4.2	5.3		4.6	5.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.2		0.1	0.4		0.2	0.3	
Delay (s)	9.7	10.5		9.9	10.7		4.3	5.7		4.8	5.4	
Level of Service	A	B		A	B		A	A		A	A	
Approach Delay (s)		10.4			10.6			5.6			5.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	34.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	73	50	41	67	32	39	828	25	10	524	69
Future Volume (vph)	110	73	50	41	67	32	39	828	25	10	524	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1472		1490	1473		1490	1560		1490	1530	
Flt Permitted	0.95	1.00		0.95	1.00		0.33	1.00		0.18	1.00	
Satd. Flow (perm)	1490	1472		1490	1473		521	1560		283	1530	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	79	54	45	73	35	42	900	27	11	570	75
RTOR Reduction (vph)	0	21	0	0	15	0	0	1	0	0	3	0
Lane Group Flow (vph)	120	112	0	45	93	0	42	926	0	11	642	0
Confl. Peds. (#/hr)						5	10		3	3		10
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.0	17.6		7.6	14.2		81.6	81.6		81.6	81.6	
Effective Green, g (s)	11.0	18.2		7.6	14.8		82.2	82.2		82.2	82.2	
Actuated g/C Ratio	0.09	0.15		0.06	0.12		0.69	0.69		0.69	0.69	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	223		94	181		356	1068		193	1048	
v/s Ratio Prot	c0.08	c0.08		0.03	0.06			c0.59			0.42	
v/s Ratio Perm							0.08			0.04		
v/c Ratio	0.88	0.50		0.48	0.51		0.12	0.87		0.06	0.61	
Uniform Delay, d1	53.9	46.7		54.3	49.2		6.5	14.7		6.2	10.3	
Progression Factor	1.00	1.00		1.00	1.00		0.11	0.50		0.53	0.73	
Incremental Delay, d2	43.9	1.8		3.8	2.5		0.4	6.4		0.5	2.5	
Delay (s)	97.7	48.5		58.1	51.7		1.1	13.8		3.8	10.0	
Level of Service	F	D		E	D		A	B		A	A	
Approach Delay (s)		71.8			53.6			13.2			9.9	
Approach LOS		E			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	7	52	3	8	4	25	877	24	8	583	24
Future Volume (Veh/h)	11	7	52	3	8	4	25	877	24	8	583	24
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	12	8	56	3	9	4	27	943	26	9	627	26
Pedestrians		16			3						15	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		1			0						1	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.80	0.80	0.80	0.80	0.80	0.70	0.80			0.70		
vC, conflicting volume	1694	1700	656	1718	1700	974	669			972		
vC1, stage 1 conf vol	674	674		1013	1013							
vC2, stage 2 conf vol	1020	1026		705	687							
vCu, unblocked vol	1175	1182	442	1205	1182	751	458			748		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	97	88	99	96	99	97			98		
cM capacity (veh/h)	214	237	483	220	244	283	864			600		

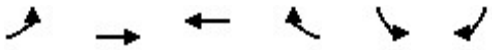
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	76	16	27	969	9	653
Volume Left	12	3	27	0	9	0
Volume Right	56	4	0	26	0	26
cSH	369	248	864	1700	600	1700
Volume to Capacity	0.21	0.06	0.03	0.57	0.02	0.38
Queue Length 95th (ft)	19	5	2	0	1	0
Control Delay (s)	17.3	20.5	9.3	0.0	11.1	0.0
Lane LOS	C	C	A		B	
Approach Delay (s)	17.3	20.5	0.3		0.2	
Approach LOS	C	C				

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	61.6%	ICU Level of Service		B
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	142	70	29	231	6	36	3	18	2	2	25
Future Volume (Veh/h)	20	142	70	29	231	6	36	3	18	2	2	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	20	145	71	30	236	6	37	3	18	2	2	26
Pedestrians		2			1			36			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked												
vC, conflicting volume	251			252			584	568	218	549	600	250
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	251			252			584	568	218	549	600	250
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			90	99	98	100	99	97
cM capacity (veh/h)	1299			1268			370	399	795	404	383	779

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	236	272	58	30
Volume Left	20	30	37	2
Volume Right	71	6	18	26
cSH	1299	1268	446	689
Volume to Capacity	0.02	0.02	0.13	0.04
Queue Length 95th (ft)	1	2	11	3
Control Delay (s)	0.8	1.1	14.3	10.5
Lane LOS	A	A	B	B
Approach Delay (s)	0.8	1.1	14.3	10.5
Approach LOS			B	B

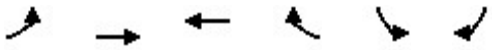
Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	36.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	197	42	31	22	27	222
Future Volume (Veh/h)	197	42	31	22	27	222
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	216	46	34	24	30	244
Pedestrians		15			8	
Lane Width (ft)		13.0			13.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		1			1	
Right turn flare (veh)						1
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1220				
pX, platoon unblocked						
vC, conflicting volume	66				532	69
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	66				532	69
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	86				93	75
cM capacity (veh/h)	1518				431	971

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	262	58	274
Volume Left	216	0	30
Volume Right	0	24	244
cSH	1518	1700	1090
Volume to Capacity	0.14	0.03	0.25
Queue Length 95th (ft)	12	0	25
Control Delay (s)	6.6	0.0	10.4
Lane LOS	A		B
Approach Delay (s)	6.6	0.0	10.4
Approach LOS			B

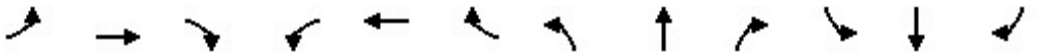
Intersection Summary			
Average Delay	7.7		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	178	1061	614	33	56	200
Future Volume (vph)	178	1061	614	33	56	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3474		1749	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3474		1749	1568
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	198	1179	682	37	62	222
RTOR Reduction (vph)	0	0	4	0	0	185
Lane Group Flow (vph)	198	1179	715	0	62	37
Confl. Peds. (#/hr)				1	3	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	11.0	32.7	17.7		8.4	8.4
Effective Green, g (s)	11.0	34.1	19.1		8.4	8.4
Actuated g/C Ratio	0.22	0.68	0.38		0.17	0.17
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	381	2366	1313		290	260
v/s Ratio Prot	0.11	c0.34	0.21			
v/s Ratio Perm					c0.04	0.02
v/c Ratio	0.52	0.50	0.54		0.21	0.14
Uniform Delay, d1	17.4	4.0	12.3		18.2	18.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.2	0.5		0.1	0.1
Delay (s)	17.9	4.2	12.8		18.3	18.1
Level of Service	B	A	B		B	B
Approach Delay (s)		6.2	12.8		18.1	
Approach LOS		A	B		B	

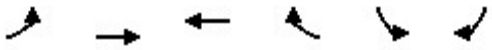
Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	50.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	980	101	63	502	42	50	63	31	30	80	165
Future Volume (vph)	127	980	101	63	502	42	50	63	31	30	80	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1543	3400	3456		1752	1845	1515	1752	1638	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1543	3400	3456		1752	1845	1515	1752	1638	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	138	1065	110	68	546	46	54	68	34	33	87	179
RTOR Reduction (vph)	0	0	42	0	5	0	0	0	25	0	54	0
Lane Group Flow (vph)	138	1065	68	68	587	0	54	68	9	33	212	0
Confl. Peds. (#/hr)			7			3			22			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	11.8	36.3	46.8	8.3	36.8		10.5	24.1	24.1	4.0	17.6	
Effective Green, g (s)	11.8	37.5	46.8	8.3	38.0		10.5	24.8	24.8	4.0	18.3	
Actuated g/C Ratio	0.12	0.40	0.49	0.09	0.40		0.11	0.26	0.26	0.04	0.19	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	218	1389	763	298	1388		194	483	397	74	316	
v/s Ratio Prot	c0.08	c0.30	0.01	0.02	c0.17		c0.03	0.04		0.02	c0.13	
v/s Ratio Perm			0.03						0.01			
v/c Ratio	0.63	0.77	0.09	0.23	0.42		0.28	0.14	0.02	0.45	0.67	
Uniform Delay, d1	39.3	24.8	12.6	40.2	20.4		38.6	26.7	25.9	44.2	35.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.4	2.6	0.0	0.1	0.2		0.3	0.0	0.0	1.6	4.4	
Delay (s)	43.7	27.4	12.6	40.3	20.6		38.9	26.8	25.9	45.8	39.7	
Level of Service	D	C	B	D	C		D	C	C	D	D	
Approach Delay (s)		27.8			22.6			30.8			40.4	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	28.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	94.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	135	845	470	146	57	108
Future Volume (Veh/h)	135	845	470	146	57	108
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	142	889	495	154	60	114
Pedestrians		3	3		5	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.96				0.80	0.96
vC, conflicting volume	654				1308	332
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	544				624	208
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	85				82	86
cM capacity (veh/h)	965				336	789

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	142	444	444	330	319	60	114
Volume Left	142	0	0	0	0	60	0
Volume Right	0	0	0	0	154	0	114
cSH	965	1700	1700	1700	1700	336	789
Volume to Capacity	0.15	0.26	0.26	0.19	0.19	0.18	0.14
Queue Length 95th (ft)	13	0	0	0	0	16	13
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	18.0	10.3
Lane LOS	A					C	B
Approach Delay (s)	1.3			0.0		13.0	
Approach LOS						B	

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	332	444	76	77	185	19	159	655	438	48	388	200
Future Volume (vph)	332	444	76	77	185	19	159	655	438	48	388	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1568	1752	3449		3400	1845	1541	1752	3052	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1568	1752	3449		3400	1845	1541	1752	3052	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	361	483	83	84	201	21	173	712	476	52	422	217
RTOR Reduction (vph)	0	0	66	0	7	0	0	0	174	0	45	0
Lane Group Flow (vph)	361	483	17	84	215	0	173	712	302	52	594	0
Confl. Peds. (#/hr)						4			3			9
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	14.0	24.0	24.0	9.7	19.7		10.3	62.2	62.2	6.3	58.2	
Effective Green, g (s)	14.0	24.9	24.9	9.7	20.6		10.3	63.1	63.1	6.3	59.1	
Actuated g/C Ratio	0.12	0.21	0.21	0.08	0.17		0.09	0.53	0.53	0.05	0.49	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	727	325	141	592		291	970	810	91	1503	
v/s Ratio Prot	c0.11	c0.14		c0.05	0.06		c0.05	c0.39		0.03	0.19	
v/s Ratio Perm			0.01						0.20			
v/c Ratio	0.91	0.66	0.05	0.60	0.36		0.59	0.73	0.37	0.57	0.40	
Uniform Delay, d1	52.4	43.7	38.1	53.3	43.9		52.8	22.0	16.8	55.5	19.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.16	0.70	
Incremental Delay, d2	24.7	2.3	0.1	6.6	0.4		3.2	4.9	1.3	7.3	0.7	
Delay (s)	77.1	46.0	38.2	59.9	44.3		56.1	26.9	18.1	71.6	14.0	
Level of Service	E	D	D	E	D		E	C	B	E	B	
Approach Delay (s)		57.4			48.6			27.5			18.4	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

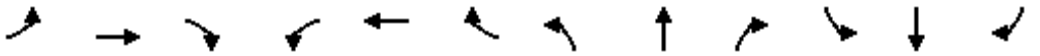
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	1	61	5	2	4	59	514	4	1	652	119
Future Volume (vph)	100	1	61	5	2	4	59	514	4	1	652	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1539		1717		1749	1842		1750	3412	
Flt Permitted	0.75	1.00	1.00		0.92		0.25	1.00		0.33	1.00	
Satd. Flow (perm)	1379	1845	1539		1611		462	1842		612	3412	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	133	1	81	7	3	5	79	685	5	1	869	159
RTOR Reduction (vph)	0	0	67	0	4	0	0	0	0	0	15	0
Lane Group Flow (vph)	133	1	14	0	11	0	79	690	0	1	1013	0
Confl. Peds. (#/hr)			5	5			20		5	5		20
Confl. Bikes (#/hr)			1									4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	13.0	13.0	13.0		13.0		55.9	55.9		55.9	55.9	
Effective Green, g (s)	13.5	13.5	13.5		13.5		55.9	55.9		55.9	55.9	
Actuated g/C Ratio	0.17	0.17	0.17		0.17		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	238	318	266		278		330	1318		438	2442	
v/s Ratio Prot		0.00						c0.37			0.30	
v/s Ratio Perm	c0.10		0.01		0.01		0.17			0.00		
v/c Ratio	0.56	0.00	0.05		0.04		0.24	0.52		0.00	0.41	
Uniform Delay, d1	29.6	26.7	27.0		26.9		3.8	5.0		3.2	4.5	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.84	0.67	
Incremental Delay, d2	1.6	0.0	0.0		0.0		0.1	0.2		0.0	0.0	
Delay (s)	31.2	26.7	27.0		26.9		3.9	5.2		2.7	3.1	
Level of Service	C	C	C		C		A	A		A	A	
Approach Delay (s)		29.6			26.9			5.1			3.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	78.1	Sum of lost time (s)	13.2
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	0	10	90	0	210	0	290	60	140	480	10
Future Volume (vph)	10	0	10	90	0	210	0	290	60	140	480	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	0	12	106	0	247	0	341	71	165	565	12

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	24	106	247	412	742
Volume Left (vph)	12	106	0	0	165
Volume Right (vph)	12	0	247	71	12
Hadj (s)	-0.15	0.25	-0.55	-0.05	0.09
Departure Headway (s)	6.8	6.8	3.2	5.2	5.0
Degree Utilization, x	0.05	0.20	0.22	0.60	1.03
Capacity (veh/h)	488	496	1122	682	709
Control Delay (s)	10.1	11.5	7.1	15.6	64.7
Approach Delay (s)	10.1	8.4		15.6	64.7
Approach LOS	B	A		C	F

Intersection Summary				
Delay	37.6			
Level of Service	E			
Intersection Capacity Utilization	72.7%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	160	10	410	20	430	80	170	830	10
Future Volume (vph)	10	10	10	160	10	410	20	430	80	170	830	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1709			1715	1568	1752	3505	1486	1752	3493	
Flt Permitted		0.89			0.71	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1544			1275	1568	1752	3505	1486	1752	3493	
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	13	13	13	208	13	532	26	558	104	221	1078	13
RTOR Reduction (vph)	0	10	0	0	0	96	0	0	59	0	1	0
Lane Group Flow (vph)	0	29	0	0	221	436	26	558	45	221	1090	0
Confl. Peds. (#/hr)	1		27	27		1			15			67
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		19.7			19.7	44.3	10.1	39.1	39.1	20.1	49.1	
Effective Green, g (s)		20.2			20.2	44.8	10.1	39.8	39.8	20.1	49.8	
Actuated g/C Ratio		0.22			0.22	0.49	0.11	0.43	0.43	0.22	0.54	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		338			279	762	192	1514	642	382	1888	
v/s Ratio Prot						c0.28	0.01	0.16		0.13	c0.31	
v/s Ratio Perm		0.02			c0.17				0.03			
v/c Ratio		0.09			0.79	0.57	0.14	0.37	0.07	0.58	0.58	
Uniform Delay, d1		28.6			34.0	16.8	37.1	17.7	15.3	32.2	14.1	
Progression Factor		1.00			1.00	1.00	1.24	0.99	1.08	1.00	1.00	
Incremental Delay, d2		0.0			13.3	0.7	0.1	0.1	0.0	1.3	0.4	
Delay (s)		28.6			47.3	17.5	45.9	17.7	16.6	33.5	14.6	
Level of Service		C			D	B	D	B	B	C	B	
Approach Delay (s)		28.6			26.2			18.6			17.8	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	92.1	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

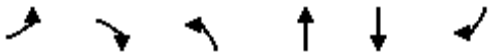
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	30	70	190	50	10	130	310	40	10	1050	420
Future Volume (vph)	140	30	70	190	50	10	130	310	40	10	1050	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	0.97	1.00		0.96		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1415	1442	1310		1767		1752	3429		1752	3505	1505
Flt Permitted	0.95	0.97	1.00		0.96		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1415	1442	1310		1767		1752	3429		1752	3505	1505
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	179	38	90	244	64	13	167	397	51	13	1346	538
RTOR Reduction (vph)	0	0	79	0	1	0	0	6	0	0	0	208
Lane Group Flow (vph)	107	110	11	0	320	0	167	442	0	13	1346	330
Confl. Peds. (#/hr)			3						5			6
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	14.5	14.5	14.5		6.0		15.9	79.2		2.4	65.7	65.7
Effective Green, g (s)	15.1	15.1	15.1		6.0		15.9	80.5		2.4	67.0	67.0
Actuated g/C Ratio	0.13	0.13	0.13		0.05		0.13	0.67		0.02	0.56	0.56
Clearance Time (s)	4.6	4.6	4.6		4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	178	181	164		88		232	2300		35	1956	840
v/s Ratio Prot	0.08	c0.08			c0.18		c0.10	0.13		0.01	c0.38	
v/s Ratio Perm			0.01									0.22
v/c Ratio	0.60	0.61	0.07		3.64		0.72	0.19		0.37	0.69	0.39
Uniform Delay, d1	49.6	49.6	46.3		57.0		49.9	7.5		58.1	19.0	15.0
Progression Factor	1.00	1.00	1.00		1.00		0.89	2.50		1.00	1.00	1.00
Incremental Delay, d2	5.6	5.7	0.2		1214.2		9.7	0.2		6.5	2.0	1.4
Delay (s)	55.2	55.3	46.4		1271.2		54.1	18.9		64.6	21.0	16.4
Level of Service	E	E	D		F		D	B		E	C	B
Approach Delay (s)		52.7			1271.2			28.4			20.0	
Approach LOS		D			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	152.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

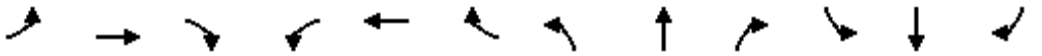
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	270	10	230	0	340	50	240	630	10
Future Volume (vph)	0	0	0	270	10	230	0	340	50	240	630	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor					1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes					1.00	0.91		0.99		1.00	1.00	
Flpb, ped/bikes					1.00	1.00		1.00		1.00	1.00	
Frt					1.00	0.85		0.98		1.00	1.00	
Flt Protected					0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)					1760	1218		1530		1490	1561	
Flt Permitted					0.95	1.00		1.00		0.24	1.00	
Satd. Flow (perm)					1760	1218		1530		370	1561	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	290	11	247	0	366	54	258	677	11
RTOR Reduction (vph)	0	0	0	0	0	201	0	5	0	0	1	0
Lane Group Flow (vph)	0	0	0	0	301	46	0	415	0	258	687	0
Confl. Peds. (#/hr)	20					20	32		11			32
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)					20.2	20.2		48.4		54.3	54.3	
Effective Green, g (s)					20.2	20.2		46.4		54.3	53.3	
Actuated g/C Ratio					0.19	0.19		0.43		0.50	0.50	
Clearance Time (s)					4.0	4.0				4.0	3.0	
Vehicle Extension (s)					3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)					330	228		659		394	773	
v/s Ratio Prot					c0.17			c0.27		0.12	c0.44	
v/s Ratio Perm						0.04				0.21		
v/c Ratio					0.91	0.20		0.63		0.65	0.89	
Uniform Delay, d1					42.8	36.9		23.9		18.3	24.5	
Progression Factor					1.00	1.00		0.12		1.00	1.00	
Incremental Delay, d2					28.7	0.5		1.9		3.9	12.2	
Delay (s)					71.5	37.4		4.7		22.2	36.6	
Level of Service					E	D		A		C	D	
Approach Delay (s)		0.0			56.1			4.7			32.7	
Approach LOS		A			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	160	10	10	230	490	410
Future Volume (vph)	160	10	10	230	490	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.94	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1483			1564	1418	
Flt Permitted	0.95			0.96	1.00	
Satd. Flow (perm)	1483			1503	1418	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	167	10	10	240	510	427
RTOR Reduction (vph)	2	0	0	0	23	0
Lane Group Flow (vph)	175	0	0	250	914	0
Confl. Peds. (#/hr)		3	18			18
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	18.1			30.3	74.5	
Effective Green, g (s)	18.1			29.3	74.5	
Actuated g/C Ratio	0.17			0.27	0.69	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	249			409	981	
v/s Ratio Prot	c0.12				c0.64	
v/s Ratio Perm				0.17		
v/c Ratio	0.70			0.61	0.93	
Uniform Delay, d1	42.2			34.2	14.4	
Progression Factor	1.00			1.00	0.37	
Incremental Delay, d2	9.3			3.1	8.8	
Delay (s)	51.6			37.3	14.1	
Level of Service	D			D	B	
Approach Delay (s)	51.6			37.3	14.1	
Approach LOS	D			D	B	

Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	19.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	160	120	120	270	70	60	400	70	60	750	210
Future Volume (vph)	30	160	120	120	270	70	60	400	70	60	750	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.99		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1683		1490	1800		1752	3409		1752	3505	1485
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1683		1490	1499		1752	3409		1752	3505	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	32	172	129	129	290	75	65	430	75	65	806	226
RTOR Reduction (vph)	0	23	0	0	8	0	0	11	0	0	0	131
Lane Group Flow (vph)	32	278	0	129	357	0	65	494	0	65	806	95
Confl. Peds. (#/hr)			30			34			4			8
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	22.2	22.2		23.7	23.7		7.1	49.5		7.1	49.5	49.5
Effective Green, g (s)	22.5	22.5		24.0	24.0		7.1	50.4		7.1	50.4	50.4
Actuated g/C Ratio	0.19	0.19		0.20	0.20		0.06	0.42		0.06	0.42	0.42
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	328	315		298	360		103	1431		103	1472	623
v/s Ratio Prot	0.02	c0.17		0.09	c0.20		c0.04	0.14		0.04	c0.23	
v/s Ratio Perm												0.06
v/c Ratio	0.10	0.88		0.43	0.99		0.63	0.35		0.63	0.55	0.15
Uniform Delay, d1	40.3	47.5		42.0	47.9		55.2	23.6		55.2	26.2	21.6
Progression Factor	1.00	1.00		1.00	1.00		0.99	0.99		1.40	0.67	0.62
Incremental Delay, d2	0.1	24.0		1.0	45.0		11.5	0.6		1.1	0.1	0.0
Delay (s)	40.5	71.5		43.1	92.9		66.0	24.1		78.5	17.6	13.3
Level of Service	D	E		D	F		E	C		E	B	B
Approach Delay (s)		68.5			79.9			28.9			20.3	
Approach LOS		E			E			C			C	

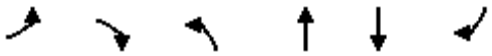
Intersection Summary			
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	150	110	20	110	10	60	120	30	10	270	140
Future Volume (vph)	40	150	110	20	110	10	60	120	30	10	270	140
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	44	165	121	22	121	11	66	132	33	11	297	154

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	44	286	22	132	231	462
Volume Left (vph)	44	0	22	0	66	11
Volume Right (vph)	0	121	0	11	33	154
Hadj (s)	0.55	-0.25	0.55	-0.01	0.02	-0.14
Departure Headway (s)	7.6	6.8	8.0	7.4	6.4	5.8
Degree Utilization, x	0.09	0.54	0.05	0.27	0.41	0.75
Capacity (veh/h)	444	492	385	419	507	598
Control Delay (s)	10.1	16.1	10.2	11.9	13.9	24.0
Approach Delay (s)	15.3		11.7		13.9	24.0
Approach LOS	C		B		B	C

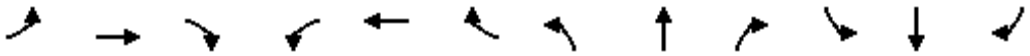
Intersection Summary				
Delay	18.0			
Level of Service	C			
Intersection Capacity Utilization	62.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	80	110	60	130	410	90
Future Volume (vph)	80	110	60	130	410	90
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	88	121	66	143	451	99

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	88	121	66	143	550
Volume Left (vph)	88	0	66	0	0
Volume Right (vph)	0	121	0	0	99
Hadj (s)	0.55	-0.65	0.55	0.05	-0.06
Departure Headway (s)	7.0	5.8	6.3	5.8	5.2
Degree Utilization, x	0.17	0.19	0.12	0.23	0.79
Capacity (veh/h)	480	573	543	590	683
Control Delay (s)	10.2	9.0	9.0	9.4	25.0
Approach Delay (s)	9.5		9.2		25.0
Approach LOS	A		A		D

Intersection Summary			
Delay	18.3		
Level of Service	C		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	50	40	40	90	50	20	130	30	40	290	60
Future Volume (vph)	40	50	40	40	90	50	20	130	30	40	290	60
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
Hourly flow rate (vph)	45	57	45	45	102	57	23	148	34	45	330	68

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	147	204	205	443
Volume Left (vph)	45	45	23	45
Volume Right (vph)	45	57	34	68
Hadj (s)	-0.07	-0.07	-0.03	-0.02
Departure Headway (s)	6.1	5.9	5.7	5.3
Degree Utilization, x	0.25	0.34	0.32	0.65
Capacity (veh/h)	510	542	570	650
Control Delay (s)	11.0	11.9	11.4	17.8
Approach Delay (s)	11.0	11.9	11.4	17.8
Approach LOS	B	B	B	C

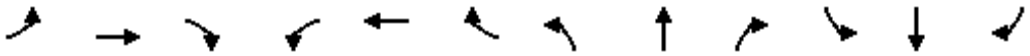
Intersection Summary				
Delay	14.3			
Level of Service	B			
Intersection Capacity Utilization	47.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	100	20	40	130	30	10	140	30	80	360	40
Future Volume (vph)	10	100	20	40	130	30	10	140	30	80	360	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		0.98	1.00		0.95	1.00		0.96	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1410	1519		1464	1499		1422	1509		1433	1527	
Flt Permitted	0.64	1.00		0.67	1.00		0.43	1.00		0.64	1.00	
Satd. Flow (perm)	953	1519		1031	1499		644	1509		958	1527	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	11	115	23	46	149	34	11	161	34	92	414	46
RTOR Reduction (vph)	0	12	0	0	13	0	0	10	0	0	5	0
Lane Group Flow (vph)	11	126	0	46	170	0	11	185	0	92	455	0
Confl. Peds. (#/hr)	54		16	16		54	74		39	39		74
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	11.8	11.8		11.8	11.8		20.8	20.8		20.8	20.8	
Effective Green, g (s)	12.0	12.0		12.0	12.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.51	0.51		0.51	0.51	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	278	444		301	438		329	772		490	782	
v/s Ratio Prot		0.08			c0.11			0.12			c0.30	
v/s Ratio Perm	0.01			0.04			0.02			0.10		
v/c Ratio	0.04	0.28		0.15	0.39		0.03	0.24		0.19	0.58	
Uniform Delay, d1	10.4	11.2		10.7	11.6		5.0	5.6		5.4	6.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.2		0.0	0.2		0.2	1.1	
Delay (s)	10.4	11.3		10.8	11.8		5.0	5.7		5.6	8.1	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.2			11.6			5.7			7.6	
Approach LOS		B			B			A			A	

Intersection Summary				
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	41.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	50.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	80	80	50	100	20	40	400	40	20	840	70
Future Volume (vph)	40	80	80	50	100	20	40	400	40	20	840	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1423		1490	1520		1490	1542		1483	1544	
Flt Permitted	0.95	1.00		0.95	1.00		0.19	1.00		0.46	1.00	
Satd. Flow (perm)	1490	1423		1490	1520		298	1542		711	1544	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	41	82	82	51	102	20	41	408	41	20	857	71
RTOR Reduction (vph)	0	31	0	0	6	0	0	2	0	0	2	0
Lane Group Flow (vph)	41	133	0	51	116	0	41	447	0	20	926	0
Confl. Peds. (#/hr)			5			5	8		3	3		8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.4	15.6		7.9	16.1		83.3	83.3		83.3	83.3	
Effective Green, g (s)	7.4	16.2		7.9	16.7		83.9	83.9		83.9	83.9	
Actuated g/C Ratio	0.06	0.13		0.07	0.14		0.70	0.70		0.70	0.70	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	91	192		98	211		208	1078		497	1079	
v/s Ratio Prot	0.03	c0.09		c0.03	0.08			0.29			c0.60	
v/s Ratio Perm							0.14			0.03		
v/c Ratio	0.45	0.69		0.52	0.55		0.20	0.41		0.04	0.86	
Uniform Delay, d1	54.3	49.5		54.2	48.1		6.3	7.6		5.6	13.6	
Progression Factor	1.00	1.00		1.00	1.00		0.21	0.30		0.39	0.81	
Incremental Delay, d2	3.5	10.3		4.9	2.9		1.9	1.1		0.1	7.5	
Delay (s)	57.9	59.8		59.1	51.1		3.2	3.4		2.3	18.5	
Level of Service	E	E		E	D		A	A		A	B	
Approach Delay (s)		59.4			53.4			3.4			18.2	
Approach LOS		E			D			A			B	

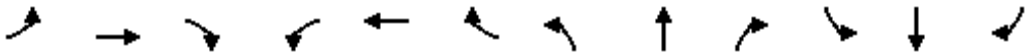
Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	10	20	20	30	440	20	10	910	50
Future Volume (Veh/h)	10	10	40	10	20	20	30	440	20	10	910	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	10	10	41	10	21	21	31	454	21	10	938	52
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.57	0.57	0.54	0.57	0.57	0.95	0.54			0.95		
vC, conflicting volume	1580	1546	984	1536	1562	498	1010			480		
vC1, stage 1 conf vol	1004	1004		532	532							
vC2, stage 2 conf vol	576	542		1004	1030							
vCu, unblocked vol	1454	1395	553	1377	1422	448	601			430		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	96	86	94	90	96	94			99		
cM capacity (veh/h)	219	232	284	175	201	564	521			1067		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	52	31	475	10	990
Volume Left	10	10	31	0	10	0
Volume Right	41	21	0	21	0	52
cSH	262	261	521	1700	1067	1700
Volume to Capacity	0.23	0.20	0.06	0.28	0.01	0.58
Queue Length 95th (ft)	22	18	5	0	1	0
Control Delay (s)	22.9	22.2	12.4	0.0	8.4	0.0
Lane LOS	C	C	B		A	
Approach Delay (s)	22.9	22.2	0.8		0.1	
Approach LOS	C	C				

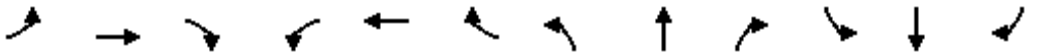
Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	67.8%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	200	130	10	290	10	60	10	10	10	10	40
Future Volume (Veh/h)	20	200	130	10	290	10	60	10	10	10	10	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	250	163	13	363	13	75	13	13	13	13	50
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	412			421			842	828	342	834	902	406
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	412			350			798	783	265	790	863	406
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			68	95	98	95	95	92
cM capacity (veh/h)	1107			1121			236	283	718	250	254	624

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	438	389	101	76
Volume Left	25	13	75	13
Volume Right	163	13	13	50
cSH	1107	1121	265	415
Volume to Capacity	0.02	0.01	0.38	0.18
Queue Length 95th (ft)	2	1	43	17
Control Delay (s)	0.7	0.4	26.7	15.6
Lane LOS	A	A	D	C
Approach Delay (s)	0.7	0.4	26.7	15.6
Approach LOS			D	C

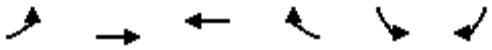
Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	45.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	150	20	50	180	50	20	10	50	50	40	130	250
Future Volume (vph)	150	20	50	180	50	20	10	50	50	40	130	250
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
Hourly flow rate (vph)	163	22	54	196	54	22	11	54	54	43	141	272

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	239	272	119	275	181
Volume Left (vph)	163	196	11	43	0
Volume Right (vph)	54	22	54	91	181
Hadj (s)	0.03	0.13	-0.22	-0.12	-0.67
Departure Headway (s)	6.0	6.0	6.1	6.1	5.6
Degree Utilization, x	0.40	0.45	0.20	0.47	0.28
Capacity (veh/h)	555	560	509	555	608
Control Delay (s)	12.9	13.9	10.7	13.2	9.6
Approach Delay (s)	12.9	13.9	10.7	11.8	
Approach LOS	B	B	B	B	

Intersection Summary				
Delay	12.4			
Level of Service	B			
Intersection Capacity Utilization	43.7%	ICU Level of Service	A	
Analysis Period (min)	15			



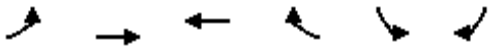
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	130	600	1020	50	80	240
Future Volume (vph)	130	600	1020	50	80	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3477		1733	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3477		1733	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	140	645	1097	54	86	258
RTOR Reduction (vph)	0	0	3	0	0	198
Lane Group Flow (vph)	140	645	1148	0	86	60
Confl. Peds. (#/hr)				1	13	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	8.2	40.3	28.1		9.4	9.4
Effective Green, g (s)	8.2	41.7	29.5		9.4	9.4
Actuated g/C Ratio	0.14	0.71	0.50		0.16	0.16
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	243	2473	1735		275	249
v/s Ratio Prot	c0.08	0.18	c0.33			
v/s Ratio Perm					c0.05	0.04
v/c Ratio	0.58	0.26	0.66		0.31	0.24
Uniform Delay, d1	23.8	3.1	11.1		22.0	21.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.1	0.1	1.0		0.2	0.2
Delay (s)	25.9	3.2	12.0		22.2	21.9
Level of Service	C	A	B		C	C
Approach Delay (s)		7.2	12.0		22.0	
Approach LOS		A	B		C	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	400	180	350	760	90	140	160	210	40	180	170
Future Volume (vph)	100	400	180	350	760	90	140	160	210	40	180	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.98	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1543	3400	3412		1752	1845	1535	1752	1671	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1543	3400	3412		1752	1845	1535	1752	1671	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	120	482	217	422	916	108	169	193	253	48	217	205
RTOR Reduction (vph)	0	0	81	0	7	0	0	0	170	0	23	0
Lane Group Flow (vph)	120	482	136	422	1017	0	169	193	83	48	399	0
Confl. Peds. (#/hr)			9			24			8			31
Confl. Bikes (#/hr)			6			7			1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	11.6	19.8	35.0	21.9	34.1		15.2	33.3	33.3	6.2	24.3	
Effective Green, g (s)	11.6	21.0	35.0	21.9	35.3		15.2	34.0	34.0	6.2	25.0	
Actuated g/C Ratio	0.11	0.20	0.34	0.21	0.34		0.15	0.33	0.33	0.06	0.24	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	197	713	523	722	1168		258	608	506	105	405	
v/s Ratio Prot	0.07	0.14	0.04	c0.12	c0.30		c0.10	0.10		0.03	c0.24	
v/s Ratio Perm			0.05						0.05			
v/c Ratio	0.61	0.68	0.26	0.58	0.87		0.66	0.32	0.16	0.46	0.98	
Uniform Delay, d1	43.6	37.9	24.7	36.5	31.8		41.5	25.9	24.5	46.8	38.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.6	2.5	0.1	0.8	7.3		4.5	0.1	0.1	1.1	40.1	
Delay (s)	47.2	40.5	24.8	37.3	39.1		46.0	26.0	24.5	48.0	79.0	
Level of Service	D	D	C	D	D		D	C	C	D	E	
Approach Delay (s)		37.3			38.5			30.9			75.8	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	103.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	510	980	140	190	220
Future Volume (Veh/h)	140	510	980	140	190	220
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	163	593	1140	163	221	256
Pedestrians			1		2	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.79				0.83	0.79
vC, conflicting volume	1305				1847	654
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	850				1181	24
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	73				0	69
cM capacity (veh/h)	612				146	826

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	163	296	296	760	543	221	256
Volume Left	163	0	0	0	0	221	0
Volume Right	0	0	0	0	163	0	256
cSH	612	1700	1700	1700	1700	146	826
Volume to Capacity	0.27	0.17	0.17	0.45	0.32	1.51	0.31
Queue Length 95th (ft)	27	0	0	0	0	372	33
Control Delay (s)	13.0	0.0	0.0	0.0	0.0	317.5	11.3
Lane LOS	B					F	B
Approach Delay (s)	2.8			0.0		153.2	
Approach LOS						F	

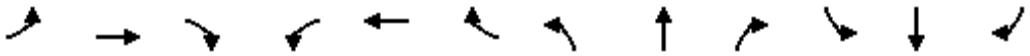
Intersection Summary			
Average Delay	29.6		
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	220	290	310	680	30	140	350	60	30	690	230
Future Volume (vph)	190	220	290	310	680	30	140	350	60	30	690	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1543	1752	3480		3400	1845	1544	1752	3104	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1543	1752	3480		3400	1845	1544	1752	3104	
Peak-hour factor, PHF	0.89	0.90	0.89	0.90	0.90	0.90	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	213	244	326	344	756	33	157	393	67	33	775	258
RTOR Reduction (vph)	0	0	154	0	3	0	0	0	36	0	25	0
Lane Group Flow (vph)	213	244	172	344	786	0	157	393	31	33	1008	0
Confl. Peds. (#/hr)			1			4			2			7
Confl. Bikes (#/hr)			2			3						1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	12.3	18.2	18.2	25.0	30.9		10.1	54.3	54.3	4.7	48.9	
Effective Green, g (s)	12.3	19.1	19.1	25.0	31.8		10.1	55.2	55.2	4.7	49.8	
Actuated g/C Ratio	0.10	0.16	0.16	0.21	0.27		0.08	0.46	0.46	0.04	0.41	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	348	557	245	365	922		286	848	710	68	1288	
v/s Ratio Prot	0.06	0.07		c0.20	0.23		c0.05	0.21		0.02	c0.32	
v/s Ratio Perm			c0.11						0.02			
v/c Ratio	0.61	0.44	0.70	0.94	0.85		0.55	0.46	0.04	0.49	0.78	
Uniform Delay, d1	51.6	45.6	47.8	46.8	41.9		52.8	22.2	17.9	56.5	30.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.15	0.67	
Incremental Delay, d2	3.2	0.6	8.8	32.4	7.7		2.2	1.8	0.1	3.8	3.4	
Delay (s)	54.7	46.2	56.6	79.2	49.6		54.9	24.1	18.0	68.5	23.6	
Level of Service	D	D	E	E	D		D	C	B	E	C	
Approach Delay (s)		52.8			58.6			31.2			25.0	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	42.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

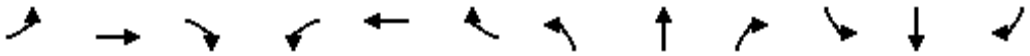
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	3	130	20	33	4	135	415	20	4	730	266
Future Volume (vph)	111	3	130	20	33	4	135	415	20	4	730	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96		1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1524		1804		1763	1848		1766	3353	
Flt Permitted	0.73	1.00	1.00		0.92		0.16	1.00		0.38	1.00	
Satd. Flow (perm)	1358	1863	1524		1682		296	1848		701	3353	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	148	4	173	27	44	5	180	553	27	5	973	355
RTOR Reduction (vph)	0	0	116	0	2	0	0	2	0	0	41	0
Lane Group Flow (vph)	148	4	57	0	74	0	180	578	0	5	1287	0
Confl. Peds. (#/hr)			9	9			39		7	7		39
Confl. Bikes (#/hr)			14			7			1			2
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	19.7	19.7	19.7		19.7		63.2	63.2		63.2	63.2	
Effective Green, g (s)	20.2	20.2	20.2		20.2		63.2	63.2		63.2	63.2	
Actuated g/C Ratio	0.22	0.22	0.22		0.22		0.69	0.69		0.69	0.69	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	297	408	334		368		203	1268		481	2300	
v/s Ratio Prot		0.00						0.31			0.38	
v/s Ratio Perm	c0.11		0.04		0.04		c0.61			0.01		
v/c Ratio	0.50	0.01	0.17		0.20		0.89	0.46		0.01	0.56	
Uniform Delay, d1	31.5	28.1	29.2		29.4		11.6	6.6		4.6	7.4	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.66	0.53	
Incremental Delay, d2	0.5	0.0	0.1		0.1		33.0	0.1		0.0	0.1	
Delay (s)	32.0	28.1	29.3		29.5		44.6	6.7		3.0	4.0	
Level of Service	C	C	C		C		D	A		A	A	
Approach Delay (s)		30.5			29.5			15.7			4.0	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	92.1	Sum of lost time (s)	13.2
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

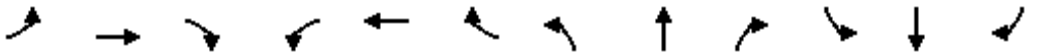
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	10	10	40	10	100	0	440	40	150	480	10
Future Volume (vph)	10	10	10	40	10	100	0	440	40	150	480	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	11	11	11	43	11	108	0	473	43	161	516	11

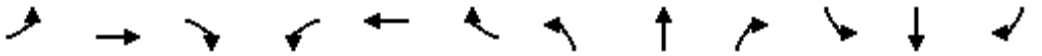
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	33	54	108	516	688
Volume Left (vph)	11	43	0	0	161
Volume Right (vph)	11	0	108	43	11
Hadj (s)	-0.08	0.21	-0.55	0.00	0.09
Departure Headway (s)	6.8	7.0	3.2	5.1	5.0
Degree Utilization, x	0.06	0.11	0.10	0.73	0.95
Capacity (veh/h)	488	476	1121	691	688
Control Delay (s)	10.3	10.9	6.5	20.4	43.9
Approach Delay (s)	10.3	8.0		20.4	43.9
Approach LOS	B	A		C	E

Intersection Summary				
Delay	30.3			
Level of Service	D			
Intersection Capacity Utilization	78.2%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	10	20	100	10	190	20	490	130	160	760	10
Future Volume (vph)	20	10	20	100	10	190	20	490	130	160	760	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1696			1753	1568	1752	3505	1504	1752	3497	
Flt Permitted		0.87			0.78	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1501			1434	1568	1752	3505	1504	1752	3497	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	21	10	21	103	10	196	21	505	134	165	784	10
RTOR Reduction (vph)	0	17	0	0	0	105	0	0	74	0	1	0
Lane Group Flow (vph)	0	35	0	0	113	91	21	505	60	165	793	0
Confl. Peds. (#/hr)			8	8					11			9
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		13.2			13.2	36.8	10.4	35.2	35.2	19.1	43.9	
Effective Green, g (s)		13.7			13.7	37.3	10.4	35.9	35.9	19.1	44.6	
Actuated g/C Ratio		0.17			0.17	0.46	0.13	0.44	0.44	0.24	0.55	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		254			243	724	225	1559	669	414	1932	
v/s Ratio Prot						0.06	0.01	0.14		c0.09	c0.23	
v/s Ratio Perm		0.02			c0.08				0.04			
v/c Ratio		0.14			0.47	0.13	0.09	0.32	0.09	0.40	0.41	
Uniform Delay, d1		28.5			30.2	12.4	31.0	14.5	12.9	26.0	10.4	
Progression Factor		1.00			1.00	1.00	1.25	0.91	0.79	1.00	1.00	
Incremental Delay, d2		0.1			0.5	0.0	0.1	0.1	0.1	0.2	0.1	
Delay (s)		28.6			30.7	12.4	38.8	13.3	10.2	26.2	10.6	
Level of Service		C			C	B	D	B	B	C	B	
Approach Delay (s)		28.6			19.1			13.5			13.3	
Approach LOS		C			B			B			B	

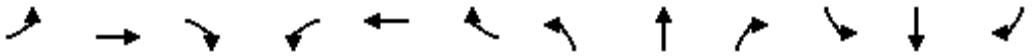
Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	12.5
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	60	120	60	70	10	130	840	70	10	450	120
Future Volume (vph)	180	60	120	60	70	10	130	840	70	10	450	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1415	1453	1315		1789		1752	3456		1752	3505	1532
Flt Permitted	0.95	0.98	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1415	1453	1315		1789		1752	3456		1752	3505	1532
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	184	61	122	61	71	10	133	857	71	10	459	122
RTOR Reduction (vph)	0	0	106	0	2	0	0	4	0	0	0	53
Lane Group Flow (vph)	121	124	16	0	140	0	133	924	0	10	459	69
Confl. Peds. (#/hr)			1						3			1
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	15.5	15.5	15.5		6.0		14.2	79.4		1.2	66.4	66.4
Effective Green, g (s)	16.1	16.1	16.1		6.0		14.2	80.7		1.2	67.7	67.7
Actuated g/C Ratio	0.13	0.13	0.13		0.05		0.12	0.67		0.01	0.56	0.56
Clearance Time (s)	4.6	4.6	4.6		4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	189	194	176		89		207	2324		17	1977	864
v/s Ratio Prot	c0.09	0.09			c0.08		c0.08	c0.27		0.01	0.13	
v/s Ratio Perm			0.01									0.04
v/c Ratio	0.64	0.64	0.09		1.57		0.64	0.40		0.59	0.23	0.08
Uniform Delay, d1	49.2	49.2	45.5		57.0		50.5	8.8		59.2	13.1	11.9
Progression Factor	1.00	1.00	1.00		1.00		0.73	2.33		1.00	1.00	1.00
Incremental Delay, d2	7.2	6.8	0.2		305.3		5.5	0.4		42.8	0.3	0.2
Delay (s)	56.4	56.0	45.8		362.3		42.2	20.9		101.9	13.4	12.1
Level of Service	E	E	D		F		D	C		F	B	B
Approach Delay (s)		52.7			362.3			23.6			14.6	
Approach LOS		D			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	48.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

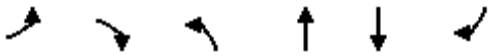
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	120	10	130	0	490	120	220	590	10
Future Volume (vph)	0	0	10	120	10	130	0	490	120	220	590	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			0.98		1.00	0.95		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.97		1.00	1.00	
Flt Protected			1.00		0.96	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1559		1763	1267		1513		1490	1561	
Flt Permitted			1.00		0.96	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1559		1763	1267		1513		183	1561	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	122	10	133	0	500	122	224	602	10
RTOR Reduction (vph)	0	0	9	0	0	116	0	7	0	0	1	0
Lane Group Flow (vph)	0	0	1	0	132	17	0	615	0	224	611	0
Confl. Peds. (#/hr)	9		1			9	25		7			25
Confl. Bikes (#/hr)									2			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			13.6		13.6	13.6		55.4		52.9	52.9	
Effective Green, g (s)			13.6		13.6	13.6		53.4		52.9	51.9	
Actuated g/C Ratio			0.13		0.13	0.13		0.50		0.50	0.49	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			198		224	161		757		319	759	
v/s Ratio Prot					c0.07			c0.41		0.12	c0.39	
v/s Ratio Perm			0.00			0.01				0.22		
v/c Ratio			0.01		0.59	0.11		0.81		0.70	0.81	
Uniform Delay, d1			40.7		43.9	41.2		22.4		24.4	23.1	
Progression Factor			1.00		1.00	1.00		0.29		1.00	1.00	
Incremental Delay, d2			0.0		4.2	0.3		0.7		6.8	6.2	
Delay (s)			40.7		48.1	41.5		7.1		31.2	29.4	
Level of Service			D		D	D		A		C	C	
Approach Delay (s)		40.7			44.8			7.1			29.9	
Approach LOS		D			D			A			C	

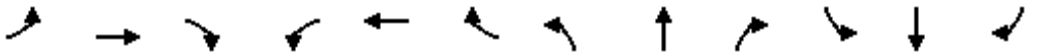
Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



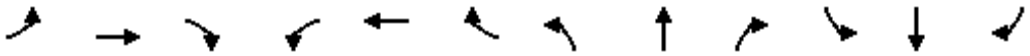
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	270	50	20	370	450	280
Future Volume (vph)	270	50	20	370	450	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.98			1.00	0.94	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.98			1.00	0.95	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1449			1561	1399	
Flt Permitted	0.96			0.95	1.00	
Satd. Flow (perm)	1449			1479	1399	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	53	21	389	474	295
RTOR Reduction (vph)	5	0	0	0	21	0
Lane Group Flow (vph)	332	0	0	410	748	0
Confl. Peds. (#/hr)		25	41			41
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	25.2			30.2	66.5	
Effective Green, g (s)	25.2			29.2	66.5	
Actuated g/C Ratio	0.24			0.27	0.62	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	342			404	871	
v/s Ratio Prot	c0.23				c0.53	
v/s Ratio Perm				c0.28		
v/c Ratio	0.97			1.01	0.86	
Uniform Delay, d1	40.4			38.8	16.3	
Progression Factor	1.00			1.00	0.30	
Incremental Delay, d2	40.3			48.6	6.9	
Delay (s)	80.6			87.3	11.7	
Level of Service	F			F	B	
Approach Delay (s)	80.6			87.3	11.7	
Approach LOS	F			F	B	

Intersection Summary			
HCM 2000 Control Delay	47.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	19.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	170	110	120	110	40	50	890	140	40	450	80
Future Volume (vph)	60	170	110	120	110	40	50	890	140	40	450	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.96		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1718		1490	1800		1752	3417		1752	3505	1524
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1718		1490	1497		1752	3417		1752	3505	1524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	177	115	125	115	42	52	927	146	42	469	83
RTOR Reduction (vph)	0	20	0	0	12	0	0	9	0	0	0	42
Lane Group Flow (vph)	63	272	0	125	145	0	52	1064	0	42	469	41
Confl. Peds. (#/hr)			9			6			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	21.8	21.8		15.6	15.6		6.9	58.4		6.7	58.2	58.2
Effective Green, g (s)	22.1	22.1		15.9	15.9		6.9	59.3		6.7	59.1	59.1
Actuated g/C Ratio	0.18	0.18		0.13	0.13		0.06	0.49		0.06	0.49	0.49
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	322	316		197	238		100	1688		97	1726	750
v/s Ratio Prot	0.04	c0.16		c0.08	0.08		c0.03	c0.31		0.02	0.13	
v/s Ratio Perm												0.03
v/c Ratio	0.20	0.86		0.63	0.61		0.52	0.63		0.43	0.27	0.05
Uniform Delay, d1	41.4	47.5		49.3	49.1		54.9	22.3		54.8	17.8	15.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	0.76		1.46	0.68	0.28
Incremental Delay, d2	0.3	20.7		6.5	4.4		2.9	1.1		2.9	0.4	0.1
Delay (s)	41.7	68.2		55.8	53.5		57.9	18.0		82.9	12.5	4.6
Level of Service	D	E		E	D		E	B		F	B	A
Approach Delay (s)		63.5			54.5			19.8			16.4	
Approach LOS		E			D			B			B	

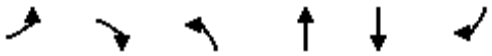
Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	90	250	130	50	210	40	140	220	60	20	200	60
Future Volume (vph)	90	250	130	50	210	40	140	220	60	20	200	60
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
Hourly flow rate (vph)	100	278	144	56	233	44	156	244	67	22	222	67

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	100	422	56	277	467	311
Volume Left (vph)	100	0	56	0	156	22
Volume Right (vph)	0	144	0	44	67	67
Hadj (s)	0.55	-0.19	0.55	-0.06	0.03	-0.06
Departure Headway (s)	9.2	8.4	9.6	9.0	8.4	8.6
Degree Utilization, x	0.25	0.99	0.15	0.70	1.09	0.75
Capacity (veh/h)	387	422	363	386	439	405
Control Delay (s)	14.1	69.2	13.1	29.1	98.2	33.1
Approach Delay (s)	58.6		26.4		98.2	33.1
Approach LOS	F		D		F	D

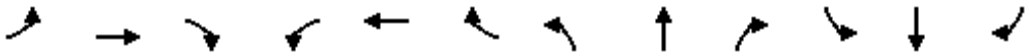
Intersection Summary				
Delay	58.5			
Level of Service	F			
Intersection Capacity Utilization	78.0%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	110	220	190	240	300	90
Future Volume (vph)	110	220	190	240	300	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	116	232	200	253	316	95

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	116	232	200	253	411
Volume Left (vph)	116	0	200	0	0
Volume Right (vph)	0	232	0	0	95
Hadj (s)	0.55	-0.65	0.55	0.05	-0.09
Departure Headway (s)	7.4	6.1	6.8	6.3	5.9
Degree Utilization, x	0.24	0.40	0.38	0.44	0.68
Capacity (veh/h)	462	551	516	557	594
Control Delay (s)	11.4	11.9	12.6	12.9	20.4
Approach Delay (s)	11.8		12.7		20.4
Approach LOS	B		B		C

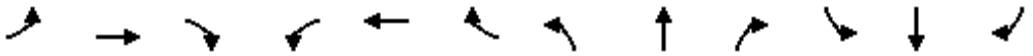
Intersection Summary			
Delay	15.1		
Level of Service	C		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	60	20	40	70	50	60	240	50	60	240	40
Future Volume (vph)	50	60	20	40	70	50	60	240	50	60	240	40
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
Hourly flow rate (vph)	57	68	23	45	80	57	68	273	57	68	273	45

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	148	182	398	386
Volume Left (vph)	57	45	68	68
Volume Right (vph)	23	57	57	45
Hadj (s)	0.03	-0.09	0.00	0.02
Departure Headway (s)	6.7	6.4	5.7	5.8
Degree Utilization, x	0.27	0.33	0.63	0.62
Capacity (veh/h)	457	477	599	598
Control Delay (s)	12.2	12.5	18.0	17.6
Approach Delay (s)	12.2	12.5	18.0	17.6
Approach LOS	B	B	C	C

Intersection Summary				
Delay	16.2			
Level of Service	C			
Intersection Capacity Utilization	44.1%	ICU Level of Service	A	
Analysis Period (min)	15			



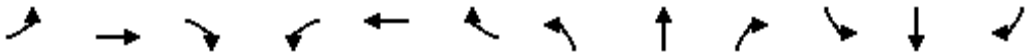
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	130	20	40	110	70	30	270	70	80	250	30
Future Volume (vph)	20	130	20	40	110	70	30	270	70	80	250	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.94	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1439	1527		1459	1439		1397	1492		1430	1524	
Flt Permitted	0.63	1.00		0.65	1.00		0.57	1.00		0.52	1.00	
Satd. Flow (perm)	958	1527		1001	1439		840	1492		780	1524	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	144	22	44	122	78	33	300	78	89	278	33
RTOR Reduction (vph)	0	9	0	0	39	0	0	12	0	0	5	0
Lane Group Flow (vph)	22	157	0	44	161	0	33	366	0	89	306	0
Confl. Peds. (#/hr)	41		24	24		41	88		63	63		88
Confl. Bikes (#/hr)						1			2			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	9.2	9.2		9.2	9.2		17.3	17.3		17.3	17.3	
Effective Green, g (s)	9.4	9.4		9.4	9.4		17.5	17.5		17.5	17.5	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	258	411		269	387		421	748		391	764	
v/s Ratio Prot		0.10			c0.11			c0.25			0.20	
v/s Ratio Perm	0.02			0.04			0.04			0.11		
v/c Ratio	0.09	0.38		0.16	0.42		0.08	0.49		0.23	0.40	
Uniform Delay, d1	9.5	10.4		9.7	10.5		4.5	5.7		4.9	5.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.3		0.1	0.5		0.3	0.3	
Delay (s)	9.6	10.6		9.8	10.8		4.6	6.3		5.2	5.8	
Level of Service	A	B		A	B		A	A		A	A	
Approach Delay (s)		10.5			10.6			6.1			5.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	34.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	80	90	50	70	40	90	810	30	10	530	70
Future Volume (vph)	110	80	90	50	70	40	90	810	30	10	530	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1443		1490	1462		1490	1558		1490	1530	
Flt Permitted	0.95	1.00		0.95	1.00		0.32	1.00		0.18	1.00	
Satd. Flow (perm)	1490	1443		1490	1462		504	1558		279	1530	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	87	98	54	76	43	98	880	33	11	576	76
RTOR Reduction (vph)	0	34	0	0	18	0	0	1	0	0	4	0
Lane Group Flow (vph)	120	151	0	54	101	0	98	912	0	11	648	0
Confl. Peds. (#/hr)						5	10		3	3		10
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.0	19.0		7.9	15.9		79.9	79.9		79.9	79.9	
Effective Green, g (s)	11.0	19.6		7.9	16.5		80.5	80.5		80.5	80.5	
Actuated g/C Ratio	0.09	0.16		0.07	0.14		0.67	0.67		0.67	0.67	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	235		98	201		338	1045		187	1026	
v/s Ratio Prot	c0.08	c0.10		0.04	0.07			c0.59			0.42	
v/s Ratio Perm							0.19			0.04		
v/c Ratio	0.88	0.64		0.55	0.50		0.29	0.87		0.06	0.63	
Uniform Delay, d1	53.9	46.9		54.3	47.9		8.1	15.7		6.8	11.3	
Progression Factor	1.00	1.00		1.00	1.00		0.16	0.46		0.62	0.74	
Incremental Delay, d2	43.9	5.9		6.6	2.0		1.4	6.6		0.6	2.8	
Delay (s)	97.7	52.8		60.9	49.9		2.6	13.9		4.8	11.1	
Level of Service	F	D		E	D		A	B		A	B	
Approach Delay (s)		70.5			53.3			12.8			11.0	
Approach LOS		E			D			B			B	

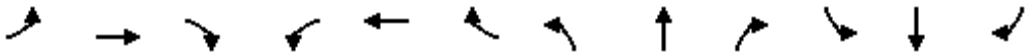
Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	60	10	10	10	30	900	30	10	580	30
Future Volume (Veh/h)	30	10	60	10	10	10	30	900	30	10	580	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	32	11	65	11	11	11	32	968	32	11	624	32
Pedestrians		16			3						15	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		1			0						1	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.79	0.79	0.80	0.79	0.79	0.69	0.80			0.69		
vC, conflicting volume	1742	1745	656	1768	1745	1002	672			1003		
vC1, stage 1 conf vol	678	678		1051	1051							
vC2, stage 2 conf vol	1064	1067		716	694							
vCu, unblocked vol	1228	1232	441	1261	1232	775	462			776		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	83	95	87	95	95	96	96			98		
cM capacity (veh/h)	187	218	483	202	228	268	861			572		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	108	33	32	1000	11	656
Volume Left	32	11	32	0	11	0
Volume Right	65	11	0	32	0	32
cSH	303	230	861	1700	572	1700
Volume to Capacity	0.36	0.14	0.04	0.59	0.02	0.39
Queue Length 95th (ft)	39	12	3	0	1	0
Control Delay (s)	23.3	23.3	9.3	0.0	11.4	0.0
Lane LOS	C	C	A		B	
Approach Delay (s)	23.3	23.3	0.3		0.2	
Approach LOS	C	C				

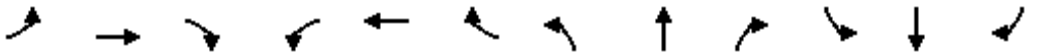
Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	63.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	190	130	20	250	10	60	10	60	10	10	30
Future Volume (Veh/h)	20	190	130	20	250	10	60	10	60	10	10	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	20	194	133	20	255	10	61	10	61	10	10	31
Pedestrians		2			1			36			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked												
vC, conflicting volume	274			363			674	650	298	676	712	271
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	274			363			674	650	298	676	712	271
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			81	97	91	97	97	96
cM capacity (veh/h)	1274			1154			315	360	717	308	332	758

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	347	285	132	51
Volume Left	20	20	61	10
Volume Right	133	10	61	31
cSH	1274	1154	431	493
Volume to Capacity	0.02	0.02	0.31	0.10
Queue Length 95th (ft)	1	1	32	9
Control Delay (s)	0.6	0.7	17.0	13.1
Lane LOS	A	A	C	B
Approach Delay (s)	0.6	0.7	17.0	13.1
Approach LOS			C	B

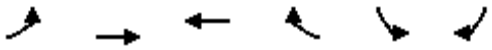
Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	45.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	200	50	10	60	40	30	10	160	110	30	80	230
Future Volume (vph)	200	50	10	60	40	30	10	160	110	30	80	230
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
Hourly flow rate (vph)	217	54	11	65	43	33	11	174	120	33	87	250

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	282	141	305	120	250
Volume Left (vph)	217	65	11	33	0
Volume Right (vph)	11	33	120	0	250
Hadj (s)	0.16	-0.01	-0.19	0.17	-0.67
Departure Headway (s)	6.2	6.4	5.8	6.6	5.7
Degree Utilization, x	0.49	0.25	0.49	0.22	0.40
Capacity (veh/h)	527	482	576	514	591
Control Delay (s)	15.0	11.5	14.3	10.2	11.2
Approach Delay (s)	15.0	11.5	14.3	10.9	
Approach LOS	B	B	B	B	

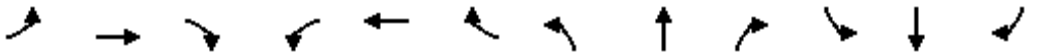
Intersection Summary				
Delay	13.0			
Level of Service	B			
Intersection Capacity Utilization	50.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	210	1180	690	40	60	250
Future Volume (vph)	210	1180	690	40	60	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3472		1748	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3472		1748	1568
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	1311	767	44	67	278
RTOR Reduction (vph)	0	0	4	0	0	234
Lane Group Flow (vph)	233	1311	807	0	67	44
Confl. Peds. (#/hr)				1	3	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	12.5	36.6	20.1		8.6	8.6
Effective Green, g (s)	12.5	38.0	21.5		8.6	8.6
Actuated g/C Ratio	0.23	0.70	0.39		0.16	0.16
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	401	2439	1367		275	246
v/s Ratio Prot	0.13	c0.37	0.23			
v/s Ratio Perm					c0.04	0.03
v/c Ratio	0.58	0.54	0.59		0.24	0.18
Uniform Delay, d1	18.7	4.0	13.1		20.2	19.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.4	0.2	0.7		0.2	0.1
Delay (s)	20.1	4.3	13.8		20.3	20.1
Level of Service	C	A	B		C	C
Approach Delay (s)		6.7	13.8		20.1	
Approach LOS		A	B		C	

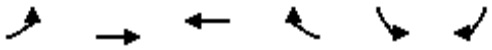
Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	910	110	70	460	50	50	70	40	40	80	220
Future Volume (vph)	220	910	110	70	460	50	50	70	40	40	80	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1542	3400	3444		1752	1845	1514	1752	1620	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1542	3400	3444		1752	1845	1514	1752	1620	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	989	120	76	500	54	54	76	43	43	87	239
RTOR Reduction (vph)	0	0	45	0	7	0	0	0	31	0	69	0
Lane Group Flow (vph)	239	989	75	76	547	0	54	76	12	43	257	0
Confl. Peds. (#/hr)			7			3			22			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	17.2	35.4	46.0	8.9	31.1		10.6	27.6	27.6	4.6	21.6	
Effective Green, g (s)	17.2	36.6	46.0	8.9	32.3		10.6	28.3	28.3	4.6	22.3	
Actuated g/C Ratio	0.17	0.37	0.47	0.09	0.33		0.11	0.29	0.29	0.05	0.23	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	306	1303	720	307	1130		188	530	435	81	367	
v/s Ratio Prot	c0.14	c0.28	0.01	0.02	c0.16		c0.03	0.04		0.02	c0.16	
v/s Ratio Perm			0.04						0.01			
v/c Ratio	0.78	0.76	0.10	0.25	0.48		0.29	0.14	0.03	0.53	0.70	
Uniform Delay, d1	38.8	27.0	14.7	41.6	26.4		40.4	26.0	25.2	45.8	35.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.3	2.6	0.0	0.2	0.3		0.3	0.0	0.0	3.3	4.9	
Delay (s)	50.1	29.6	14.7	41.8	26.7		40.7	26.1	25.2	49.2	39.9	
Level of Service	D	C	B	D	C		D	C	C	D	D	
Approach Delay (s)		31.9			28.5			30.4			40.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

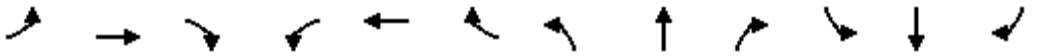


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	850	470	200	90	110
Future Volume (Veh/h)	140	850	470	200	90	110
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	147	895	495	211	95	116
Pedestrians		3	3		5	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.95				0.81	0.95
vC, conflicting volume	711				1350	361
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	583				658	214
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	84				70	85
cM capacity (veh/h)	925				321	776

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	147	448	448	330	376	95	116
Volume Left	147	0	0	0	0	95	0
Volume Right	0	0	0	0	211	0	116
cSH	925	1700	1700	1700	1700	321	776
Volume to Capacity	0.16	0.26	0.26	0.19	0.22	0.30	0.15
Queue Length 95th (ft)	14	0	0	0	0	30	13
Control Delay (s)	9.6	0.0	0.0	0.0	0.0	20.9	10.5
Lane LOS	A					C	B
Approach Delay (s)	1.4			0.0		15.1	
Approach LOS						C	

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

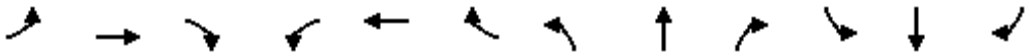
* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	500	100	80	210	20	170	660	450	50	390	210
Future Volume (vph)	340	500	100	80	210	20	170	660	450	50	390	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1568	1752	3453		3400	1845	1541	1752	3046	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1568	1752	3453		3400	1845	1541	1752	3046	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	543	109	87	228	22	185	717	489	54	424	228
RTOR Reduction (vph)	0	0	87	0	7	0	0	0	180	0	49	0
Lane Group Flow (vph)	370	543	22	87	243	0	185	717	309	54	603	0
Confl. Peds. (#/hr)						4			3			9
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	14.0	23.2	23.2	11.3	20.5		10.4	61.4	61.4	6.3	57.3	
Effective Green, g (s)	14.0	24.1	24.1	11.3	21.4		10.4	62.3	62.3	6.3	58.2	
Actuated g/C Ratio	0.12	0.20	0.20	0.09	0.18		0.09	0.52	0.52	0.05	0.49	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	703	314	164	615		294	957	800	91	1477	
v/s Ratio Prot	c0.11	c0.15		c0.05	0.07		c0.05	c0.39		0.03	0.20	
v/s Ratio Perm			0.01						0.20			
v/c Ratio	0.93	0.77	0.07	0.53	0.40		0.63	0.75	0.39	0.59	0.41	
Uniform Delay, d1	52.5	45.4	38.9	51.8	43.6		52.9	22.7	17.3	55.6	19.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.10	0.84	
Incremental Delay, d2	29.0	5.3	0.1	3.3	0.4		4.2	5.4	1.4	8.5	0.7	
Delay (s)	81.5	50.6	39.0	55.1	44.0		57.1	28.1	18.8	69.7	17.4	
Level of Service	F	D	D	E	D		E	C	B	E	B	
Approach Delay (s)		60.6			46.9			28.7			21.4	
Approach LOS		E			D			C			C	

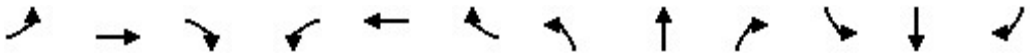
Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	10	70	10	10	10	60	530	10	10	750	120
Future Volume (vph)	100	10	70	10	10	10	60	530	10	10	750	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1538		1730		1750	1839		1750	3422	
Flt Permitted	0.73	1.00	1.00		0.93		0.21	1.00		0.32	1.00	
Satd. Flow (perm)	1350	1845	1538		1627		392	1839		586	3422	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	133	13	93	13	13	13	80	707	13	13	1000	160
RTOR Reduction (vph)	0	0	77	0	11	0	0	1	0	0	12	0
Lane Group Flow (vph)	133	13	16	0	28	0	80	719	0	13	1148	0
Confl. Peds. (#/hr)			5	5			20		5	5		20
Confl. Bikes (#/hr)			1									4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	13.2	13.2	13.2		13.2		58.3	58.3		58.3	58.3	
Effective Green, g (s)	13.7	13.7	13.7		13.7		58.3	58.3		58.3	58.3	
Actuated g/C Ratio	0.17	0.17	0.17		0.17		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	229	313	261		276		283	1328		423	2472	
v/s Ratio Prot		0.01						c0.39			0.34	
v/s Ratio Perm	c0.10		0.01		0.02		0.20			0.02		
v/c Ratio	0.58	0.04	0.06		0.10		0.28	0.54		0.03	0.46	
Uniform Delay, d1	30.9	28.0	28.1		28.3		3.9	5.1		3.2	4.7	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.76	0.68	
Incremental Delay, d2	2.4	0.0	0.0		0.1		0.2	0.2		0.0	0.0	
Delay (s)	33.3	28.0	28.1		28.4		4.1	5.4		2.4	3.2	
Level of Service	C	C	C		C		A	A		A	A	
Approach Delay (s)		31.0			28.4			5.2			3.2	
Approach LOS		C			C			A			A	

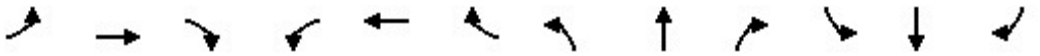
Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	13.2
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	0	10	90	0	220	0	290	70	140	450	10
Future Volume (vph)	10	0	10	90	0	220	0	290	70	140	450	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	0	12	106	0	259	0	341	82	165	529	12

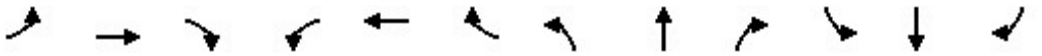
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	24	106	259	423	706
Volume Left (vph)	12	106	0	0	165
Volume Right (vph)	12	0	259	82	12
Hadj (s)	-0.15	0.25	-0.55	-0.07	0.09
Departure Headway (s)	6.9	6.9	3.2	5.2	5.0
Degree Utilization, x	0.05	0.20	0.23	0.62	0.99
Capacity (veh/h)	485	494	1122	684	705
Control Delay (s)	10.2	11.7	7.2	16.3	52.9
Approach Delay (s)	10.2	8.5		16.3	52.9
Approach LOS	B	A		C	F

Intersection Summary				
Delay	31.3			
Level of Service	D			
Intersection Capacity Utilization	71.7%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	190	10	410	20	420	80	190	830	10
Future Volume (vph)	10	10	10	190	10	410	20	420	80	190	830	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1709			1714	1568	1752	3505	1486	1752	3493	
Flt Permitted		0.88			0.71	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1535			1271	1568	1752	3505	1486	1752	3493	
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	13	13	13	247	13	532	26	545	104	247	1078	13
RTOR Reduction (vph)	0	10	0	0	0	96	0	0	61	0	1	0
Lane Group Flow (vph)	0	29	0	0	260	436	26	545	43	247	1090	0
Confl. Peds. (#/hr)	1		27	27		1			15			67
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		21.3			21.3	45.9	10.1	37.6	37.6	20.1	47.6	
Effective Green, g (s)		21.8			21.8	46.4	10.1	38.3	38.3	20.1	48.3	
Actuated g/C Ratio		0.24			0.24	0.50	0.11	0.42	0.42	0.22	0.52	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		362			300	789	191	1455	617	381	1829	
v/s Ratio Prot						c0.28	0.01	0.16		c0.14	c0.31	
v/s Ratio Perm		0.02			c0.20				0.03			
v/c Ratio		0.08			0.87	0.55	0.14	0.37	0.07	0.65	0.60	
Uniform Delay, d1		27.4			33.8	15.8	37.1	18.7	16.2	32.8	15.2	
Progression Factor		1.00			1.00	1.00	1.17	1.05	1.36	1.00	1.00	
Incremental Delay, d2		0.0			21.5	0.5	0.1	0.1	0.0	2.8	0.5	
Delay (s)		27.4			55.3	16.2	43.6	19.7	22.1	35.7	15.7	
Level of Service		C			E	B	D	B	C	D	B	
Approach Delay (s)		27.4			29.1			21.0			19.4	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	92.2	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	30	80	190	50	10	160	360	40	10	1020	420
Future Volume (vph)	140	30	80	190	50	10	160	360	40	10	1020	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1379		1752	1798		1752	3439		1752	3505	1505
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1379		1752	1798		1752	3439		1752	3505	1505
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	179	38	103	244	64	13	205	462	51	13	1308	538
RTOR Reduction (vph)	0	91	0	0	6	0	0	6	0	0	0	229
Lane Group Flow (vph)	179	51	0	244	71	0	205	507	0	13	1308	309
Confl. Peds. (#/hr)			3						5			6
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	21.4	10.8		15.6	5.0		19.2	73.7		2.0	56.5	56.5
Effective Green, g (s)	22.0	11.4		16.6	5.0		19.2	75.0		2.0	57.8	57.8
Actuated g/C Ratio	0.18	0.10		0.14	0.04		0.16	0.62		0.02	0.48	0.48
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	273	131		242	74		280	2149		29	1688	724
v/s Ratio Prot	c0.12	0.04		c0.14	c0.04		c0.12	0.15		0.01	c0.37	
v/s Ratio Perm												0.21
v/c Ratio	0.66	0.39		1.01	0.96		0.73	0.24		0.45	0.77	0.43
Uniform Delay, d1	45.5	51.0		51.7	57.4		48.0	9.9		58.5	25.7	20.3
Progression Factor	1.00	1.00		1.00	1.00		0.92	2.43		1.00	1.00	1.00
Incremental Delay, d2	5.6	1.9		60.0	91.3		8.9	0.2		10.6	3.5	1.8
Delay (s)	51.1	52.9		111.7	148.7		53.2	24.3		69.1	29.3	22.1
Level of Service	D	D		F	F		D	C		E	C	C
Approach Delay (s)		51.9			120.6			32.5			27.5	
Approach LOS		D			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	270	10	230	0	330	60	240	630	10
Future Volume (vph)	0	0	10	270	10	230	0	330	60	240	630	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		3.0		4.0	3.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			1.00		1.00	0.91		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.98		1.00	1.00	
Flt Protected			1.00		0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1596		1760	1218		1522		1490	1561	
Flt Permitted			1.00		0.95	1.00		1.00		0.23	1.00	
Satd. Flow (perm)			1596		1760	1218		1522		361	1561	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	11	290	11	247	0	355	65	258	677	11
RTOR Reduction (vph)	0	0	9	0	0	201	0	6	0	0	0	0
Lane Group Flow (vph)	0	0	2	0	301	46	0	414	0	258	688	0
Confl. Peds. (#/hr)	20					20	32		11			32
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			20.2		20.2	20.2		48.4		54.3	54.3	
Effective Green, g (s)			20.2		20.2	20.2		48.4		54.3	54.3	
Actuated g/C Ratio			0.19		0.19	0.19		0.45		0.50	0.50	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			299		330	228		684		392	787	
v/s Ratio Prot					c0.17			c0.27		0.12	c0.44	
v/s Ratio Perm			0.00			0.04				0.21		
v/c Ratio			0.01		0.91	0.20		0.61		0.66	0.87	
Uniform Delay, d1			35.5		42.8	36.9		22.4		18.4	23.6	
Progression Factor			1.00		1.00	1.00		0.11		1.00	1.00	
Incremental Delay, d2			0.0		28.7	0.5		1.5		4.0	10.6	
Delay (s)			35.6		71.5	37.4		3.8		22.4	34.2	
Level of Service			D		E	D		A		C	C	
Approach Delay (s)		35.6			56.1			3.8			31.0	
Approach LOS		D			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

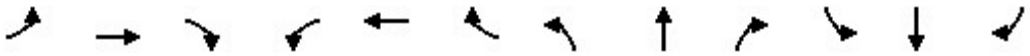
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	160	10	10	230	490	410
Future Volume (vph)	160	10	10	230	490	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.94	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1483			1564	1418	
Flt Permitted	0.95			0.96	1.00	
Satd. Flow (perm)	1483			1503	1418	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	167	10	10	240	510	427
RTOR Reduction (vph)	2	0	0	0	23	0
Lane Group Flow (vph)	175	0	0	250	914	0
Confl. Peds. (#/hr)		3	18			18
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	18.1			30.3	74.5	
Effective Green, g (s)	18.1			29.3	74.5	
Actuated g/C Ratio	0.17			0.27	0.69	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	249			409	981	
v/s Ratio Prot	c0.12				c0.64	
v/s Ratio Perm				0.17		
v/c Ratio	0.70			0.61	0.93	
Uniform Delay, d1	42.2			34.2	14.4	
Progression Factor	1.00			1.00	0.37	
Incremental Delay, d2	9.3			3.1	9.2	
Delay (s)	51.6			37.3	14.5	
Level of Service	D			D	B	
Approach Delay (s)	51.6			37.3	14.5	
Approach LOS	D			D	B	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	19.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	160	140	120	260	80	80	460	60	70	710	220
Future Volume (vph)	30	160	140	120	260	80	80	460	60	70	710	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.98		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.96		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1669		1490	1800		1752	3430		1752	3505	1485
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1669		1490	1489		1752	3430		1752	3505	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	32	172	151	129	280	86	86	495	65	75	763	237
RTOR Reduction (vph)	0	27	0	0	10	0	0	8	0	0	0	142
Lane Group Flow (vph)	32	296	0	129	356	0	86	552	0	75	763	95
Confl. Peds. (#/hr)			30			34			4			8
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	22.9	22.9		23.7	23.7		8.6	48.7		7.2	47.3	47.3
Effective Green, g (s)	23.2	23.2		24.0	24.0		8.6	49.6		7.2	48.2	48.2
Actuated g/C Ratio	0.19	0.19		0.20	0.20		0.07	0.41		0.06	0.40	0.40
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	338	322		298	360		125	1417		105	1407	596
v/s Ratio Prot	0.02	c0.18		0.09	c0.20		c0.05	0.16		0.04	c0.22	
v/s Ratio Perm												0.06
v/c Ratio	0.09	0.92		0.43	0.99		0.69	0.39		0.71	0.54	0.16
Uniform Delay, d1	39.8	47.5		42.0	47.9		54.4	24.6		55.4	27.5	23.0
Progression Factor	1.00	1.00		1.00	1.00		0.93	1.03		1.34	0.55	0.40
Incremental Delay, d2	0.1	30.5		1.0	44.2		13.6	0.7		12.8	0.9	0.3
Delay (s)	39.9	78.0		43.1	92.1		64.2	26.2		87.0	15.9	9.4
Level of Service	D	E		D	F		E	C		F	B	A
Approach Delay (s)		74.5			79.3			31.2			19.4	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	41.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	140	100	20	110	10	60	140	30	10	330	170
Future Volume (vph)	50	140	100	20	110	10	60	140	30	10	330	170
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	55	154	110	22	121	11	66	154	33	11	363	187

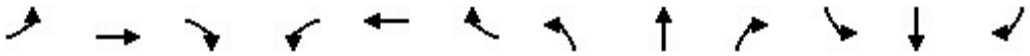
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	55	264	22	132	253	561
Volume Left (vph)	55	0	22	0	66	11
Volume Right (vph)	0	110	0	11	33	187
Hadj (s)	0.55	-0.24	0.55	-0.01	0.02	-0.15
Departure Headway (s)	8.0	7.2	8.5	7.9	6.8	6.0
Degree Utilization, x	0.12	0.53	0.05	0.29	0.47	0.93
Capacity (veh/h)	436	477	404	434	503	589
Control Delay (s)	11.0	16.9	10.8	12.9	15.7	45.1
Approach Delay (s)	15.9		12.6		15.7	45.1
Approach LOS	C		B		C	E

Intersection Summary				
Delay	28.2			
Level of Service	D			
Intersection Capacity Utilization	68.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	80	100	40	160	410	90
Future Volume (vph)	80	100	40	160	410	90
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	88	110	44	176	451	99

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	88	110	44	176	550
Volume Left (vph)	88	0	44	0	0
Volume Right (vph)	0	110	0	0	99
Hadj (s)	0.55	-0.65	0.55	0.05	-0.06
Departure Headway (s)	7.0	5.8	6.3	5.8	5.2
Degree Utilization, x	0.17	0.18	0.08	0.28	0.79
Capacity (veh/h)	478	569	547	595	685
Control Delay (s)	10.3	8.9	8.6	9.9	24.8
Approach Delay (s)	9.5		9.6		24.8
Approach LOS	A		A		C

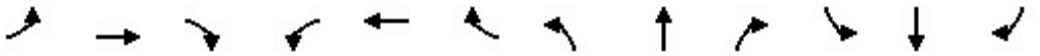
Intersection Summary			
Delay	18.2		
Level of Service	C		
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	50	10	50	80	40	10	130	40	40	290	50
Future Volume (vph)	40	50	10	50	80	40	10	130	40	40	290	50
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
Hourly flow rate (vph)	45	57	11	57	91	45	11	148	45	45	330	57

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	113	193	204	432
Volume Left (vph)	45	57	11	45
Volume Right (vph)	11	45	45	57
Hadj (s)	0.07	-0.03	-0.07	-0.01
Departure Headway (s)	6.1	5.8	5.4	5.2
Degree Utilization, x	0.19	0.31	0.31	0.62
Capacity (veh/h)	506	557	603	670
Control Delay (s)	10.5	11.4	10.8	16.1
Approach Delay (s)	10.5	11.4	10.8	16.1
Approach LOS	B	B	B	C

Intersection Summary				
Delay	13.3			
Level of Service	B			
Intersection Capacity Utilization	50.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	110	20	40	130	30	10	170	30	80	360	40
Future Volume (vph)	20	110	20	40	130	30	10	170	30	80	360	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		0.98	1.00		0.95	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1409	1522		1464	1499		1421	1517		1435	1527	
Flt Permitted	0.64	1.00		0.66	1.00		0.43	1.00		0.62	1.00	
Satd. Flow (perm)	952	1522		1021	1499		645	1517		930	1527	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	23	126	23	46	149	34	11	195	34	92	414	46
RTOR Reduction (vph)	0	11	0	0	13	0	0	8	0	0	5	0
Lane Group Flow (vph)	23	138	0	46	170	0	11	221	0	92	455	0
Confl. Peds. (#/hr)	54		16	16		54	74		39	39		74
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	11.8	11.8		11.8	11.8		21.2	21.2		21.2	21.2	
Effective Green, g (s)	12.0	12.0		12.0	12.0		21.4	21.4		21.4	21.4	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.52	0.52		0.52	0.52	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	275	441		295	434		333	784		480	789	
v/s Ratio Prot		0.09			c0.11			0.15			c0.30	
v/s Ratio Perm	0.02			0.05			0.02			0.10		
v/c Ratio	0.08	0.31		0.16	0.39		0.03	0.28		0.19	0.58	
Uniform Delay, d1	10.7	11.5		10.9	11.8		4.9	5.7		5.4	6.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.2		0.0	0.2		0.2	1.0	
Delay (s)	10.7	11.6		11.0	12.0		5.0	5.9		5.6	7.9	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.5			11.8			5.8			7.5	
Approach LOS		B			B			A			A	

Intersection Summary				
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	41.4	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	57.9%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	80	70	70	100	30	40	490	40	20	830	70
Future Volume (vph)	40	80	70	70	100	30	40	490	40	20	830	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1433		1490	1500		1490	1546		1485	1544	
Flt Permitted	0.95	1.00		0.95	1.00		0.19	1.00		0.40	1.00	
Satd. Flow (perm)	1490	1433		1490	1500		305	1546		623	1544	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	41	82	71	71	102	31	41	500	41	20	847	71
RTOR Reduction (vph)	0	27	0	0	9	0	0	2	0	0	2	0
Lane Group Flow (vph)	41	126	0	71	124	0	41	539	0	20	916	0
Confl. Peds. (#/hr)			5			5	8		3	3		8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.4	15.2		8.4	16.2		83.2	83.2		83.2	83.2	
Effective Green, g (s)	7.4	15.8		8.4	16.8		83.8	83.8		83.8	83.8	
Actuated g/C Ratio	0.06	0.13		0.07	0.14		0.70	0.70		0.70	0.70	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	91	188		104	210		212	1079		435	1078	
v/s Ratio Prot	0.03	c0.09		c0.05	0.08			0.35			c0.59	
v/s Ratio Perm							0.13			0.03		
v/c Ratio	0.45	0.67		0.68	0.59		0.19	0.50		0.05	0.85	
Uniform Delay, d1	54.3	49.6		54.5	48.4		6.3	8.4		5.6	13.4	
Progression Factor	1.00	1.00		1.00	1.00		0.18	0.26		0.43	0.69	
Incremental Delay, d2	3.5	9.0		16.9	4.2		1.7	1.4		0.2	7.0	
Delay (s)	57.9	58.7		71.4	52.5		2.8	3.6		2.6	16.3	
Level of Service	E	E		E	D		A	A		A	B	
Approach Delay (s)		58.5			59.1			3.6			16.0	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	10	20	20	30	530	20	10	910	30
Future Volume (Veh/h)	10	10	40	10	20	20	30	530	20	10	910	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	10	10	41	10	21	21	31	546	21	10	938	31
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.62	0.62	0.56	0.62	0.62	0.88	0.56			0.88		
vC, conflicting volume	1661	1628	974	1628	1632	590	989			572		
vC1, stage 1 conf vol	994	994		624	624							
vC2, stage 2 conf vol	668	634		1004	1009							
vCu, unblocked vol	1328	1274	558	1274	1282	467	586			447		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	96	86	94	90	96	94			99		
cM capacity (veh/h)	219	236	290	175	210	509	541			972		

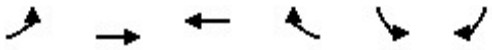
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	52	31	567	10	969
Volume Left	10	10	31	0	10	0
Volume Right	41	21	0	21	0	31
cSH	266	262	541	1700	972	1700
Volume to Capacity	0.23	0.20	0.06	0.33	0.01	0.57
Queue Length 95th (ft)	22	18	5	0	1	0
Control Delay (s)	22.5	22.1	12.1	0.0	8.7	0.0
Lane LOS	C	C	B		A	
Approach Delay (s)	22.5	22.1	0.6		0.1	
Approach LOS	C	C				

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	66.5%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	160	20	10	280	10	30	10	10	10	10	40
Future Volume (Veh/h)	20	160	20	10	280	10	30	10	10	10	10	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	200	25	13	350	13	38	13	13	13	13	50
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.95			0.95	0.95	0.95	0.95	0.95	
vC, conflicting volume	399			233			710	696	222	702	702	392
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	399			165			667	653	154	660	659	392
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			87	96	98	96	96	92
cM capacity (veh/h)	1120			1327			297	341	837	313	339	634

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	250	376	64	76
Volume Left	25	13	38	13
Volume Right	25	13	13	50
cSH	1120	1327	352	479
Volume to Capacity	0.02	0.01	0.18	0.16
Queue Length 95th (ft)	2	1	16	14
Control Delay (s)	1.0	0.4	17.5	13.9
Lane LOS	A	A	C	B
Approach Delay (s)	1.0	0.4	17.5	13.9
Approach LOS			C	B

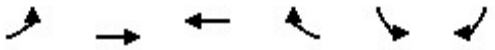
Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	33.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	160	20	50	20	40	250
Future Volume (Veh/h)	160	20	50	20	40	250
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	205	26	64	26	51	321
Pedestrians		4			21	
Lane Width (ft)		13.0			13.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		0			2	
Right turn flare (veh)						1
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1220				
pX, platoon unblocked						
vC, conflicting volume	111				534	102
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	111				534	102
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	86				88	65
cM capacity (veh/h)	1445				425	929

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	231	90	372
Volume Left	205	0	51
Volume Right	0	26	321
cSH	1445	1700	1077
Volume to Capacity	0.14	0.05	0.35
Queue Length 95th (ft)	12	0	39
Control Delay (s)	7.1	0.0	11.4
Lane LOS	A		B
Approach Delay (s)	7.1	0.0	11.4
Approach LOS			B

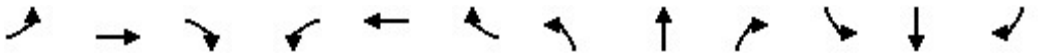
Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	130	620	1050	60	80	230
Future Volume (vph)	130	620	1050	60	80	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3472		1733	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3472		1733	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	140	667	1129	65	86	247
RTOR Reduction (vph)	0	0	3	0	0	190
Lane Group Flow (vph)	140	667	1191	0	86	57
Confl. Peds. (#/hr)				1	13	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	8.3	41.5	29.2		9.5	9.5
Effective Green, g (s)	8.3	42.9	30.6		9.5	9.5
Actuated g/C Ratio	0.14	0.71	0.51		0.16	0.16
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	240	2489	1758		272	246
v/s Ratio Prot	c0.08	0.19	c0.34			
v/s Ratio Perm					c0.05	0.04
v/c Ratio	0.58	0.27	0.68		0.32	0.23
Uniform Delay, d1	24.4	3.1	11.2		22.6	22.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.3	0.1	1.0		0.2	0.2
Delay (s)	26.8	3.2	12.2		22.8	22.4
Level of Service	C	A	B		C	C
Approach Delay (s)		7.3	12.2		22.5	
Approach LOS		A	B		C	

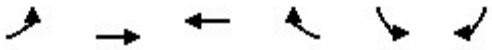
Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	510	200	350	810	20	170	140	220	50	180	120
Future Volume (vph)	50	510	200	350	810	20	170	140	220	50	180	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1542	3400	3483		1752	1845	1533	1752	1699	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1542	3400	3483		1752	1845	1533	1752	1699	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	60	614	241	422	976	24	205	169	265	60	217	145
RTOR Reduction (vph)	0	0	76	0	1	0	0	0	180	0	17	0
Lane Group Flow (vph)	60	614	165	422	999	0	205	169	85	60	345	0
Confl. Peds. (#/hr)			9			24			8			31
Confl. Bikes (#/hr)			6			7			1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	7.0	24.6	42.1	23.0	44.6		17.5	34.8	34.8	7.0	24.3	
Effective Green, g (s)	7.0	25.8	42.1	23.0	45.8		17.5	35.5	35.5	7.0	25.0	
Actuated g/C Ratio	0.06	0.23	0.38	0.21	0.41		0.16	0.32	0.32	0.06	0.22	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	110	812	583	702	1433		275	588	488	110	381	
v/s Ratio Prot	0.03	0.18	0.04	c0.12	c0.29		c0.12	0.09		0.03	c0.20	
v/s Ratio Perm			0.06						0.06			
v/c Ratio	0.55	0.76	0.28	0.60	0.70		0.75	0.29	0.17	0.55	0.91	
Uniform Delay, d1	50.6	39.8	24.1	40.0	27.0		44.8	28.4	27.3	50.6	42.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.9	4.0	0.1	1.0	1.5		9.2	0.1	0.1	2.9	23.8	
Delay (s)	53.5	43.9	24.2	41.0	28.5		54.0	28.5	27.4	53.5	65.8	
Level of Service	D	D	C	D	C		D	C	C	D	E	
Approach Delay (s)		39.3			32.2			36.2			64.0	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	111.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	550	1020	100	190	200
Future Volume (Veh/h)	110	550	1020	100	190	200
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	128	640	1186	116	221	233
Pedestrians			1		2	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.79				0.83	0.79
vC, conflicting volume	1304				1823	653
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	840				1058	10
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	79				0	72
cM capacity (veh/h)	615				187	836

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	128	320	320	791	511	221	233
Volume Left	128	0	0	0	0	221	0
Volume Right	0	0	0	0	116	0	233
cSH	615	1700	1700	1700	1700	187	836
Volume to Capacity	0.21	0.19	0.19	0.47	0.30	1.18	0.28
Queue Length 95th (ft)	19	0	0	0	0	287	29
Control Delay (s)	12.4	0.0	0.0	0.0	0.0	174.1	11.0
Lane LOS	B					F	B
Approach Delay (s)	2.1			0.0		90.4	
Approach LOS						F	

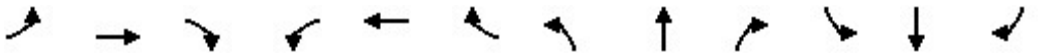
Intersection Summary			
Average Delay	16.9		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	230	290	310	690	30	180	440	70	30	690	230
Future Volume (vph)	200	230	290	310	690	30	180	440	70	30	690	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1543	3400	3480		3400	1845	1544	1752	3104	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1543	3400	3480		3400	1845	1544	1752	3104	
Peak-hour factor, PHF	0.89	0.90	0.89	0.90	0.90	0.90	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	225	256	326	344	767	33	202	494	78	33	775	258
RTOR Reduction (vph)	0	0	154	0	3	0	0	0	42	0	26	0
Lane Group Flow (vph)	225	256	172	344	797	0	202	494	36	33	1007	0
Confl. Peds. (#/hr)			1			4			2			7
Confl. Bikes (#/hr)			2			3						1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	12.5	18.3	18.3	25.4	31.2		10.6	53.8	53.8	4.7	47.9	
Effective Green, g (s)	12.5	19.2	19.2	25.4	32.1		10.6	54.7	54.7	4.7	48.8	
Actuated g/C Ratio	0.10	0.16	0.16	0.21	0.27		0.09	0.46	0.46	0.04	0.41	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	354	560	246	719	930		300	841	703	68	1262	
v/s Ratio Prot	0.07	0.07		0.10	c0.23		c0.06	0.27		0.02	c0.32	
v/s Ratio Perm			c0.11						0.02			
v/c Ratio	0.64	0.46	0.70	0.48	0.86		0.67	0.59	0.05	0.49	0.80	
Uniform Delay, d1	51.6	45.7	47.7	41.5	41.8		53.0	24.3	18.2	56.5	31.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.14	0.68	
Incremental Delay, d2	3.7	0.6	8.7	0.5	7.9		5.9	3.0	0.1	3.8	3.8	
Delay (s)	55.3	46.3	56.4	42.0	49.6		58.9	27.3	18.3	68.4	25.1	
Level of Service	E	D	E	D	D		E	C	B	E	C	
Approach Delay (s)		52.9			47.3			34.6			26.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	10	120	10	40	10	120	390	20	10	770	250
Future Volume (vph)	120	10	120	10	40	10	120	390	20	10	770	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96		1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1526		1798		1763	1847		1766	3368	
Flt Permitted	0.72	1.00	1.00		0.97		0.15	1.00		0.39	1.00	
Satd. Flow (perm)	1346	1863	1526		1752		274	1847		725	3368	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	160	13	160	13	53	13	160	520	27	13	1027	333
RTOR Reduction (vph)	0	0	102	0	8	0	0	2	0	0	36	0
Lane Group Flow (vph)	160	13	58	0	71	0	160	545	0	13	1324	0
Confl. Peds. (#/hr)			9	9			39		7	7		39
Confl. Bikes (#/hr)			14			7			1			2
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	21.3	21.3	21.3		21.3		61.7	61.7		61.7	61.7	
Effective Green, g (s)	21.8	21.8	21.8		21.8		61.7	61.7		61.7	61.7	
Actuated g/C Ratio	0.24	0.24	0.24		0.24		0.67	0.67		0.67	0.67	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	318	440	360		414		183	1236		485	2253	
v/s Ratio Prot		0.01						0.29			0.39	
v/s Ratio Perm	c0.12		0.04		0.04		c0.58			0.02		
v/c Ratio	0.50	0.03	0.16		0.17		0.87	0.44		0.03	0.59	
Uniform Delay, d1	30.5	27.1	28.0		28.0		12.2	7.2		5.1	8.3	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.65	0.55	
Incremental Delay, d2	0.5	0.0	0.1		0.1		33.1	0.1		0.0	0.2	
Delay (s)	31.0	27.1	28.0		28.1		45.2	7.2		3.3	4.7	
Level of Service	C	C	C		C		D	A		A	A	
Approach Delay (s)		29.4			28.1			15.8			4.7	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	92.2	Sum of lost time (s)	13.2
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

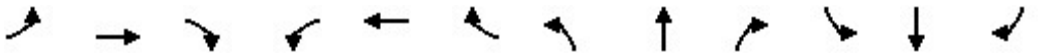
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	10	10	50	10	110	0	360	40	150	440	20
Future Volume (vph)	10	10	10	50	10	110	0	360	40	150	440	20
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	11	11	11	54	11	118	0	387	43	161	473	22

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	33	65	118	430	656
Volume Left (vph)	11	54	0	0	161
Volume Right (vph)	11	0	118	43	22
Hadj (s)	-0.08	0.21	-0.55	-0.01	0.08
Departure Headway (s)	6.6	6.8	3.2	5.0	4.9
Degree Utilization, x	0.06	0.12	0.10	0.60	0.89
Capacity (veh/h)	499	491	1121	687	723
Control Delay (s)	10.0	10.7	6.6	15.4	33.5
Approach Delay (s)	10.0	8.0		15.4	33.5
Approach LOS	B	A		C	D

Intersection Summary				
Delay	23.4			
Level of Service	C			
Intersection Capacity Utilization	72.5%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	10	10	100	10	210	20	490	130	160	720	10
Future Volume (vph)	20	10	10	100	10	210	20	490	130	160	720	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.97			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1731			1753	1568	1752	3505	1505	1752	3496	
Flt Permitted		0.84			0.72	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1492			1311	1568	1752	3505	1505	1752	3496	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	21	10	10	103	10	216	21	505	134	165	742	10
RTOR Reduction (vph)	0	8	0	0	0	115	0	0	75	0	1	0
Lane Group Flow (vph)	0	33	0	0	113	101	21	505	59	165	751	0
Confl. Peds. (#/hr)			8	8					11			9
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		13.2			13.2	36.9	10.4	34.1	34.1	19.2	42.9	
Effective Green, g (s)		13.7			13.7	37.4	10.4	34.8	34.8	19.2	43.6	
Actuated g/C Ratio		0.17			0.17	0.47	0.13	0.44	0.44	0.24	0.55	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		256			225	735	228	1530	657	422	1912	
v/s Ratio Prot						0.06	0.01	0.14		c0.09	c0.21	
v/s Ratio Perm		0.02			c0.09				0.04			
v/c Ratio		0.13			0.50	0.14	0.09	0.33	0.09	0.39	0.39	
Uniform Delay, d1		27.9			29.9	12.0	30.5	14.8	13.2	25.4	10.4	
Progression Factor		1.00			1.00	1.00	1.25	0.91	0.79	1.00	1.00	
Incremental Delay, d2		0.1			0.6	0.0	0.1	0.1	0.1	0.2	0.1	
Delay (s)		28.0			30.6	12.0	38.2	13.5	10.4	25.6	10.5	
Level of Service		C			C	B	D	B	B	C	B	
Approach Delay (s)		28.0			18.4			13.7			13.3	
Approach LOS		C			B			B			B	

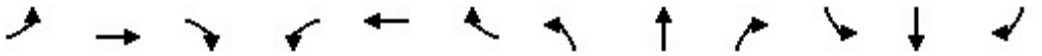
Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	79.7	Sum of lost time (s)	12.5
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	60	150	60	70	10	160	930	70	10	450	120
Future Volume (vph)	180	60	150	60	70	10	160	930	70	10	450	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1386		1752	1810		1752	3460		1752	3505	1532
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1386		1752	1810		1752	3460		1752	3505	1532
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	184	61	153	61	71	10	163	949	71	10	459	122
RTOR Reduction (vph)	0	88	0	0	5	0	0	3	0	0	0	63
Lane Group Flow (vph)	184	126	0	61	76	0	163	1017	0	10	459	59
Confl. Peds. (#/hr)			1						3			1
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	20.1	17.0		11.7	8.6		16.4	72.4		1.0	57.0	57.0
Effective Green, g (s)	20.7	17.6		12.7	8.6		16.4	73.7		1.0	58.3	58.3
Actuated g/C Ratio	0.17	0.15		0.11	0.07		0.14	0.61		0.01	0.49	0.49
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	257	203		185	129		239	2125		14	1702	744
v/s Ratio Prot	c0.12	c0.09		0.03	0.04		c0.09	c0.29		0.01	0.13	
v/s Ratio Perm												0.04
v/c Ratio	0.72	0.62		0.33	0.59		0.68	0.48		0.71	0.27	0.08
Uniform Delay, d1	46.9	48.1		49.7	54.0		49.3	12.6		59.4	18.3	16.5
Progression Factor	1.00	1.00		1.00	1.00		0.94	1.95		1.00	1.00	1.00
Incremental Delay, d2	9.1	5.8		1.0	7.1		6.5	0.6		100.1	0.4	0.2
Delay (s)	56.0	53.9		50.8	61.1		52.6	25.4		159.5	18.6	16.7
Level of Service	E	D		D	E		D	C		F	B	B
Approach Delay (s)		54.9			56.7			29.1			20.6	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	120	10	130	0	470	140	220	550	10
Future Volume (vph)	0	0	10	120	10	130	0	470	140	220	550	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		3.0		4.0	3.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			0.98		1.00	0.95		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.97		1.00	1.00	
Flt Protected			1.00		0.96	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1559		1763	1267		1504		1490	1561	
Flt Permitted			1.00		0.96	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1559		1763	1267		1504		183	1561	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	122	10	133	0	480	143	224	561	10
RTOR Reduction (vph)	0	0	9	0	0	116	0	8	0	0	1	0
Lane Group Flow (vph)	0	0	1	0	132	17	0	615	0	224	570	0
Confl. Peds. (#/hr)	9		1			9	25		7			25
Confl. Bikes (#/hr)									2			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			13.6		13.6	13.6		55.4		52.9	52.9	
Effective Green, g (s)			13.6		13.6	13.6		55.4		52.9	52.9	
Actuated g/C Ratio			0.13		0.13	0.13		0.52		0.50	0.50	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			198		224	161		780		319	773	
v/s Ratio Prot					c0.07			c0.41		0.12	c0.37	
v/s Ratio Perm			0.00			0.01				0.22		
v/c Ratio			0.01		0.59	0.11		0.79		0.70	0.74	
Uniform Delay, d1			40.7		43.9	41.2		20.9		24.4	21.4	
Progression Factor			1.00		1.00	1.00		0.24		1.00	1.00	
Incremental Delay, d2			0.0		4.2	0.3		2.3		6.8	3.7	
Delay (s)			40.7		48.1	41.5		7.3		31.2	25.1	
Level of Service			D		D	D		A		C	C	
Approach Delay (s)		40.7			44.8			7.3			26.8	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

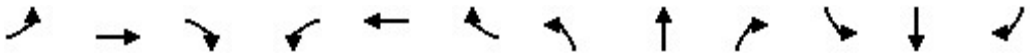
c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	270	40	10	340	410	270
Future Volume (vph)	270	40	10	340	410	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.99			1.00	0.94	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.98			1.00	0.95	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1457			1563	1393	
Flt Permitted	0.96			0.98	1.00	
Satd. Flow (perm)	1457			1528	1393	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	42	11	358	432	284
RTOR Reduction (vph)	5	0	0	0	22	0
Lane Group Flow (vph)	321	0	0	369	694	0
Confl. Peds. (#/hr)		25	41			41
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	25.2			30.2	66.5	
Effective Green, g (s)	25.2			29.2	66.5	
Actuated g/C Ratio	0.24			0.27	0.62	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	344			418	868	
v/s Ratio Prot	c0.22				c0.50	
v/s Ratio Perm				0.24		
v/c Ratio	0.93			0.88	0.80	
Uniform Delay, d1	39.9			37.1	15.1	
Progression Factor	1.00			1.00	0.26	
Incremental Delay, d2	32.2			19.7	4.4	
Delay (s)	72.1			56.8	8.4	
Level of Service	E			E	A	
Approach Delay (s)	72.1			56.8	8.4	
Approach LOS	E			E	A	

Intersection Summary			
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	19.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	170	140	100	110	50	70	920	140	50	450	80
Future Volume (vph)	100	170	140	100	110	50	70	920	140	50	450	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.95		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1700		1490	1800		1752	3419		1752	3505	1524
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1700		1490	1485		1752	3419		1752	3505	1524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	104	177	146	104	115	52	73	958	146	52	469	83
RTOR Reduction (vph)	0	25	0	0	15	0	0	9	0	0	0	43
Lane Group Flow (vph)	104	298	0	104	152	0	73	1095	0	52	469	40
Confl. Peds. (#/hr)			9			6			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	23.4	23.4		15.7	15.7		7.1	57.1		6.3	56.3	56.3
Effective Green, g (s)	23.7	23.7		16.0	16.0		7.1	58.0		6.3	57.2	57.2
Actuated g/C Ratio	0.20	0.20		0.13	0.13		0.06	0.48		0.05	0.48	0.48
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	346	335		198	240		103	1652		91	1670	726
v/s Ratio Prot	0.06	c0.18		0.07	c0.08		c0.04	c0.32		0.03	0.13	
v/s Ratio Perm												0.03
v/c Ratio	0.30	0.89		0.53	0.63		0.71	0.66		0.57	0.28	0.05
Uniform Delay, d1	41.1	46.9		48.5	49.2		55.4	23.6		55.5	19.0	16.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	0.76		1.25	0.67	0.29
Incremental Delay, d2	0.5	23.7		2.5	5.4		9.1	0.9		8.1	0.4	0.1
Delay (s)	41.6	70.6		51.0	54.6		64.5	18.9		77.7	13.1	5.0
Level of Service	D	E		D	D		E	B		E	B	A
Approach Delay (s)		63.5			53.2			21.7			17.5	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	110	200	120	50	130	40	130	260	60	20	240	80
Future Volume (vph)	110	200	120	50	130	40	130	260	60	20	240	80
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
Hourly flow rate (vph)	122	222	133	56	144	44	144	289	67	22	267	89

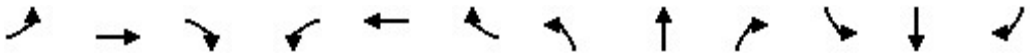
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	122	355	56	188	500	378
Volume Left (vph)	122	0	56	0	144	22
Volume Right (vph)	0	133	0	44	67	89
Hadj (s)	0.55	-0.21	0.55	-0.11	0.03	-0.08
Departure Headway (s)	8.9	8.2	9.5	8.9	7.7	7.8
Degree Utilization, x	0.30	0.80	0.15	0.46	1.08	0.82
Capacity (veh/h)	394	432	358	378	474	451
Control Delay (s)	14.5	35.8	13.0	18.1	91.4	37.8
Approach Delay (s)	30.4		16.9		91.4	37.8
Approach LOS	D		C		F	E

Intersection Summary				
Delay	49.2			
Level of Service	E			
Intersection Capacity Utilization	79.8%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	110	140	100	240	310	100
Future Volume (vph)	110	140	100	240	310	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	116	147	105	253	326	105

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	116	147	105	253	431
Volume Left (vph)	116	0	105	0	0
Volume Right (vph)	0	147	0	0	105
Hadj (s)	0.55	-0.65	0.55	0.05	-0.10
Departure Headway (s)	7.1	5.9	6.4	5.9	5.5
Degree Utilization, x	0.23	0.24	0.19	0.42	0.66
Capacity (veh/h)	472	563	538	586	637
Control Delay (s)	11.0	9.6	9.7	11.9	18.6
Approach Delay (s)	10.2		11.3		18.6
Approach LOS	B		B		C

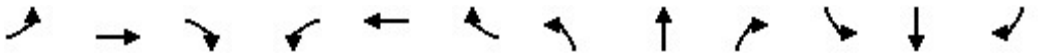
Intersection Summary			
Delay	14.0		
Level of Service	B		
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	60	60	10	40	70	50	20	240	40	60	240	50
Future Volume (vph)	60	60	10	40	70	50	20	240	40	60	240	50
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
Hourly flow rate (vph)	68	68	11	45	80	57	23	273	45	68	273	57

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	147	182	341	398
Volume Left (vph)	68	45	23	68
Volume Right (vph)	11	57	45	57
Hadj (s)	0.10	-0.09	-0.01	0.00
Departure Headway (s)	6.5	6.2	5.6	5.6
Degree Utilization, x	0.27	0.31	0.53	0.62
Capacity (veh/h)	469	492	596	616
Control Delay (s)	11.8	12.1	14.9	17.1
Approach Delay (s)	11.8	12.1	14.9	17.1
Approach LOS	B	B	B	C

Intersection Summary				
Delay	14.8			
Level of Service	B			
Intersection Capacity Utilization	54.8%	ICU Level of Service	A	
Analysis Period (min)	15			



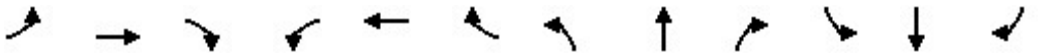
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	110	20	40	100	70	30	260	60	80	260	30
Future Volume (vph)	30	110	20	40	100	70	30	260	60	80	260	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.94	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1439	1521		1458	1432		1399	1498		1428	1526	
Flt Permitted	0.64	1.00		0.67	1.00		0.57	1.00		0.54	1.00	
Satd. Flow (perm)	967	1521		1021	1432		833	1498		816	1526	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	122	22	44	111	78	33	289	67	89	289	33
RTOR Reduction (vph)	0	11	0	0	44	0	0	11	0	0	5	0
Lane Group Flow (vph)	33	133	0	44	145	0	33	345	0	89	317	0
Confl. Peds. (#/hr)	41		24	24		41	88		63	63		88
Confl. Bikes (#/hr)						1			2			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	8.7	8.7		8.7	8.7		17.4	17.4		17.4	17.4	
Effective Green, g (s)	8.9	8.9		8.9	8.9		17.6	17.6		17.6	17.6	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.51	0.51		0.51	0.51	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	249	392		263	369		424	764		416	778	
v/s Ratio Prot		0.09			c0.10			c0.23			0.21	
v/s Ratio Perm	0.03			0.04			0.04			0.11		
v/c Ratio	0.13	0.34		0.17	0.39		0.08	0.45		0.21	0.41	
Uniform Delay, d1	9.8	10.4		9.9	10.6		4.3	5.4		4.6	5.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.3		0.1	0.4		0.3	0.3	
Delay (s)	9.9	10.6		10.0	10.8		4.4	5.8		4.9	5.6	
Level of Service	A	B		B	B		A	A		A	A	
Approach Delay (s)		10.5			10.7			5.7			5.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	34.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	80	60	60	70	40	50	900	30	10	530	80
Future Volume (vph)	110	80	60	60	70	40	50	900	30	10	530	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1467		1490	1462		1490	1559		1490	1526	
Flt Permitted	0.95	1.00		0.95	1.00		0.32	1.00		0.13	1.00	
Satd. Flow (perm)	1490	1467		1490	1462		498	1559		203	1526	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	87	65	65	76	43	54	978	33	11	576	87
RTOR Reduction (vph)	0	23	0	0	18	0	0	1	0	0	4	0
Lane Group Flow (vph)	120	129	0	65	101	0	54	1010	0	11	659	0
Confl. Peds. (#/hr)						5	10		3	3		10
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.0	18.0		8.3	15.3		80.5	80.5		80.5	80.5	
Effective Green, g (s)	11.0	18.6		8.3	15.9		81.1	81.1		81.1	81.1	
Actuated g/C Ratio	0.09	0.16		0.07	0.13		0.68	0.68		0.68	0.68	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	227		103	193		336	1053		137	1031	
v/s Ratio Prot	c0.08	c0.09		0.04	0.07			c0.65			0.43	
v/s Ratio Perm							0.11			0.05		
v/c Ratio	0.88	0.57		0.63	0.52		0.16	0.96		0.08	0.64	
Uniform Delay, d1	53.9	47.0		54.4	48.5		7.1	17.9		6.7	11.1	
Progression Factor	1.00	1.00		1.00	1.00		0.19	0.57		0.56	0.64	
Incremental Delay, d2	43.9	3.3		11.9	2.5		0.6	13.4		1.1	2.8	
Delay (s)	97.7	50.2		66.3	51.0		2.0	23.6		4.8	9.9	
Level of Service	F	D		E	D		A	C		A	A	
Approach Delay (s)		71.2			56.4			22.5			9.8	
Approach LOS		E			E			C			A	

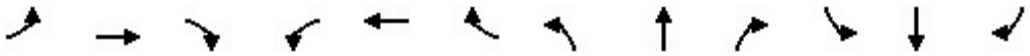
Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	70	10	10	10	40	960	30	10	580	30
Future Volume (Veh/h)	30	10	70	10	10	10	40	960	30	10	580	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	32	11	75	11	11	11	43	1032	32	11	624	32
Pedestrians		16			3						15	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		1			0						1	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.73	0.73	0.79	0.73	0.73	0.63	0.79			0.63		
vC, conflicting volume	1828	1831	656	1864	1831	1066	672			1067		
vC1, stage 1 conf vol	678	678		1137	1137							
vC2, stage 2 conf vol	1150	1153		726	694							
vCu, unblocked vol	1301	1306	431	1350	1306	806	452			808		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	79	94	85	93	94	95	95			98		
cM capacity (veh/h)	150	181	485	169	193	234	860			507		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	118	33	43	1064	11	656
Volume Left	32	11	43	0	11	0
Volume Right	75	11	0	32	0	32
cSH	275	195	860	1700	507	1700
Volume to Capacity	0.43	0.17	0.05	0.63	0.02	0.39
Queue Length 95th (ft)	51	15	4	0	2	0
Control Delay (s)	27.6	27.2	9.4	0.0	12.3	0.0
Lane LOS	D	D	A		B	
Approach Delay (s)	27.6	27.2	0.4		0.2	
Approach LOS	D	D				

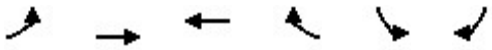
Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	67.0%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	190	70	30	240	10	40	10	30	10	10	30
Future Volume (Veh/h)	20	190	70	30	240	10	40	10	30	10	10	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	20	194	71	31	245	10	41	10	31	10	10	31
Pedestrians		2			1			36			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked												
vC, conflicting volume	264			301			656	632	266	628	662	261
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	264			301			656	632	266	628	662	261
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			97			87	97	96	97	97	96
cM capacity (veh/h)	1285			1217			323	366	746	346	352	768

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	285	286	82	51
Volume Left	20	31	41	10
Volume Right	71	10	31	31
cSH	1285	1217	419	522
Volume to Capacity	0.02	0.03	0.20	0.10
Queue Length 95th (ft)	1	2	18	8
Control Delay (s)	0.7	1.1	15.7	12.6
Lane LOS	A	A	C	B
Approach Delay (s)	0.7	1.1	15.7	12.6
Approach LOS			C	B

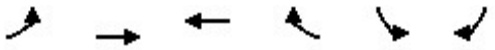
Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	38.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	240	50	40	30	30	230
Future Volume (Veh/h)	240	50	40	30	30	230
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	264	55	44	33	33	253
Pedestrians		15			8	
Lane Width (ft)		13.0			13.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		1			1	
Right turn flare (veh)						1
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1220				
pX, platoon unblocked						
vC, conflicting volume	85				652	84
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	85				652	84
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	82				91	73
cM capacity (veh/h)	1494				353	953

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	319	77	286
Volume Left	264	0	33
Volume Right	0	33	253
cSH	1494	1700	1077
Volume to Capacity	0.18	0.05	0.27
Queue Length 95th (ft)	16	0	27
Control Delay (s)	6.8	0.0	10.8
Lane LOS	A		B
Approach Delay (s)	6.8	0.0	10.8
Approach LOS			B

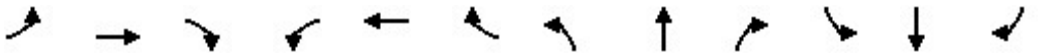
Intersection Summary			
Average Delay	7.7		
Intersection Capacity Utilization	36.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	240	1100	710	40	70	250
Future Volume (vph)	240	1100	710	40	70	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3473		1748	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3473		1748	1568
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	267	1222	789	44	78	278
RTOR Reduction (vph)	0	0	4	0	0	235
Lane Group Flow (vph)	267	1222	829	0	78	43
Confl. Peds. (#/hr)				1	3	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	14.2	39.4	21.2		9.0	9.0
Effective Green, g (s)	14.2	40.8	22.6		9.0	9.0
Actuated g/C Ratio	0.25	0.71	0.39		0.16	0.16
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	430	2474	1357		272	244
v/s Ratio Prot	c0.15	0.35	c0.24			
v/s Ratio Perm					c0.04	0.03
v/c Ratio	0.62	0.49	0.61		0.29	0.18
Uniform Delay, d1	19.4	3.8	14.1		21.6	21.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.0	0.2	0.8		0.2	0.1
Delay (s)	21.4	4.0	14.9		21.8	21.3
Level of Service	C	A	B		C	C
Approach Delay (s)		7.1	14.9		21.4	
Approach LOS		A	B		C	

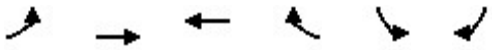
Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	57.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	990	110	70	590	60	70	70	40	40	80	210
Future Volume (vph)	150	990	110	70	590	60	70	70	40	40	80	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1543	3400	3447		1752	1845	1513	1752	1622	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1543	3400	3447		1752	1845	1513	1752	1622	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	1076	120	76	641	65	76	76	43	43	87	228
RTOR Reduction (vph)	0	0	44	0	6	0	0	0	31	0	67	0
Lane Group Flow (vph)	163	1076	76	76	700	0	76	76	12	43	248	0
Confl. Peds. (#/hr)			7			3			22			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	13.5	35.9	47.6	9.1	35.5		11.7	27.8	27.8	4.6	20.7	
Effective Green, g (s)	13.5	37.1	47.6	9.1	36.7		11.7	28.5	28.5	4.6	21.4	
Actuated g/C Ratio	0.14	0.37	0.48	0.09	0.37		0.12	0.29	0.29	0.05	0.22	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	238	1309	739	311	1273		206	529	434	81	349	
v/s Ratio Prot	c0.09	c0.31	0.01	0.02	c0.20		c0.04	0.04		0.02	c0.15	
v/s Ratio Perm			0.04						0.01			
v/c Ratio	0.68	0.82	0.10	0.24	0.55		0.37	0.14	0.03	0.53	0.71	
Uniform Delay, d1	40.9	28.1	14.2	41.9	24.8		40.4	26.3	25.4	46.3	36.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.4	4.3	0.0	0.1	0.5		0.4	0.0	0.0	3.3	5.6	
Delay (s)	47.2	32.4	14.2	42.1	25.3		40.8	26.4	25.5	49.6	41.7	
Level of Service	D	C	B	D	C		D	C	C	D	D	
Approach Delay (s)		32.6			26.9			31.8			42.6	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	99.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	850	560	150	60	140
Future Volume (Veh/h)	170	850	560	150	60	140
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	179	895	589	158	63	147
Pedestrians		3	3		5	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.94				0.79	0.94
vC, conflicting volume	752				1482	382
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	603				733	208
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	80				77	81
cM capacity (veh/h)	900				273	774

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	179	448	448	393	354	63	147
Volume Left	179	0	0	0	0	63	0
Volume Right	0	0	0	0	158	0	147
cSH	900	1700	1700	1700	1700	273	774
Volume to Capacity	0.20	0.26	0.26	0.23	0.21	0.23	0.19
Queue Length 95th (ft)	18	0	0	0	0	22	17
Control Delay (s)	10.0	0.0	0.0	0.0	0.0	22.1	10.7
Lane LOS	A					C	B
Approach Delay (s)	1.7			0.0		14.1	
Approach LOS						B	

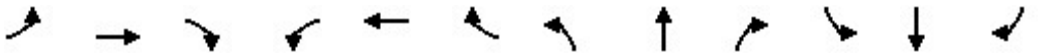
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	450	80	90	230	20	170	750	540	50	390	240
Future Volume (vph)	340	450	80	90	230	20	170	750	540	50	390	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1568	3400	3457		3400	1845	1541	1752	3029	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1568	3400	3457		3400	1845	1541	1752	3029	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	489	87	98	250	22	185	815	587	54	424	261
RTOR Reduction (vph)	0	0	70	0	7	0	0	0	179	0	61	0
Lane Group Flow (vph)	370	489	17	98	265	0	185	815	408	54	624	0
Confl. Peds. (#/hr)						4			3			9
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	14.0	22.0	22.0	9.1	17.1		10.4	64.8	64.8	6.3	60.7	
Effective Green, g (s)	14.0	22.9	22.9	9.1	18.0		10.4	65.7	65.7	6.3	61.6	
Actuated g/C Ratio	0.12	0.19	0.19	0.08	0.15		0.09	0.55	0.55	0.05	0.51	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	668	299	257	518		294	1010	843	91	1554	
v/s Ratio Prot	c0.11	c0.14		0.03	c0.08		c0.05	c0.44		0.03	0.21	
v/s Ratio Perm			0.01						0.26			
v/c Ratio	0.93	0.73	0.06	0.38	0.51		0.63	0.81	0.48	0.59	0.40	
Uniform Delay, d1	52.5	45.7	39.7	52.8	47.0		52.9	22.0	16.7	55.6	17.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.14	0.78	
Incremental Delay, d2	29.0	4.1	0.1	0.9	0.9		4.2	6.9	2.0	8.7	0.7	
Delay (s)	81.5	49.8	39.8	53.7	47.8		57.1	28.9	18.7	71.8	14.6	
Level of Service	F	D	D	D	D		E	C	B	E	B	
Approach Delay (s)		61.3			49.4			28.4			18.8	
Approach LOS		E			D			C			B	

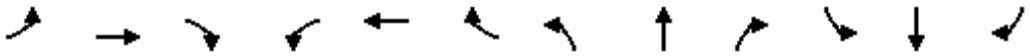
Intersection Summary			
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	10	70	10	10	10	60	530	10	10	700	120
Future Volume (vph)	100	10	70	10	10	10	60	530	10	10	700	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1538		1730		1749	1839		1750	3417	
Flt Permitted	0.73	1.00	1.00		0.93		0.23	1.00		0.32	1.00	
Satd. Flow (perm)	1350	1845	1538		1627		426	1839		584	3417	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	133	13	93	13	13	13	80	707	13	13	933	160
RTOR Reduction (vph)	0	0	77	0	11	0	0	1	0	0	14	0
Lane Group Flow (vph)	133	13	16	0	28	0	80	719	0	13	1079	0
Confl. Peds. (#/hr)			5	5			20		5	5		20
Confl. Bikes (#/hr)			1									4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	13.2	13.2	13.2		13.2		57.3	57.3		57.3	57.3	
Effective Green, g (s)	13.7	13.7	13.7		13.7		57.3	57.3		57.3	57.3	
Actuated g/C Ratio	0.17	0.17	0.17		0.17		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	232	317	264		279		306	1322		419	2456	
v/s Ratio Prot		0.01						c0.39			0.32	
v/s Ratio Perm	c0.10		0.01		0.02		0.19			0.02		
v/c Ratio	0.57	0.04	0.06		0.10		0.26	0.54		0.03	0.44	
Uniform Delay, d1	30.3	27.5	27.6		27.8		3.9	5.2		3.2	4.6	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.74	0.66	
Incremental Delay, d2	2.1	0.0	0.0		0.1		0.2	0.2		0.0	0.0	
Delay (s)	32.4	27.5	27.7		27.9		4.0	5.4		2.4	3.1	
Level of Service	C	C	C		C		A	A		A	A	
Approach Delay (s)		30.3			27.9			5.3			3.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	79.7	Sum of lost time (s)	13.2
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	0	10	90	0	220	0	310	70	140	480	10
Future Volume (vph)	10	0	10	90	0	220	0	310	70	140	480	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	0	12	106	0	259	0	365	82	165	565	12

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	24	106	259	447	742
Volume Left (vph)	12	106	0	0	165
Volume Right (vph)	12	0	259	82	12
Hadj (s)	-0.15	0.25	-0.55	-0.06	0.09
Departure Headway (s)	6.8	6.9	3.2	5.2	5.1
Degree Utilization, x	0.05	0.20	0.23	0.65	1.05
Capacity (veh/h)	478	490	1122	674	703
Control Delay (s)	10.2	11.6	7.2	17.2	68.2
Approach Delay (s)	10.2	8.5		17.2	68.2
Approach LOS	B	A		C	F

Intersection Summary				
Delay	39.0			
Level of Service	E			
Intersection Capacity Utilization	74.3%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	180	10	410	20	430	80	190	830	10
Future Volume (vph)	10	10	10	180	10	410	20	430	80	190	830	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1709			1714	1568	1752	3505	1486	1752	3493	
Flt Permitted		0.89			0.71	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1538			1272	1568	1752	3505	1486	1752	3493	
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	13	13	13	234	13	532	26	558	104	247	1078	13
RTOR Reduction (vph)	0	10	0	0	0	93	0	0	61	0	1	0
Lane Group Flow (vph)	0	29	0	0	247	439	26	558	43	247	1090	0
Confl. Peds. (#/hr)	1		27	27		1			15			67
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		20.7			20.7	45.4	10.1	37.6	37.6	20.2	47.7	
Effective Green, g (s)		21.2			21.2	45.9	10.1	38.3	38.3	20.2	48.4	
Actuated g/C Ratio		0.23			0.23	0.50	0.11	0.42	0.42	0.22	0.53	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		355			294	784	192	1463	620	385	1843	
v/s Ratio Prot						c0.28	0.01	0.16		c0.14	c0.31	
v/s Ratio Perm		0.02			c0.19				0.03			
v/c Ratio		0.08			0.84	0.56	0.14	0.38	0.07	0.64	0.59	
Uniform Delay, d1		27.6			33.6	15.9	36.9	18.5	16.0	32.5	14.9	
Progression Factor		1.00			1.00	1.00	1.18	1.04	1.30	1.00	1.00	
Incremental Delay, d2		0.0			18.3	0.5	0.1	0.2	0.0	2.7	0.5	
Delay (s)		27.7			51.9	16.4	43.7	19.4	20.8	35.2	15.4	
Level of Service		C			D	B	D	B	C	D	B	
Approach Delay (s)		27.7			27.7			20.5			19.0	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

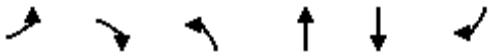
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	30	80	190	50	10	160	380	40	10	1060	420
Future Volume (vph)	140	30	80	190	50	10	160	380	40	10	1060	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1379		1752	1798		1752	3442		1752	3505	1505
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1379		1752	1798		1752	3442		1752	3505	1505
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	179	38	103	244	64	13	205	487	51	13	1359	538
RTOR Reduction (vph)	0	91	0	0	6	0	0	6	0	0	0	221
Lane Group Flow (vph)	179	51	0	244	71	0	205	532	0	13	1359	317
Confl. Peds. (#/hr)			3						5			6
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	21.4	10.8		15.6	5.0		19.2	73.7		2.0	56.5	56.5
Effective Green, g (s)	22.0	11.4		16.6	5.0		19.2	75.0		2.0	57.8	57.8
Actuated g/C Ratio	0.18	0.10		0.14	0.04		0.16	0.62		0.02	0.48	0.48
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	273	131		242	74		280	2151		29	1688	724
v/s Ratio Prot	c0.12	0.04		c0.14	c0.04		c0.12	0.15		0.01	c0.39	
v/s Ratio Perm												0.21
v/c Ratio	0.66	0.39		1.01	0.96		0.73	0.25		0.45	0.81	0.44
Uniform Delay, d1	45.5	51.0		51.7	57.4		48.0	10.0		58.5	26.3	20.4
Progression Factor	1.00	1.00		1.00	1.00		0.92	2.40		1.00	1.00	1.00
Incremental Delay, d2	5.6	1.9		60.0	91.3		8.9	0.3		10.6	4.2	1.9
Delay (s)	51.1	52.9		111.7	148.7		53.0	24.2		69.1	30.5	22.4
Level of Service	D	D		F	F		D	C		E	C	C
Approach Delay (s)		51.9			120.6			32.1			28.5	
Approach LOS		D			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

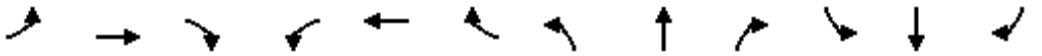
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	280	10	230	0	340	60	240	630	10
Future Volume (vph)	0	0	10	280	10	230	0	340	60	240	630	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		3.0		4.0	3.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			1.00		1.00	0.91		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.98		1.00	1.00	
Flt Protected			1.00		0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1596		1760	1218		1523		1490	1561	
Flt Permitted			1.00		0.95	1.00		1.00		0.22	1.00	
Satd. Flow (perm)			1596		1760	1218		1523		342	1561	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	11	301	11	247	0	366	65	258	677	11
RTOR Reduction (vph)	0	0	9	0	0	201	0	5	0	0	0	0
Lane Group Flow (vph)	0	0	2	0	312	46	0	426	0	258	688	0
Confl. Peds. (#/hr)	20					20	32		11			32
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			20.2		20.2	20.2		49.0		54.4	54.4	
Effective Green, g (s)			20.2		20.2	20.2		49.0		54.4	54.4	
Actuated g/C Ratio			0.19		0.19	0.19		0.45		0.50	0.50	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			297		328	227		689		384	784	
v/s Ratio Prot					c0.18			c0.28		0.12	c0.44	
v/s Ratio Perm			0.00			0.04				0.21		
v/c Ratio			0.01		0.95	0.20		0.62		0.67	0.88	
Uniform Delay, d1			35.9		43.6	37.2		22.5		18.9	24.0	
Progression Factor			1.00		1.00	1.00		0.11		1.00	1.00	
Incremental Delay, d2			0.0		37.0	0.5		1.6		4.6	10.8	
Delay (s)			35.9		80.6	37.8		3.9		23.4	34.8	
Level of Service			D		F	D		A		C	C	
Approach Delay (s)		35.9			61.7			3.9			31.7	
Approach LOS		D			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	108.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	10	10	230	500	410
Future Volume (vph)	170	10	10	230	500	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.94	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1484			1564	1420	
Flt Permitted	0.95			0.96	1.00	
Satd. Flow (perm)	1484			1503	1420	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	177	10	10	240	521	427
RTOR Reduction (vph)	2	0	0	0	22	0
Lane Group Flow (vph)	185	0	0	250	926	0
Confl. Peds. (#/hr)		3	18			18
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	18.7			30.3	74.6	
Effective Green, g (s)	18.7			29.3	74.6	
Actuated g/C Ratio	0.17			0.27	0.69	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	256			406	978	
v/s Ratio Prot	c0.12				c0.65	
v/s Ratio Perm				0.17		
v/c Ratio	0.72			0.62	0.95	
Uniform Delay, d1	42.4			34.6	15.1	
Progression Factor	1.00			1.00	0.41	
Incremental Delay, d2	10.4			3.2	10.5	
Delay (s)	52.7			37.7	16.6	
Level of Service	D			D	B	
Approach Delay (s)	52.7			37.7	16.6	
Approach LOS	D			D	B	

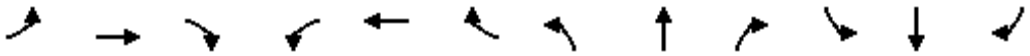
Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	108.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	160	140	120	270	80	80	470	70	70	750	220
Future Volume (vph)	30	160	140	120	270	80	80	470	70	70	750	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.98		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1669		1490	1800		1752	3421		1752	3505	1485
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1669		1490	1491		1752	3421		1752	3505	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	32	172	151	129	290	86	86	505	75	75	806	237
RTOR Reduction (vph)	0	27	0	0	9	0	0	9	0	0	0	142
Lane Group Flow (vph)	32	296	0	129	367	0	86	571	0	75	806	95
Confl. Peds. (#/hr)			30			34			4			8
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	22.9	22.9		23.7	23.7		8.6	48.7		7.2	47.3	47.3
Effective Green, g (s)	23.2	23.2		24.0	24.0		8.6	49.6		7.2	48.2	48.2
Actuated g/C Ratio	0.19	0.19		0.20	0.20		0.07	0.41		0.06	0.40	0.40
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	338	322		298	360		125	1414		105	1407	596
v/s Ratio Prot	0.02	c0.18		0.09	c0.20		c0.05	0.17		0.04	c0.23	
v/s Ratio Perm												0.06
v/c Ratio	0.09	0.92		0.43	1.02		0.69	0.40		0.71	0.57	0.16
Uniform Delay, d1	39.8	47.5		42.0	48.0		54.4	24.8		55.4	27.9	23.0
Progression Factor	1.00	1.00		1.00	1.00		0.93	1.03		1.34	0.55	0.39
Incremental Delay, d2	0.1	30.5		1.0	52.6		13.6	0.8		12.1	0.9	0.3
Delay (s)	39.9	78.0		43.1	100.6		64.0	26.3		86.4	16.3	9.3
Level of Service	D	E		D	F		E	C		F	B	A
Approach Delay (s)		74.5			85.9			31.2			19.5	
Approach LOS		E			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

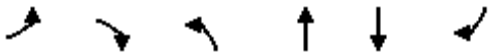
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	150	110	20	120	10	70	140	30	10	330	170
Future Volume (vph)	50	150	110	20	120	10	70	140	30	10	330	170
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	55	165	121	22	132	11	77	154	33	11	363	187

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	55	286	22	143	264	561
Volume Left (vph)	55	0	22	0	77	11
Volume Right (vph)	0	121	0	11	33	187
Hadj (s)	0.55	-0.25	0.55	0.00	0.03	-0.15
Departure Headway (s)	8.3	7.4	8.8	8.2	7.0	6.2
Degree Utilization, x	0.13	0.59	0.05	0.33	0.52	0.97
Capacity (veh/h)	431	472	398	426	490	572
Control Delay (s)	11.3	19.4	11.1	13.9	17.3	54.1
Approach Delay (s)	18.1		13.5		17.3	54.1
Approach LOS	C		B		C	F

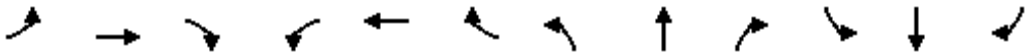
Intersection Summary				
Delay	32.5			
Level of Service	D			
Intersection Capacity Utilization	73.3%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	80	110	60	160	410	90
Future Volume (vph)	80	110	60	160	410	90
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	88	121	66	176	451	99

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	88	121	66	176	550
Volume Left (vph)	88	0	66	0	0
Volume Right (vph)	0	121	0	0	99
Hadj (s)	0.55	-0.65	0.55	0.05	-0.06
Departure Headway (s)	7.1	5.9	6.3	5.8	5.2
Degree Utilization, x	0.17	0.20	0.12	0.29	0.80
Capacity (veh/h)	475	566	543	590	677
Control Delay (s)	10.4	9.1	9.0	10.0	25.9
Approach Delay (s)	9.6		9.7		25.9
Approach LOS	A		A		D

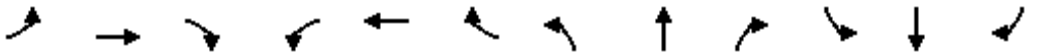
Intersection Summary			
Delay	18.6		
Level of Service	C		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	50	40	40	90	50	30	130	40	40	290	60
Future Volume (vph)	40	50	40	40	90	50	30	130	40	40	290	60
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
Hourly flow rate (vph)	45	57	45	45	102	57	34	148	45	45	330	68

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	147	204	227	443
Volume Left (vph)	45	45	34	45
Volume Right (vph)	45	57	45	68
Hadj (s)	-0.07	-0.07	-0.04	-0.02
Departure Headway (s)	6.1	6.0	5.7	5.4
Degree Utilization, x	0.25	0.34	0.36	0.66
Capacity (veh/h)	501	533	571	642
Control Delay (s)	11.2	12.1	11.9	18.2
Approach Delay (s)	11.2	12.1	11.9	18.2
Approach LOS	B	B	B	C

Intersection Summary				
Delay	14.5			
Level of Service	B			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A	
Analysis Period (min)	15			

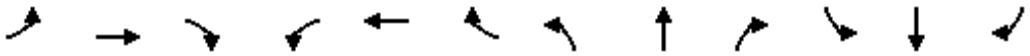


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	110	20	40	140	30	20	170	30	80	360	40
Future Volume (vph)	20	110	20	40	140	30	20	170	30	80	360	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		0.98	1.00		0.95	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1410	1522		1465	1503		1421	1517		1435	1527	
Flt Permitted	0.64	1.00		0.66	1.00		0.43	1.00		0.62	1.00	
Satd. Flow (perm)	943	1522		1021	1503		642	1517		930	1527	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	23	126	23	46	161	34	23	195	34	92	414	46
RTOR Reduction (vph)	0	11	0	0	13	0	0	8	0	0	5	0
Lane Group Flow (vph)	23	138	0	46	182	0	23	221	0	92	455	0
Confl. Peds. (#/hr)	54		16	16		54	74		39	39		74
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	12.0	12.0		12.0	12.0		20.9	20.9		20.9	20.9	
Effective Green, g (s)	12.2	12.2		12.2	12.2		21.1	21.1		21.1	21.1	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.51	0.51		0.51	0.51	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	278	449		301	443		327	775		475	780	
v/s Ratio Prot		0.09			c0.12			0.15			c0.30	
v/s Ratio Perm	0.02			0.05			0.04			0.10		
v/c Ratio	0.08	0.31		0.15	0.41		0.07	0.29		0.19	0.58	
Uniform Delay, d1	10.5	11.3		10.7	11.7		5.1	5.8		5.5	7.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.2		0.1	0.2		0.2	1.1	
Delay (s)	10.6	11.4		10.8	11.9		5.2	6.0		5.7	8.2	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.3			11.7			5.9			7.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	41.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	80	80	70	100	30	50	490	40	20	840	70
Future Volume (vph)	40	80	80	70	100	30	50	490	40	20	840	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1423		1490	1500		1490	1546		1485	1544	
Flt Permitted	0.95	1.00		0.95	1.00		0.19	1.00		0.40	1.00	
Satd. Flow (perm)	1490	1423		1490	1500		294	1546		621	1544	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	41	82	82	71	102	31	51	500	41	20	857	71
RTOR Reduction (vph)	0	31	0	0	9	0	0	2	0	0	2	0
Lane Group Flow (vph)	41	133	0	71	124	0	51	539	0	20	926	0
Confl. Peds. (#/hr)			5			5	8		3	3		8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.4	15.6		8.4	16.6		82.8	82.8		82.8	82.8	
Effective Green, g (s)	7.4	16.2		8.4	17.2		83.4	83.4		83.4	83.4	
Actuated g/C Ratio	0.06	0.13		0.07	0.14		0.70	0.70		0.70	0.70	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	91	192		104	215		204	1074		431	1073	
v/s Ratio Prot	0.03	c0.09		c0.05	0.08			0.35			c0.60	
v/s Ratio Perm							0.17			0.03		
v/c Ratio	0.45	0.69		0.68	0.57		0.25	0.50		0.05	0.86	
Uniform Delay, d1	54.3	49.5		54.5	48.0		6.8	8.6		5.8	13.9	
Progression Factor	1.00	1.00		1.00	1.00		0.16	0.24		0.41	0.70	
Incremental Delay, d2	3.5	10.3		16.9	3.7		2.4	1.4		0.2	7.5	
Delay (s)	57.9	59.8		71.4	51.7		3.5	3.5		2.5	17.2	
Level of Service	E	E		E	D		A	A		A	B	
Approach Delay (s)		59.4			58.5			3.5			16.9	
Approach LOS		E			E			A			B	

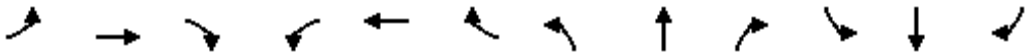
Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	10	20	20	30	550	20	10	910	60
Future Volume (Veh/h)	10	10	40	10	20	20	30	550	20	10	910	60
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	10	10	41	10	21	21	31	567	21	10	938	62
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.61	0.61	0.54	0.61	0.61	0.86	0.54			0.86		
vC, conflicting volume	1698	1664	989	1648	1684	610	1020			593		
vC1, stage 1 conf vol	1009	1009		644	644							
vC2, stage 2 conf vol	688	655		1004	1040							
vCu, unblocked vol	1315	1260	551	1235	1294	469	609			448		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	96	85	94	89	96	94			99		
cM capacity (veh/h)	213	229	282	175	197	497	511			951		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	52	31	588	10	1000
Volume Left	10	10	31	0	10	0
Volume Right	41	21	0	21	0	62
cSH	258	253	511	1700	951	1700
Volume to Capacity	0.24	0.21	0.06	0.35	0.01	0.59
Queue Length 95th (ft)	22	19	5	0	1	0
Control Delay (s)	23.2	22.9	12.5	0.0	8.8	0.0
Lane LOS	C	C	B		A	
Approach Delay (s)	23.2	22.9	0.6		0.1	
Approach LOS	C	C				

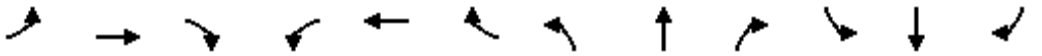
Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	68.4%	ICU Level of Service		C
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	210	130	10	300	10	60	10	10	10	10	40
Future Volume (Veh/h)	20	210	130	10	300	10	60	10	10	10	10	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	263	163	13	375	13	75	13	13	13	13	50
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	424			434			866	852	354	860	928	418
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	424			361			823	808	276	815	888	418
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			67	95	98	95	95	92
cM capacity (veh/h)	1096			1108			226	273	706	239	245	614

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	451	401	101	76
Volume Left	25	13	75	13
Volume Right	163	13	13	50
cSH	1096	1108	254	403
Volume to Capacity	0.02	0.01	0.40	0.19
Queue Length 95th (ft)	2	1	45	17
Control Delay (s)	0.7	0.4	28.2	16.0
Lane LOS	A	A	D	C
Approach Delay (s)	0.7	0.4	28.2	16.0
Approach LOS			D	C

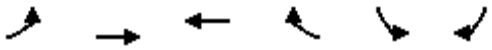
Intersection Summary				
Average Delay	4.4			
Intersection Capacity Utilization	46.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	160	20	50	180	50	30	10	50	50	40	130	260
Future Volume (vph)	160	20	50	180	50	30	10	50	50	40	130	260
Peak Hour Factor	0.78	0.78	0.90	0.90	0.78	0.78	0.90	0.90	0.90	0.78	0.90	0.78
Hourly flow rate (vph)	205	26	56	200	64	38	11	56	56	51	144	333

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	287	302	123	195	333
Volume Left (vph)	205	200	11	51	0
Volume Right (vph)	56	38	56	0	333
Hadj (s)	0.07	0.10	-0.22	0.17	-0.65
Departure Headway (s)	6.4	6.4	6.7	6.8	6.0
Degree Utilization, x	0.51	0.54	0.23	0.37	0.56
Capacity (veh/h)	516	519	456	502	566
Control Delay (s)	15.9	16.6	11.7	12.6	15.0
Approach Delay (s)	15.9	16.6	11.7	14.1	
Approach LOS	C	C	B	B	

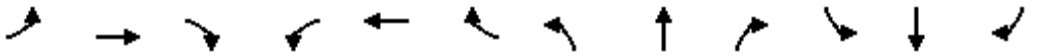
Intersection Summary				
Delay	14.9			
Level of Service	B			
Intersection Capacity Utilization	47.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	150	670	1100	60	80	240
Future Volume (vph)	150	670	1100	60	80	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3474		1731	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3474		1731	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	161	720	1183	65	86	258
RTOR Reduction (vph)	0	0	4	0	0	200
Lane Group Flow (vph)	161	720	1244	0	86	58
Confl. Peds. (#/hr)				1	13	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	11.2	45.8	30.6		9.5	9.5
Effective Green, g (s)	11.2	47.2	32.0		9.5	9.5
Actuated g/C Ratio	0.17	0.73	0.49		0.15	0.15
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	303	2556	1718		254	230
v/s Ratio Prot	c0.09	0.21	c0.36			
v/s Ratio Perm					c0.05	0.04
v/c Ratio	0.53	0.28	0.72		0.34	0.25
Uniform Delay, d1	24.4	3.0	12.9		24.8	24.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.1	1.5		0.3	0.2
Delay (s)	25.3	3.0	14.4		25.1	24.7
Level of Service	C	A	B		C	C
Approach Delay (s)		7.1	14.4		24.8	
Approach LOS		A	B		C	

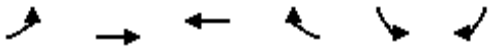
Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	64.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	450	200	350	820	100	170	160	210	50	180	170
Future Volume (vph)	100	450	200	350	820	100	170	160	210	50	180	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.98	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1543	3400	3408		1752	1845	1534	1752	1670	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1543	3400	3408		1752	1845	1534	1752	1670	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	120	542	241	422	988	120	205	193	253	60	217	205
RTOR Reduction (vph)	0	0	78	0	7	0	0	0	170	0	24	0
Lane Group Flow (vph)	120	542	163	422	1101	0	205	193	83	60	398	0
Confl. Peds. (#/hr)			9			24			8			31
Confl. Bikes (#/hr)			6			7			1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	11.9	22.0	39.3	22.7	36.8		17.3	34.7	34.7	6.9	24.3	
Effective Green, g (s)	11.9	23.2	39.3	22.7	38.0		17.3	35.4	35.4	6.9	25.0	
Actuated g/C Ratio	0.11	0.21	0.36	0.21	0.35		0.16	0.33	0.33	0.06	0.23	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	192	751	560	713	1196		280	603	501	111	385	
v/s Ratio Prot	c0.07	0.15	0.05	0.12	c0.32		c0.12	0.10		0.03	c0.24	
v/s Ratio Perm			0.06						0.05			
v/c Ratio	0.62	0.72	0.29	0.59	0.92		0.73	0.32	0.17	0.54	1.03	
Uniform Delay, d1	46.0	39.5	24.5	38.6	33.7		43.2	27.4	25.9	49.1	41.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.5	3.4	0.1	0.9	11.5		8.2	0.1	0.1	2.9	55.0	
Delay (s)	50.5	42.9	24.6	39.5	45.1		51.5	27.5	25.9	52.0	96.6	
Level of Service	D	D	C	D	D		D	C	C	D	F	
Approach Delay (s)		39.1			43.6			34.4			91.0	
Approach LOS		D			D			C			F	

Intersection Summary			
HCM 2000 Control Delay	47.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	108.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	160	550	1050	180	190	220
Future Volume (Veh/h)	160	550	1050	180	190	220
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	186	640	1221	209	221	256
Pedestrians			1		2	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.77				0.82	0.77
vC, conflicting volume	1432				2020	717
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	967				1274	40
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	66				0	68
cM capacity (veh/h)	540				114	791

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	186	320	320	814	616	221	256
Volume Left	186	0	0	0	0	221	0
Volume Right	0	0	0	0	209	0	256
cSH	540	1700	1700	1700	1700	114	791
Volume to Capacity	0.34	0.19	0.19	0.48	0.36	1.93	0.32
Queue Length 95th (ft)	38	0	0	0	0	448	35
Control Delay (s)	15.1	0.0	0.0	0.0	0.0	512.6	11.7
Lane LOS	C					F	B
Approach Delay (s)	3.4			0.0		243.8	
Approach LOS						F	

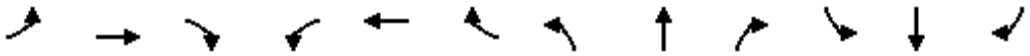
Intersection Summary			
Average Delay	43.6		
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

* User Entered Value

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	250	290	310	730	30	200	450	70	30	690	230
Future Volume (vph)	200	250	290	310	730	30	200	450	70	30	690	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1543	3400	3482		3400	1845	1544	1752	3104	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1543	3400	3482		3400	1845	1544	1752	3104	
Peak-hour factor, PHF	0.89	0.90	0.89	0.90	0.90	0.90	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	225	278	326	344	811	33	225	506	78	33	775	258
RTOR Reduction (vph)	0	0	153	0	2	0	0	0	43	0	26	0
Lane Group Flow (vph)	225	278	173	344	842	0	225	506	35	33	1007	0
Confl. Peds. (#/hr)			1			4			2			7
Confl. Bikes (#/hr)			2			3						1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	12.5	18.6	18.6	26.1	32.2		10.8	52.8	52.8	4.7	46.7	
Effective Green, g (s)	12.5	19.5	19.5	26.1	33.1		10.8	53.7	53.7	4.7	47.6	
Actuated g/C Ratio	0.10	0.16	0.16	0.22	0.28		0.09	0.45	0.45	0.04	0.40	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	354	569	250	739	960		306	825	690	68	1231	
v/s Ratio Prot	0.07	0.08		0.10	c0.24		c0.07	0.27		0.02	c0.32	
v/s Ratio Perm			c0.11						0.02			
v/c Ratio	0.64	0.49	0.69	0.47	0.88		0.74	0.61	0.05	0.49	0.82	
Uniform Delay, d1	51.6	45.7	47.4	40.9	41.5		53.2	25.2	18.7	56.5	32.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.13	0.69	
Incremental Delay, d2	3.7	0.7	8.0	0.5	9.1		8.9	3.4	0.1	3.7	4.3	
Delay (s)	55.3	46.4	55.4	41.3	50.6		62.1	28.6	18.9	67.8	26.6	
Level of Service	E	D	E	D	D		E	C	B	E	C	
Approach Delay (s)		52.3			47.9			37.0			27.9	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	41.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

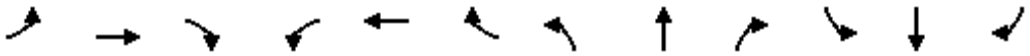
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	10	120	10	40	10	120	400	20	10	770	250
Future Volume (vph)	120	10	120	10	40	10	120	400	20	10	770	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96		1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1525		1798		1763	1847		1766	3368	
Flt Permitted	0.72	1.00	1.00		0.97		0.15	1.00		0.38	1.00	
Satd. Flow (perm)	1346	1863	1525		1751		276	1847		714	3368	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	160	13	160	13	53	13	160	533	27	13	1027	333
RTOR Reduction (vph)	0	0	102	0	8	0	0	2	0	0	36	0
Lane Group Flow (vph)	160	13	58	0	71	0	160	558	0	13	1324	0
Confl. Peds. (#/hr)			9	9			39		7	7		39
Confl. Bikes (#/hr)			14			7			1			2
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	20.7	20.7	20.7		20.7		61.8	61.8		61.8	61.8	
Effective Green, g (s)	21.2	21.2	21.2		21.2		61.8	61.8		61.8	61.8	
Actuated g/C Ratio	0.23	0.23	0.23		0.23		0.67	0.67		0.67	0.67	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	311	430	352		404		186	1244		481	2269	
v/s Ratio Prot		0.01						0.30			0.39	
v/s Ratio Perm	c0.12		0.04		0.04		c0.58			0.02		
v/c Ratio	0.51	0.03	0.16		0.18		0.86	0.45		0.03	0.58	
Uniform Delay, d1	30.8	27.3	28.2		28.3		11.6	7.0		5.0	8.0	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.65	0.54	
Incremental Delay, d2	0.6	0.0	0.1		0.1		30.1	0.1		0.0	0.2	
Delay (s)	31.4	27.3	28.2		28.3		41.7	7.1		3.2	4.6	
Level of Service	C	C	C		C		D	A		A	A	
Approach Delay (s)		29.7			28.3			14.8			4.6	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	13.2
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

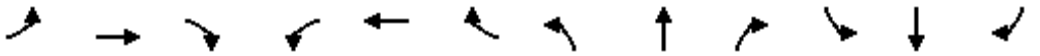
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	10	10	50	10	110	0	440	50	150	480	20
Future Volume (vph)	10	10	10	50	10	110	0	440	50	150	480	20
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
Hourly flow rate (vph)	11	11	11	54	11	118	0	473	54	161	516	22

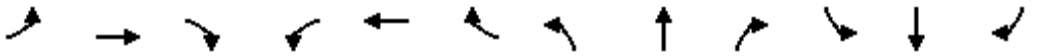
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	33	65	118	527	699
Volume Left (vph)	11	54	0	0	161
Volume Right (vph)	11	0	118	54	22
Hadj (s)	-0.08	0.21	-0.55	-0.01	0.08
Departure Headway (s)	7.0	7.1	3.2	5.1	5.0
Degree Utilization, x	0.06	0.13	0.10	0.75	0.98
Capacity (veh/h)	484	475	1121	690	709
Control Delay (s)	10.4	11.2	6.6	22.1	50.1
Approach Delay (s)	10.4	8.2		22.1	50.1
Approach LOS	B	A		C	F

Intersection Summary				
Delay	33.7			
Level of Service	D			
Intersection Capacity Utilization	79.4%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	10	20	100	10	210	20	490	130	160	760	10
Future Volume (vph)	30	10	20	100	10	210	20	490	130	160	760	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1706			1753	1568	1752	3505	1504	1752	3497	
Flt Permitted		0.83			0.76	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1444			1397	1568	1752	3505	1504	1752	3497	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	10	21	103	10	216	21	505	134	165	784	10
RTOR Reduction (vph)	0	17	0	0	0	116	0	0	74	0	1	0
Lane Group Flow (vph)	0	45	0	0	113	100	21	505	60	165	793	0
Confl. Peds. (#/hr)			8	8					11			9
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		13.2			13.2	36.8	10.4	35.2	35.2	19.1	43.9	
Effective Green, g (s)		13.7			13.7	37.3	10.4	35.9	35.9	19.1	44.6	
Actuated g/C Ratio		0.17			0.17	0.46	0.13	0.44	0.44	0.24	0.55	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		245			237	724	225	1559	669	414	1932	
v/s Ratio Prot						0.06	0.01	0.14		c0.09	c0.23	
v/s Ratio Perm		0.03			c0.08				0.04			
v/c Ratio		0.18			0.48	0.14	0.09	0.32	0.09	0.40	0.41	
Uniform Delay, d1		28.7			30.3	12.5	31.0	14.5	12.9	26.0	10.4	
Progression Factor		1.00			1.00	1.00	1.25	0.91	0.79	1.00	1.00	
Incremental Delay, d2		0.1			0.6	0.0	0.1	0.1	0.1	0.2	0.1	
Delay (s)		28.8			30.8	12.5	38.8	13.3	10.2	26.2	10.6	
Level of Service		C			C	B	D	B	B	C	B	
Approach Delay (s)		28.8			18.8			13.5			13.3	
Approach LOS		C			B			B			B	

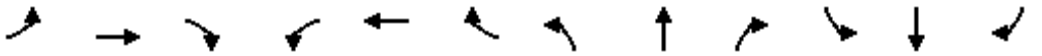
Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	12.5
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	60	150	60	70	10	160	940	70	10	450	120
Future Volume (vph)	180	60	150	60	70	10	160	940	70	10	450	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1386		1752	1810		1752	3461		1752	3505	1532
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1386		1752	1810		1752	3461		1752	3505	1532
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	184	61	153	61	71	10	163	959	71	10	459	122
RTOR Reduction (vph)	0	88	0	0	5	0	0	3	0	0	0	63
Lane Group Flow (vph)	184	126	0	61	76	0	163	1027	0	10	459	59
Confl. Peds. (#/hr)			1						3			1
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	20.1	17.0		11.7	8.6		16.4	72.4		1.0	57.0	57.0
Effective Green, g (s)	20.7	17.6		12.7	8.6		16.4	73.7		1.0	58.3	58.3
Actuated g/C Ratio	0.17	0.15		0.11	0.07		0.14	0.61		0.01	0.49	0.49
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	257	203		185	129		239	2125		14	1702	744
v/s Ratio Prot	c0.12	c0.09		0.03	0.04		c0.09	c0.30		0.01	0.13	
v/s Ratio Perm												0.04
v/c Ratio	0.72	0.62		0.33	0.59		0.68	0.48		0.71	0.27	0.08
Uniform Delay, d1	46.9	48.1		49.7	54.0		49.3	12.7		59.4	18.3	16.5
Progression Factor	1.00	1.00		1.00	1.00		0.92	1.99		1.00	1.00	1.00
Incremental Delay, d2	9.1	5.8		1.0	7.1		6.4	0.6		100.1	0.4	0.2
Delay (s)	56.0	53.9		50.8	61.1		51.7	25.9		159.5	18.6	16.7
Level of Service	E	D		D	E		D	C		F	B	B
Approach Delay (s)		54.9			56.7			29.4			20.6	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

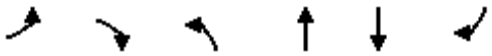
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	120	10	130	0	550	130	220	610	10
Future Volume (vph)	0	0	10	120	10	130	0	550	130	220	610	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			0.98		1.00	0.95		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.97		1.00	1.00	
Flt Protected			1.00		0.96	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1559		1763	1267		1514		1490	1562	
Flt Permitted			1.00		0.96	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1559		1763	1267		1514		183	1562	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	122	10	133	0	561	133	224	622	10
RTOR Reduction (vph)	0	0	9	0	0	116	0	6	0	0	1	0
Lane Group Flow (vph)	0	0	1	0	132	17	0	688	0	224	631	0
Confl. Peds. (#/hr)	9		1			9	25		7			25
Confl. Bikes (#/hr)									2			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			13.6		13.6	13.6		55.4		52.9	52.9	
Effective Green, g (s)			13.6		13.6	13.6		53.4		52.9	51.9	
Actuated g/C Ratio			0.13		0.13	0.13		0.50		0.50	0.49	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			198		224	161		757		319	759	
v/s Ratio Prot					c0.07			c0.45		0.12	c0.40	
v/s Ratio Perm			0.00			0.01				0.22		
v/c Ratio			0.01		0.59	0.11		0.91		0.70	0.83	
Uniform Delay, d1			40.7		43.9	41.2		24.4		24.6	23.6	
Progression Factor			1.00		1.00	1.00		0.37		1.00	1.00	
Incremental Delay, d2			0.0		4.2	0.3		1.7		6.8	7.8	
Delay (s)			40.7		48.1	41.5		10.7		31.5	31.4	
Level of Service			D		D	D		B		C	C	
Approach Delay (s)		40.7			44.8			10.7			31.4	
Approach LOS		D			D			B			C	

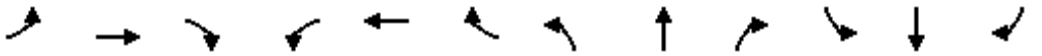
Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



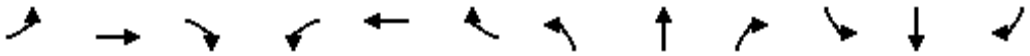
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	270	50	20	410	460	290
Future Volume (vph)	270	50	20	410	460	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.98			1.00	0.94	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.98			1.00	0.95	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1449			1562	1398	
Flt Permitted	0.96			0.95	1.00	
Satd. Flow (perm)	1449			1485	1398	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	53	21	432	484	305
RTOR Reduction (vph)	5	0	0	0	21	0
Lane Group Flow (vph)	332	0	0	453	768	0
Confl. Peds. (#/hr)		25	41			41
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	25.2			30.2	66.5	
Effective Green, g (s)	25.2			29.2	66.5	
Actuated g/C Ratio	0.24			0.27	0.62	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	342			406	871	
v/s Ratio Prot	c0.23				c0.55	
v/s Ratio Perm				c0.31		
v/c Ratio	0.97			1.12	0.88	
Uniform Delay, d1	40.4			38.8	16.8	
Progression Factor	1.00			1.00	0.32	
Incremental Delay, d2	40.3			79.9	8.4	
Delay (s)	80.6			118.7	13.7	
Level of Service	F			F	B	
Approach Delay (s)	80.6			118.7	13.7	
Approach LOS	F			F	B	

Intersection Summary			
HCM 2000 Control Delay	58.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	19.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	170	140	120	110	50	70	940	140	50	450	80
Future Volume (vph)	90	170	140	120	110	50	70	940	140	50	450	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.95		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1700		1490	1800		1752	3421		1752	3505	1524
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1700		1490	1485		1752	3421		1752	3505	1524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	94	177	146	125	115	52	73	979	146	52	469	83
RTOR Reduction (vph)	0	25	0	0	15	0	0	8	0	0	0	43
Lane Group Flow (vph)	94	298	0	125	152	0	73	1117	0	52	469	40
Confl. Peds. (#/hr)			9			6			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	23.4	23.4		15.7	15.7		7.1	57.1		6.3	56.3	56.3
Effective Green, g (s)	23.7	23.7		16.0	16.0		7.1	58.0		6.3	57.2	57.2
Actuated g/C Ratio	0.20	0.20		0.13	0.13		0.06	0.48		0.05	0.48	0.48
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	346	335		198	240		103	1653		91	1670	726
v/s Ratio Prot	0.05	c0.18		0.08	c0.08		c0.04	c0.33		0.03	0.13	
v/s Ratio Perm												0.03
v/c Ratio	0.27	0.89		0.63	0.63		0.71	0.68		0.57	0.28	0.05
Uniform Delay, d1	40.8	46.9		49.2	49.2		55.4	23.8		55.5	19.0	16.9
Progression Factor	1.00	1.00		1.00	1.00		1.01	0.74		1.25	0.67	0.29
Incremental Delay, d2	0.4	23.7		6.4	5.4		9.7	1.0		8.1	0.4	0.1
Delay (s)	41.3	70.6		55.6	54.6		65.9	18.7		77.7	13.1	5.0
Level of Service	D	E		E	D		E	B		E	B	A
Approach Delay (s)		64.0			55.1			21.6			17.5	
Approach LOS		E			E			C			B	

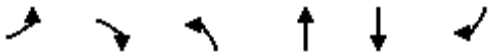
Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	110	250	130	50	220	40	140	260	60	20	240	80
Future Volume (vph)	110	250	130	50	220	40	140	260	60	20	240	80
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
Hourly flow rate (vph)	122	278	144	56	244	44	156	289	67	22	267	89

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	122	422	56	288	512	378
Volume Left (vph)	122	0	56	0	156	22
Volume Right (vph)	0	144	0	44	67	89
Hadj (s)	0.55	-0.19	0.55	-0.06	0.03	-0.08
Departure Headway (s)	9.6	8.9	10.0	9.4	8.8	8.8
Degree Utilization, x	0.33	1.04	0.16	0.75	1.25	0.92
Capacity (veh/h)	371	410	351	373	416	401
Control Delay (s)	15.9	84.2	13.7	35.0	157.0	57.7
Approach Delay (s)	68.9		31.5		157.0	57.7
Approach LOS	F		D		F	F

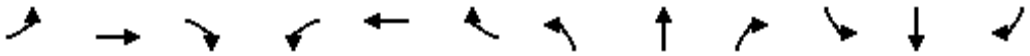
Intersection Summary				
Delay	84.7			
Level of Service	F			
Intersection Capacity Utilization	83.4%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	110	220	190	240	300	90
Future Volume (vph)	110	220	190	240	300	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	116	232	200	253	316	95

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	116	232	200	253	411
Volume Left (vph)	116	0	200	0	0
Volume Right (vph)	0	232	0	0	95
Hadj (s)	0.55	-0.65	0.55	0.05	-0.09
Departure Headway (s)	7.4	6.1	6.8	6.3	5.9
Degree Utilization, x	0.24	0.40	0.38	0.44	0.68
Capacity (veh/h)	462	551	516	557	594
Control Delay (s)	11.4	11.9	12.6	12.9	20.4
Approach Delay (s)	11.8		12.7		20.4
Approach LOS	B		B		C

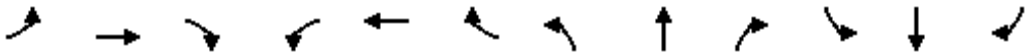
Intersection Summary			
Delay	15.1		
Level of Service	C		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	70	60	20	40	70	50	60	240	50	70	240	50
Future Volume (vph)	70	60	20	40	70	50	60	240	50	70	240	50
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
Hourly flow rate (vph)	80	68	23	45	80	57	68	273	57	80	273	57

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	171	182	398	410
Volume Left (vph)	80	45	68	80
Volume Right (vph)	23	57	57	57
Hadj (s)	0.06	-0.09	0.00	0.01
Departure Headway (s)	6.8	6.7	5.9	5.9
Degree Utilization, x	0.33	0.34	0.65	0.67
Capacity (veh/h)	447	460	577	576
Control Delay (s)	13.1	13.0	19.4	20.2
Approach Delay (s)	13.1	13.0	19.4	20.2
Approach LOS	B	B	C	C

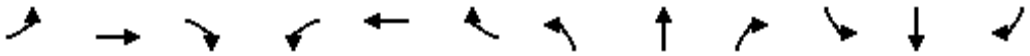
Intersection Summary				
Delay	17.8			
Level of Service	C			
Intersection Capacity Utilization	49.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	130	20	40	110	70	30	270	70	80	250	30
Future Volume (vph)	30	130	20	40	110	70	30	270	70	80	250	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.94	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1439	1527		1459	1439		1397	1492		1430	1524	
Flt Permitted	0.63	1.00		0.65	1.00		0.57	1.00		0.52	1.00	
Satd. Flow (perm)	958	1527		1001	1439		840	1492		780	1524	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	144	22	44	122	78	33	300	78	89	278	33
RTOR Reduction (vph)	0	9	0	0	39	0	0	12	0	0	5	0
Lane Group Flow (vph)	33	157	0	44	161	0	33	366	0	89	306	0
Confl. Peds. (#/hr)	41		24	24		41	88		63	63		88
Confl. Bikes (#/hr)						1			2			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	9.2	9.2		9.2	9.2		17.3	17.3		17.3	17.3	
Effective Green, g (s)	9.4	9.4		9.4	9.4		17.5	17.5		17.5	17.5	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	258	411		269	387		421	748		391	764	
v/s Ratio Prot		0.10			c0.11			c0.25			0.20	
v/s Ratio Perm	0.03			0.04			0.04			0.11		
v/c Ratio	0.13	0.38		0.16	0.42		0.08	0.49		0.23	0.40	
Uniform Delay, d1	9.6	10.4		9.7	10.5		4.5	5.7		4.9	5.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.3		0.1	0.5		0.3	0.3	
Delay (s)	9.7	10.6		9.8	10.8		4.6	6.3		5.2	5.8	
Level of Service	A	B		A	B		A	A		A	A	
Approach Delay (s)		10.5			10.6			6.1			5.6	
Approach LOS		B			B			A			A	

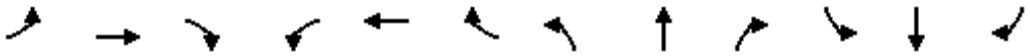
Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	34.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	80	110	60	70	40	90	890	30	10	530	80
Future Volume (vph)	110	80	110	60	70	40	90	890	30	10	530	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1432		1490	1462		1490	1559		1490	1526	
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00		0.12	1.00	
Satd. Flow (perm)	1490	1432		1490	1462		488	1559		195	1526	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	87	120	65	76	43	98	967	33	11	576	87
RTOR Reduction (vph)	0	42	0	0	18	0	0	1	0	0	4	0
Lane Group Flow (vph)	120	165	0	65	101	0	98	999	0	11	659	0
Confl. Peds. (#/hr)						5	10		3	3		10
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.0	19.6		8.3	16.9		78.9	78.9		78.9	78.9	
Effective Green, g (s)	11.0	20.2		8.3	17.5		79.5	79.5		79.5	79.5	
Actuated g/C Ratio	0.09	0.17		0.07	0.15		0.66	0.66		0.66	0.66	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	241		103	213		323	1032		129	1010	
v/s Ratio Prot	c0.08	c0.12		0.04	0.07			c0.64			0.43	
v/s Ratio Perm							0.20			0.06		
v/c Ratio	0.88	0.69		0.63	0.47		0.30	0.97		0.09	0.65	
Uniform Delay, d1	53.9	46.9		54.4	47.0		8.6	19.1		7.2	12.0	
Progression Factor	1.00	1.00		1.00	1.00		0.25	0.57		0.66	0.67	
Incremental Delay, d2	43.9	7.9		11.9	1.7		1.5	15.4		1.2	3.0	
Delay (s)	97.7	54.8		66.3	48.7		3.6	26.2		6.0	11.1	
Level of Service	F	D		E	D		A	C		A	B	
Approach Delay (s)		70.5			54.9			24.2			11.0	
Approach LOS		E			D			C			B	

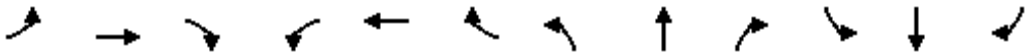
Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	60	10	10	10	40	970	30	10	580	30
Future Volume (Veh/h)	60	10	60	10	10	10	40	970	30	10	580	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	65	11	65	11	11	11	43	1043	32	11	624	32
Pedestrians		16			3						15	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		1			0						1	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.72	0.72	0.80	0.72	0.72	0.62	0.80			0.62		
vC, conflicting volume	1838	1842	656	1864	1842	1077	672			1078		
vC1, stage 1 conf vol	678	678		1148	1148							
vC2, stage 2 conf vol	1160	1164		716	694							
vCu, unblocked vol	1336	1341	441	1373	1341	818	461			819		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	55	94	87	93	94	95	95			98		
cM capacity (veh/h)	145	177	483	167	188	229	861			498		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	141	33	43	1075	11	656
Volume Left	65	11	43	0	11	0
Volume Right	65	11	0	32	0	32
cSH	219	191	861	1700	498	1700
Volume to Capacity	0.64	0.17	0.05	0.63	0.02	0.39
Queue Length 95th (ft)	97	15	4	0	2	0
Control Delay (s)	47.1	27.7	9.4	0.0	12.4	0.0
Lane LOS	E	D	A		B	
Approach Delay (s)	47.1	27.7	0.4		0.2	
Approach LOS	E	D				

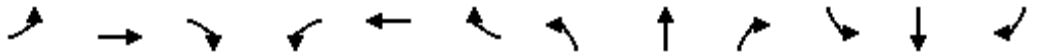
Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	70.9%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	190	130	20	260	10	60	10	60	10	10	30
Future Volume (Veh/h)	20	190	130	20	260	10	60	10	60	10	10	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	20	194	133	20	265	10	61	10	61	10	10	31
Pedestrians		2			1			36			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595			625							
pX, platoon unblocked												
vC, conflicting volume	284			363			684	660	298	686	722	281
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	284			363			684	660	298	686	722	281
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			80	97	91	97	97	96
cM capacity (veh/h)	1263			1154			310	355	717	303	327	749

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	347	295	132	51
Volume Left	20	20	61	10
Volume Right	133	10	61	31
cSH	1263	1154	426	486
Volume to Capacity	0.02	0.02	0.31	0.10
Queue Length 95th (ft)	1	1	33	9
Control Delay (s)	0.6	0.7	17.2	13.3
Lane LOS	A	A	C	B
Approach Delay (s)	0.6	0.7	17.2	13.3
Approach LOS			C	B

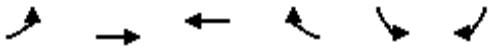
Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	45.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	50	10	60	40	30	10	160	110	30	80	240
Future Volume (vph)	200	50	10	60	40	30	10	160	110	30	80	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.97			0.95			1.00	0.85
Flt Protected		0.96			0.98			1.00			0.99	1.00
Satd. Flow (prot)		1784			1755			1761			1837	1550
Flt Permitted		0.69			0.79			0.99			0.88	1.00
Satd. Flow (perm)		1287			1415			1748			1636	1550
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	54	11	65	43	33	11	174	120	33	87	261
RTOR Reduction (vph)	0	4	0	0	20	0	0	58	0	0	0	157
Lane Group Flow (vph)	0	278	0	0	121	0	0	247	0	0	120	104
Confl. Bikes (#/hr)						1						1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		16.0			16.0			16.0			16.0	16.0
Effective Green, g (s)		16.0			16.0			16.0			16.0	16.0
Actuated g/C Ratio		0.40			0.40			0.40			0.40	0.40
Clearance Time (s)		4.0			4.0			4.0			4.0	4.0
Lane Grp Cap (vph)		514			566			699			654	620
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.09			c0.14			0.07	0.07
v/c Ratio		0.54			0.21			0.35			0.18	0.17
Uniform Delay, d1		9.2			7.9			8.4			7.8	7.7
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		4.1			0.9			1.4			0.6	0.6
Delay (s)		13.2			8.7			9.8			8.4	8.3
Level of Service		B			A			A			A	A
Approach Delay (s)		13.2			8.7			9.8			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

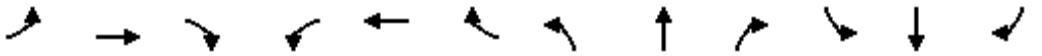
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	250	1220	770	40	60	300
Future Volume (vph)	250	1220	770	40	60	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3476		1748	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3476		1748	1568
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	278	1356	856	44	67	333
RTOR Reduction (vph)	0	0	4	0	0	285
Lane Group Flow (vph)	278	1356	896	0	67	48
Confl. Peds. (#/hr)				1	3	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	15.0	42.2	23.2		8.7	8.7
Effective Green, g (s)	15.0	43.6	24.6		8.7	8.7
Actuated g/C Ratio	0.25	0.72	0.41		0.14	0.14
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	435	2534	1418		252	226
v/s Ratio Prot	c0.16	0.39	c0.26			
v/s Ratio Perm					c0.04	0.03
v/c Ratio	0.64	0.54	0.63		0.27	0.21
Uniform Delay, d1	20.2	3.8	14.2		23.0	22.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.3	0.2	0.9		0.2	0.2
Delay (s)	22.5	4.0	15.2		23.2	22.9
Level of Service	C	A	B		C	C
Approach Delay (s)		7.1	15.2		23.0	
Approach LOS		A	B		C	

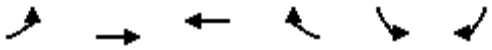
Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	940	110	70	520	40	70	70	40	40	90	220
Future Volume (vph)	230	940	110	70	520	40	70	70	40	40	90	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1543	3400	3461		1752	1845	1513	1752	1627	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1543	3400	3461		1752	1845	1513	1752	1627	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	1022	120	76	565	43	76	76	43	43	98	239
RTOR Reduction (vph)	0	0	44	0	5	0	0	0	30	0	61	0
Lane Group Flow (vph)	250	1022	76	76	603	0	76	76	13	43	276	0
Confl. Peds. (#/hr)			7			3			22			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	18.1	35.7	47.3	9.4	31.0		11.6	28.6	28.6	4.6	21.6	
Effective Green, g (s)	18.1	36.9	47.3	9.4	32.2		11.6	29.3	29.3	4.6	22.3	
Actuated g/C Ratio	0.18	0.37	0.47	0.09	0.32		0.12	0.29	0.29	0.05	0.22	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	316	1290	728	318	1112		202	539	442	80	362	
v/s Ratio Prot	c0.14	c0.29	0.01	0.02	c0.17		c0.04	0.04		0.02	c0.17	
v/s Ratio Perm			0.04						0.01			
v/c Ratio	0.79	0.79	0.10	0.24	0.54		0.38	0.14	0.03	0.54	0.76	
Uniform Delay, d1	39.2	28.2	14.7	42.1	27.9		41.0	26.2	25.3	46.8	36.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.9	3.4	0.0	0.1	0.5		0.4	0.0	0.0	3.4	8.2	
Delay (s)	51.1	31.6	14.7	42.2	28.5		41.4	26.2	25.3	50.2	44.7	
Level of Service	D	C	B	D	C		D	C	C	D	D	
Approach Delay (s)		33.7			30.0			31.9			45.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

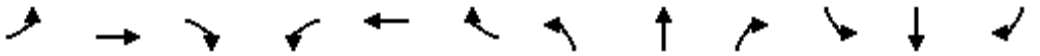


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	850	490	200	90	140
Future Volume (Veh/h)	170	850	490	200	90	140
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	179	895	516	211	95	147
Pedestrians		3	3		5	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.94				0.80	0.94
vC, conflicting volume	732				1435	372
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	575				688	189
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	81				68	81
cM capacity (veh/h)	920				294	790

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	179	448	448	344	383	95	147
Volume Left	179	0	0	0	0	95	0
Volume Right	0	0	0	0	211	0	147
cSH	920	1700	1700	1700	1700	294	790
Volume to Capacity	0.19	0.26	0.26	0.20	0.23	0.32	0.19
Queue Length 95th (ft)	18	0	0	0	0	34	17
Control Delay (s)	9.9	0.0	0.0	0.0	0.0	22.9	10.6
Lane LOS	A					C	B
Approach Delay (s)	1.6			0.0		15.4	
Approach LOS						C	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value



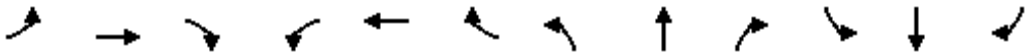
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	500	100	90	240	20	170	740	560	50	390	230
Future Volume (vph)	340	500	100	90	240	20	170	740	560	50	390	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1568	3400	3459		3400	1845	1541	1752	3034	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1568	3400	3459		3400	1845	1541	1752	3034	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	543	109	98	261	22	185	804	609	54	424	250
RTOR Reduction (vph)	0	0	87	0	6	0	0	0	193	0	57	0
Lane Group Flow (vph)	370	543	22	98	277	0	185	804	416	54	617	0
Confl. Peds. (#/hr)						4			3			9
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	14.0	23.4	23.4	8.9	18.3		10.4	63.6	63.6	6.3	59.5	
Effective Green, g (s)	14.0	24.3	24.3	8.9	19.2		10.4	64.5	64.5	6.3	60.4	
Actuated g/C Ratio	0.12	0.20	0.20	0.07	0.16		0.09	0.54	0.54	0.05	0.50	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	709	317	252	553		294	991	828	91	1527	
v/s Ratio Prot	c0.11	c0.15		0.03	c0.08		c0.05	c0.44		0.03	0.20	
v/s Ratio Perm			0.01						0.27			
v/c Ratio	0.93	0.77	0.07	0.39	0.50		0.63	0.81	0.50	0.59	0.40	
Uniform Delay, d1	52.5	45.2	38.7	53.0	46.0		52.9	22.8	17.6	55.6	18.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.12	0.86	
Incremental Delay, d2	29.0	4.9	0.1	1.0	0.7		4.2	7.2	2.2	8.5	0.7	
Delay (s)	81.5	50.1	38.8	54.0	46.7		57.1	30.0	19.8	70.5	16.7	
Level of Service	F	D	D	D	D		E	C	B	E	B	
Approach Delay (s)		60.3			48.6			29.2			20.7	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	10	70	10	10	10	70	530	10	10	750	120
Future Volume (vph)	100	10	70	10	10	10	70	530	10	10	750	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1538		1730		1750	1839		1750	3422	
Flt Permitted	0.73	1.00	1.00		0.93		0.21	1.00		0.32	1.00	
Satd. Flow (perm)	1350	1845	1538		1627		392	1839		586	3422	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	133	13	93	13	13	13	93	707	13	13	1000	160
RTOR Reduction (vph)	0	0	77	0	11	0	0	1	0	0	12	0
Lane Group Flow (vph)	133	13	16	0	28	0	93	719	0	13	1148	0
Confl. Peds. (#/hr)			5	5			20		5	5		20
Confl. Bikes (#/hr)			1									4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	13.2	13.2	13.2		13.2		58.3	58.3		58.3	58.3	
Effective Green, g (s)	13.7	13.7	13.7		13.7		58.3	58.3		58.3	58.3	
Actuated g/C Ratio	0.17	0.17	0.17		0.17		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	229	313	261		276		283	1328		423	2472	
v/s Ratio Prot		0.01						c0.39			0.34	
v/s Ratio Perm	c0.10		0.01		0.02		0.24			0.02		
v/c Ratio	0.58	0.04	0.06		0.10		0.33	0.54		0.03	0.46	
Uniform Delay, d1	30.9	28.0	28.1		28.3		4.1	5.1		3.2	4.7	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.76	0.68	
Incremental Delay, d2	2.4	0.0	0.0		0.1		0.2	0.2		0.0	0.0	
Delay (s)	33.3	28.0	28.1		28.4		4.3	5.4		2.4	3.3	
Level of Service	C	C	C		C		A	A		A	A	
Approach Delay (s)		31.0			28.4			5.2			3.2	
Approach LOS		C			C			A			A	

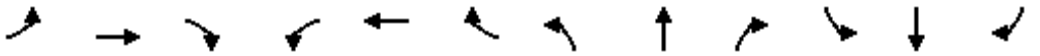
Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	13.2
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	0	10	90	0	220	0	310	80	150	480	10
Future Volume (vph)	10	0	10	90	0	220	0	310	80	150	480	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	0	12	106	0	259	0	365	94	176	565	12

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	24	106	259	459	753
Volume Left (vph)	12	106	0	0	176
Volume Right (vph)	12	0	259	94	12
Hadj (s)	-0.15	0.25	-0.55	-0.07	0.09
Departure Headway (s)	6.9	6.9	3.2	5.2	5.1
Degree Utilization, x	0.05	0.20	0.23	0.66	1.06
Capacity (veh/h)	476	488	1122	676	702
Control Delay (s)	10.2	11.7	7.2	17.8	74.2
Approach Delay (s)	10.2	8.5		17.8	74.2
Approach LOS	B	A		C	F

Intersection Summary				
Delay	42.1			
Level of Service	E			
Intersection Capacity Utilization	75.5%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	190	10	410	20	430	100	190	830	10
Future Volume (vph)	10	10	10	190	10	410	20	430	100	190	830	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1709			1714	1568	1752	3505	1486	1752	3493	
Flt Permitted		0.88			0.71	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1536			1271	1568	1752	3505	1486	1752	3493	
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	13	13	13	247	13	532	26	558	130	247	1078	13
RTOR Reduction (vph)	0	10	0	0	0	92	0	0	76	0	1	0
Lane Group Flow (vph)	0	29	0	0	260	440	26	558	54	247	1090	0
Confl. Peds. (#/hr)	1		27	27		1			15			67
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		21.3			21.3	46.0	10.1	37.2	37.2	20.2	47.3	
Effective Green, g (s)		21.8			21.8	46.5	10.1	37.9	37.9	20.2	48.0	
Actuated g/C Ratio		0.24			0.24	0.51	0.11	0.41	0.41	0.22	0.52	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		364			301	793	192	1445	612	385	1824	
v/s Ratio Prot						c0.28	0.01	0.16		c0.14	c0.31	
v/s Ratio Perm		0.02			c0.20				0.04			
v/c Ratio		0.08			0.86	0.55	0.14	0.39	0.09	0.64	0.60	
Uniform Delay, d1		27.3			33.6	15.6	37.0	18.9	16.5	32.6	15.2	
Progression Factor		1.00			1.00	1.00	1.15	1.07	1.48	1.00	1.00	
Incremental Delay, d2		0.0			21.1	0.5	0.1	0.2	0.1	2.7	0.5	
Delay (s)		27.3			54.7	16.1	42.7	20.4	24.4	35.3	15.8	
Level of Service		C			D	B	D	C	C	D	B	
Approach Delay (s)		27.3			28.8			21.9			19.4	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	91.9	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

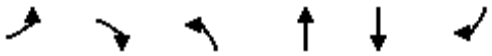
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	30	80	190	50	10	160	690	40	10	1070	420
Future Volume (vph)	140	30	80	190	50	10	160	690	40	10	1070	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1379		1752	1798		1752	3469		1752	3505	1505
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1379		1752	1798		1752	3469		1752	3505	1505
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	179	38	103	244	64	13	205	885	51	13	1372	538
RTOR Reduction (vph)	0	91	0	0	6	0	0	3	0	0	0	219
Lane Group Flow (vph)	179	51	0	244	71	0	205	933	0	13	1372	319
Confl. Peds. (#/hr)			3						5			6
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	21.4	10.8		15.6	5.0		19.2	73.7		2.0	56.5	56.5
Effective Green, g (s)	22.0	11.4		16.6	5.0		19.2	75.0		2.0	57.8	57.8
Actuated g/C Ratio	0.18	0.10		0.14	0.04		0.16	0.62		0.02	0.48	0.48
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	273	131		242	74		280	2168		29	1688	724
v/s Ratio Prot	c0.12	0.04		c0.14	c0.04		c0.12	0.27		0.01	c0.39	
v/s Ratio Perm												0.21
v/c Ratio	0.66	0.39		1.01	0.96		0.73	0.43		0.45	0.81	0.44
Uniform Delay, d1	45.5	51.0		51.7	57.4		48.0	11.5		58.5	26.5	20.5
Progression Factor	1.00	1.00		1.00	1.00		1.15	0.52		1.00	1.00	1.00
Incremental Delay, d2	5.6	1.9		60.0	91.3		8.3	0.5		10.6	4.4	1.9
Delay (s)	51.1	52.9		111.7	148.7		63.5	6.6		69.1	30.9	22.4
Level of Service	D	D		F	F		E	A		E	C	C
Approach Delay (s)		51.9			120.6			16.8			28.8	
Approach LOS		D			F			B			C	

Intersection Summary			
HCM 2000 Control Delay	35.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

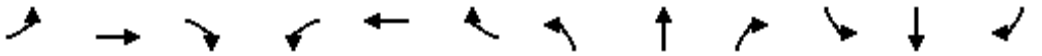
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	280	10	230	0	350	70	240	630	10
Future Volume (vph)	0	0	10	280	10	230	0	350	70	240	630	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		3.0		4.0	3.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			1.00		1.00	0.91		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.98		1.00	1.00	
Flt Protected			1.00		0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1596		1760	1218		1518		1490	1561	
Flt Permitted			1.00		0.95	1.00		1.00		0.20	1.00	
Satd. Flow (perm)			1596		1760	1218		1518		309	1561	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	11	301	11	247	0	376	75	258	677	11
RTOR Reduction (vph)	0	0	9	0	0	201	0	6	0	0	0	0
Lane Group Flow (vph)	0	0	2	0	312	46	0	445	0	258	688	0
Confl. Peds. (#/hr)	20					20	32		11			32
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			20.2		20.2	20.2		49.0		54.4	54.4	
Effective Green, g (s)			20.2		20.2	20.2		49.0		54.4	54.4	
Actuated g/C Ratio			0.19		0.19	0.19		0.45		0.50	0.50	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			297		328	227		686		374	784	
v/s Ratio Prot					c0.18			c0.29		0.13	c0.44	
v/s Ratio Perm			0.00			0.04				0.22		
v/c Ratio			0.01		0.95	0.20		0.65		0.69	0.88	
Uniform Delay, d1			35.9		43.6	37.2		23.0		19.2	24.0	
Progression Factor			1.00		1.00	1.00		0.11		1.00	1.00	
Incremental Delay, d2			0.0		37.0	0.5		1.9		5.2	10.8	
Delay (s)			35.9		80.6	37.8		4.4		24.4	34.8	
Level of Service			D		F	D		A		C	C	
Approach Delay (s)		35.9			61.7			4.4			32.0	
Approach LOS		D			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	108.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	10	10	250	500	410
Future Volume (vph)	170	10	10	250	500	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.94	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1484			1564	1420	
Flt Permitted	0.95			0.96	1.00	
Satd. Flow (perm)	1484			1507	1420	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	177	10	10	260	521	427
RTOR Reduction (vph)	2	0	0	0	22	0
Lane Group Flow (vph)	185	0	0	270	926	0
Confl. Peds. (#/hr)		3	18			18
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	18.7			30.3	74.6	
Effective Green, g (s)	18.7			29.3	74.6	
Actuated g/C Ratio	0.17			0.27	0.69	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	256			407	978	
v/s Ratio Prot	c0.12				c0.65	
v/s Ratio Perm				0.18		
v/c Ratio	0.72			0.66	0.95	
Uniform Delay, d1	42.4			35.1	15.1	
Progression Factor	1.00			1.00	0.41	
Incremental Delay, d2	10.4			4.4	10.5	
Delay (s)	52.7			39.6	16.6	
Level of Service	D			D	B	
Approach Delay (s)	52.7			39.6	16.6	
Approach LOS	D			D	B	

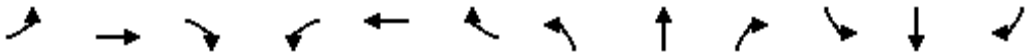
Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	108.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	160	140	120	270	80	80	770	70	70	770	220
Future Volume (vph)	50	160	140	120	270	80	80	770	70	70	770	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.98		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1669		1490	1800		1752	3451		1752	3505	1485
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1669		1490	1491		1752	3451		1752	3505	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	172	151	129	290	86	86	828	75	75	828	237
RTOR Reduction (vph)	0	28	0	0	10	0	0	5	0	0	0	136
Lane Group Flow (vph)	54	295	0	129	366	0	86	898	0	75	828	101
Confl. Peds. (#/hr)			30			34			4			8
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	15.3	29.7		16.8	31.2		8.6	47.7		8.3	47.4	47.4
Effective Green, g (s)	15.6	30.0		17.1	31.5		8.6	48.6		8.3	48.3	48.3
Actuated g/C Ratio	0.13	0.25		0.14	0.26		0.07	0.41		0.07	0.40	0.40
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	227	417		212	472		125	1397		121	1410	597
v/s Ratio Prot	0.03	0.18		c0.09	c0.20		c0.05	c0.26		0.04	0.24	
v/s Ratio Perm												0.07
v/c Ratio	0.24	0.71		0.61	0.78		0.69	0.64		0.62	0.59	0.17
Uniform Delay, d1	46.9	41.0		48.3	41.0		54.4	28.7		54.3	28.1	23.0
Progression Factor	1.00	1.00		1.00	1.00		0.96	1.16		0.69	0.95	2.50
Incremental Delay, d2	0.5	5.4		4.9	7.8		12.6	1.9		5.1	1.0	0.3
Delay (s)	47.4	46.4		53.2	48.8		64.9	35.4		42.8	27.6	57.7
Level of Service	D	D		D	D		E	D		D	C	E
Approach Delay (s)		46.6			49.9			37.9			34.8	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

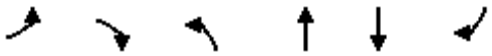
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	180	120	20	140	10	70	140	30	10	330	170
Future Volume (vph)	50	180	120	20	140	10	70	140	30	10	330	170
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	55	198	132	22	154	11	77	154	33	11	363	187

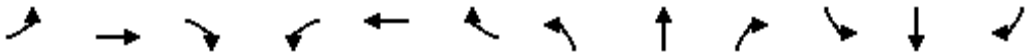
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	55	330	22	165	264	561
Volume Left (vph)	55	0	22	0	77	11
Volume Right (vph)	0	132	0	11	33	187
Hadj (s)	0.55	-0.23	0.55	0.00	0.03	-0.15
Departure Headway (s)	8.2	7.5	8.8	8.2	7.3	6.5
Degree Utilization, x	0.13	0.68	0.05	0.38	0.54	1.02
Capacity (veh/h)	425	468	390	407	468	542
Control Delay (s)	11.2	23.9	11.1	14.9	18.5	67.6
Approach Delay (s)	22.1		14.4		18.5	67.6
Approach LOS	C		B		C	F

Intersection Summary				
Delay	38.6			
Level of Service	E			
Intersection Capacity Utilization	75.4%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	90	130	70	190	410	90
Future Volume (vph)	90	130	70	190	410	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.1	3.1	3.1	3.1	3.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1490	1275	1490	1568	1516	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1490	1275	1490	1568	1516	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	99	143	77	209	451	99
RTOR Reduction (vph)	0	115	0	0	7	0
Lane Group Flow (vph)	99	28	77	209	543	0
Confl. Peds. (#/hr)		12	15			15
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	11.2	11.2	7.7	43.5	31.7	
Effective Green, g (s)	12.2	12.2	8.7	44.5	32.7	
Actuated g/C Ratio	0.19	0.19	0.14	0.71	0.52	
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	288	247	206	1109	788	
v/s Ratio Prot	c0.07		c0.05	0.13	c0.36	
v/s Ratio Perm		0.02				
v/c Ratio	0.34	0.11	0.37	0.19	0.69	
Uniform Delay, d1	21.9	20.9	24.6	3.1	11.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	0.2	1.1	0.1	2.5	
Delay (s)	22.6	21.1	25.8	3.2	13.8	
Level of Service	C	C	C	A	B	
Approach Delay (s)	21.7			9.3	13.8	
Approach LOS	C			A	B	

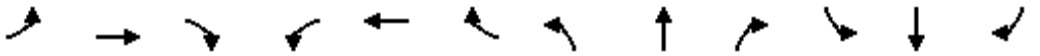
Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	62.9	Sum of lost time (s)	9.3
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	50	40	50	90	50	30	140	70	50	290	60
Future Volume (vph)	50	50	40	50	90	50	30	140	70	50	290	60
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
Hourly flow rate (vph)	57	57	45	57	102	57	34	159	80	57	330	68

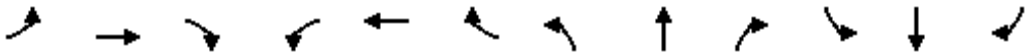
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	159	216	273	455
Volume Left (vph)	57	57	34	57
Volume Right (vph)	45	57	80	68
Hadj (s)	-0.05	-0.05	-0.10	-0.01
Departure Headway (s)	6.5	6.3	5.9	5.6
Degree Utilization, x	0.29	0.38	0.45	0.71
Capacity (veh/h)	471	493	559	615
Control Delay (s)	12.1	13.2	13.5	21.4
Approach Delay (s)	12.1	13.2	13.5	21.4
Approach LOS	B	B	B	C

Intersection Summary				
Delay	16.5			
Level of Service	C			
Intersection Capacity Utilization	48.8%	ICU Level of Service	A	
Analysis Period (min)	15			



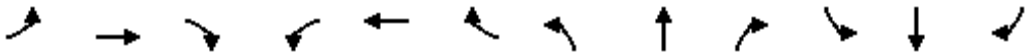
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	140	20	40	130	30	20	210	30	80	360	40
Future Volume (vph)	20	140	20	40	130	30	20	210	30	80	360	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		0.98	1.00		0.96	1.00		0.97	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1411	1531		1466	1500		1423	1526		1440	1527	
Flt Permitted	0.64	1.00		0.64	1.00		0.43	1.00		0.59	1.00	
Satd. Flow (perm)	953	1531		990	1500		641	1526		895	1527	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	23	161	23	46	149	34	23	241	34	92	414	46
RTOR Reduction (vph)	0	8	0	0	13	0	0	6	0	0	5	0
Lane Group Flow (vph)	23	176	0	46	170	0	23	269	0	92	455	0
Confl. Peds. (#/hr)	54		16	16		54	74		39	39		74
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	11.8	11.8		11.8	11.8		20.2	20.2		20.2	20.2	
Effective Green, g (s)	12.0	12.0		12.0	12.0		20.4	20.4		20.4	20.4	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	454		294	445		323	770		451	771	
v/s Ratio Prot		c0.11			0.11			0.18			c0.30	
v/s Ratio Perm	0.02			0.05			0.04			0.10		
v/c Ratio	0.08	0.39		0.16	0.38		0.07	0.35		0.20	0.59	
Uniform Delay, d1	10.2	11.3		10.5	11.3		5.1	6.0		5.5	7.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.1	0.2		0.1	0.3		0.2	1.2	
Delay (s)	10.3	11.5		10.6	11.5		5.2	6.3		5.7	8.3	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.3			11.3			6.2			7.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	40.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	80	80	70	100	30	50	710	40	20	840	70
Future Volume (vph)	40	80	80	70	100	30	50	710	40	20	840	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1423		1490	1500		1490	1553		1490	1544	
Flt Permitted	0.95	1.00		0.95	1.00		0.19	1.00		0.27	1.00	
Satd. Flow (perm)	1490	1423		1490	1500		294	1553		426	1544	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	41	82	82	71	102	31	51	724	41	20	857	71
RTOR Reduction (vph)	0	31	0	0	9	0	0	2	0	0	2	0
Lane Group Flow (vph)	41	133	0	71	124	0	51	763	0	20	926	0
Confl. Peds. (#/hr)			5			5	8		3	3		8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.4	15.6		8.4	16.6		82.8	82.8		82.8	82.8	
Effective Green, g (s)	7.4	16.2		8.4	17.2		83.4	83.4		83.4	83.4	
Actuated g/C Ratio	0.06	0.13		0.07	0.14		0.70	0.70		0.70	0.70	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	91	192		104	215		204	1079		296	1073	
v/s Ratio Prot	0.03	c0.09		c0.05	0.08			0.49			c0.60	
v/s Ratio Perm							0.17			0.05		
v/c Ratio	0.45	0.69		0.68	0.57		0.25	0.71		0.07	0.86	
Uniform Delay, d1	54.3	49.5		54.5	48.0		6.8	11.0		5.9	13.9	
Progression Factor	1.00	1.00		1.00	1.00		0.12	0.30		2.31	2.25	
Incremental Delay, d2	3.5	10.3		16.9	3.7		2.0	2.6		0.4	7.8	
Delay (s)	57.9	59.8		71.4	51.7		2.8	5.9		13.9	39.2	
Level of Service	E	E		E	D		A	A		B	D	
Approach Delay (s)		59.4			58.5			5.7			38.6	
Approach LOS		E			E			A			D	

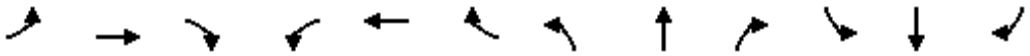
Intersection Summary			
HCM 2000 Control Delay	30.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	10	20	20	30	760	20	10	910	60
Future Volume (Veh/h)	10	10	40	10	20	20	30	760	20	10	910	60
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	10	10	41	10	21	21	31	784	21	10	938	62
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.69	0.69	0.54	0.69	0.69	0.71	0.54			0.71		
vC, conflicting volume	1914	1881	989	1866	1902	828	1020			810		
vC1, stage 1 conf vol	1009	1009		862	862							
vC2, stage 2 conf vol	906	872		1004	1040							
vCu, unblocked vol	1142	1093	551	1070	1123	548	609			524		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	96	85	94	89	94	94			99		
cM capacity (veh/h)	195	224	282	175	198	367	511			730		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	52	31	805	10	1000
Volume Left	10	10	31	0	10	0
Volume Right	41	21	0	21	0	62
cSH	253	236	511	1700	730	1700
Volume to Capacity	0.24	0.22	0.06	0.47	0.01	0.59
Queue Length 95th (ft)	23	21	5	0	1	0
Control Delay (s)	23.7	24.6	12.5	0.0	10.0	0.0
Lane LOS	C	C	B		A	
Approach Delay (s)	23.7	24.6	0.5		0.1	
Approach LOS	C	C				

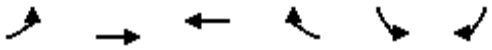
Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	68.4%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	170	20	60	310	50	20	10	10	10	10	40
Future Volume (Veh/h)	20	170	20	60	310	50	20	10	10	10	10	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	213	25	75	388	63	25	13	13	13	13	50
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	487			246			910	920	236	902	902	456
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	487			171			874	886	160	867	866	456
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			94			88	94	98	94	95	91
cM capacity (veh/h)	1039			1312			202	236	826	214	243	585

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	263	526	51	76
Volume Left	25	75	25	13
Volume Right	25	63	13	50
cSH	1039	1312	262	381
Volume to Capacity	0.02	0.06	0.19	0.20
Queue Length 95th (ft)	2	5	18	18
Control Delay (s)	1.0	1.7	22.0	16.8
Lane LOS	A	A	C	C
Approach Delay (s)	1.0	1.7	22.0	16.8
Approach LOS			C	C

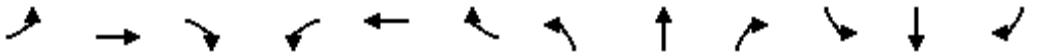
Intersection Summary				
Average Delay	3.9			
Intersection Capacity Utilization	47.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	20	110	50	40	310
Future Volume (Veh/h)	170	20	110	50	40	310
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	218	26	141	64	51	397
Pedestrians		4			21	
Lane Width (ft)		13.0			13.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		0			2	
Right turn flare (veh)						1
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1220				
pX, platoon unblocked						
vC, conflicting volume	226				656	198
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	226				656	198
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	83				85	52
cM capacity (veh/h)	1311				351	822

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	244	205	448
Volume Left	218	0	51
Volume Right	0	64	397
cSH	1311	1700	927
Volume to Capacity	0.17	0.12	0.48
Queue Length 95th (ft)	15	0	67
Control Delay (s)	7.6	0.0	13.8
Lane LOS	A		B
Approach Delay (s)	7.6	0.0	13.8
Approach LOS			B

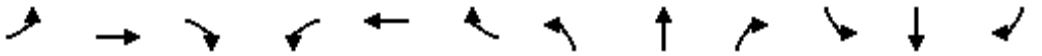
Intersection Summary			
Average Delay	9.0		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	780	0	10	1060	70	0	30	10	80	0	250
Future Volume (vph)	150	780	0	10	1060	70	0	30	10	80	0	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.1	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	1.00
Frt	1.00	1.00		1.00	0.99			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.95	1.00
Satd. Flow (prot)	1752	3505		1752	3468			1782			1730	1568
Flt Permitted	0.95	1.00		0.95	1.00			1.00			0.73	1.00
Satd. Flow (perm)	1752	3505		1752	3468			1782			1326	1568
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.93	0.93	0.90	0.90	0.90	0.93	0.90	0.93
Adj. Flow (vph)	161	839	0	11	1140	75	0	33	11	86	0	269
RTOR Reduction (vph)	0	0	0	0	3	0	0	9	0	0	0	172
Lane Group Flow (vph)	161	839	0	11	1212	0	0	35	0	0	86	97
Confl. Peds. (#/hr)						1				13		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA			NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	12.2	47.9		1.0	36.8			10.7			10.7	10.7
Effective Green, g (s)	12.2	49.3		1.0	38.2			10.7			10.7	10.7
Actuated g/C Ratio	0.17	0.67		0.01	0.52			0.15			0.15	0.15
Clearance Time (s)	4.0	5.4		4.1	5.4			4.0			4.0	4.0
Vehicle Extension (s)	2.0	3.0		3.0	3.0			2.0			2.0	2.0
Lane Grp Cap (vph)	292	2363		23	1812			260			194	229
v/s Ratio Prot	c0.09	0.24		0.01	c0.35			0.02				
v/s Ratio Perm											c0.06	0.06
v/c Ratio	0.55	0.36		0.48	0.67			0.13			0.44	0.42
Uniform Delay, d1	27.9	5.1		35.8	12.8			27.2			28.5	28.4
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.3	0.1		14.8	0.9			0.1			0.6	0.5
Delay (s)	29.2	5.2		50.6	13.8			27.2			29.1	28.8
Level of Service	C	A		D	B			C			C	C
Approach Delay (s)		9.1			14.1			27.2			28.9	
Approach LOS		A			B			C			C	

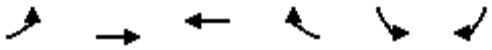
Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	73.1	Sum of lost time (s)	12.1
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	610	200	350	830	20	180	140	240	50	180	130
Future Volume (vph)	50	610	200	350	830	20	180	140	240	50	180	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.7
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1541	3400	3484		1752	1845	1533	1752	1845	1489
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1541	3400	3484		1752	1845	1533	1752	1845	1489
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	60	735	241	422	1000	24	217	169	289	60	217	157
RTOR Reduction (vph)	0	0	71	0	1	0	0	0	205	0	0	129
Lane Group Flow (vph)	60	735	170	422	1023	0	217	169	84	60	217	28
Confl. Peds. (#/hr)			9			24			8			31
Confl. Bikes (#/hr)			6			7			1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	7.0	28.6	47.1	23.6	49.2		18.5	32.0	32.0	7.0	20.5	20.5
Effective Green, g (s)	7.0	29.8	47.1	23.6	50.4		18.5	32.7	32.7	7.0	21.2	20.5
Actuated g/C Ratio	0.06	0.26	0.42	0.21	0.45		0.16	0.29	0.29	0.06	0.19	0.18
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	4.7
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	108	923	641	709	1552		286	533	443	108	345	269
v/s Ratio Prot	0.03	c0.21	0.04	c0.12	c0.29		c0.12	0.09		0.03	c0.12	
v/s Ratio Perm			0.07						0.05			0.02
v/c Ratio	0.56	0.80	0.26	0.60	0.66		0.76	0.32	0.19	0.56	0.63	0.11
Uniform Delay, d1	51.5	38.8	21.6	40.4	24.6		45.2	31.5	30.2	51.5	42.3	38.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.5	4.8	0.1	0.9	1.0		9.8	0.1	0.1	3.5	2.6	0.1
Delay (s)	55.0	43.6	21.7	41.3	25.6		55.0	31.6	30.3	55.0	44.9	38.7
Level of Service	E	D	C	D	C		D	C	C	E	D	D
Approach Delay (s)		39.2			30.2			38.6			44.1	
Approach LOS		D			C			D			D	

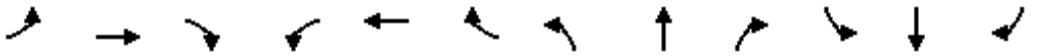
Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	113.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	110	560	1070	210	190	200
Future Volume (vph)	110	560	1070	210	190	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.9	3.9		3.9	3.9
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3403		1490	1333
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3403		1490	1333
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	128	651	1244	244	221	233
RTOR Reduction (vph)	0	0	12	0	0	163
Lane Group Flow (vph)	128	651	1476	0	221	70
Confl. Peds. (#/hr)	2			2	1	
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10	10
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	14.0	75.1	57.1		35.1	35.1
Effective Green, g (s)	15.0	76.1	58.1		36.1	36.1
Actuated g/C Ratio	0.12	0.63	0.48		0.30	0.30
Clearance Time (s)	4.0	4.9	4.9		4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	219	2222	1647		448	401
v/s Ratio Prot	c0.07	0.19	c0.43		c0.15	
v/s Ratio Perm						0.05
v/c Ratio	0.58	0.29	0.90		0.49	0.17
Uniform Delay, d1	49.6	9.9	28.2		34.4	31.0
Progression Factor	1.00	1.00	0.84		1.00	1.00
Incremental Delay, d2	3.9	0.3	3.4		3.8	0.9
Delay (s)	53.5	10.2	27.2		38.3	31.9
Level of Service	D	B	C		D	C
Approach Delay (s)		17.3	27.2		35.0	
Approach LOS		B	C		D	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

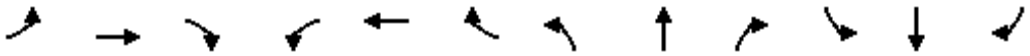
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	250	290	310	710	30	350	600	130	30	690	230
Future Volume (vph)	230	250	290	310	710	30	350	600	130	30	690	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1543	3400	3481		3400	1845	1544	1752	3104	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1543	3400	3481		3400	1845	1544	1752	3104	
Peak-hour factor, PHF	0.89	0.90	0.89	0.90	0.90	0.90	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	258	278	326	344	789	33	393	674	144	33	775	258
RTOR Reduction (vph)	0	0	153	0	2	0	0	0	75	0	26	0
Lane Group Flow (vph)	258	278	173	344	820	0	393	674	69	33	1007	0
Confl. Peds. (#/hr)			1			4			2			7
Confl. Bikes (#/hr)			2			3						1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	13.0	18.6	18.6	26.1	31.7		11.0	52.8	52.8	4.7	46.5	
Effective Green, g (s)	13.0	19.5	19.5	26.1	32.6		11.0	53.7	53.7	4.7	47.4	
Actuated g/C Ratio	0.11	0.16	0.16	0.22	0.27		0.09	0.45	0.45	0.04	0.39	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	368	569	250	739	945		311	825	690	68	1226	
v/s Ratio Prot	0.08	0.08		0.10	c0.24		c0.12	c0.37		0.02	0.32	
v/s Ratio Perm			c0.11						0.04			
v/c Ratio	0.70	0.49	0.69	0.47	0.87		1.26	0.82	0.10	0.49	0.82	
Uniform Delay, d1	51.6	45.7	47.4	40.9	41.6		54.5	28.9	19.2	56.5	32.5	
Progression Factor	0.81	0.82	0.67	1.00	1.00		1.00	1.00	1.00	1.08	0.76	
Incremental Delay, d2	5.7	0.6	7.6	0.5	8.5		141.9	8.8	0.3	3.7	4.4	
Delay (s)	47.6	38.3	39.4	41.3	50.1		196.4	37.7	19.5	64.8	29.0	
Level of Service	D	D	D	D	D		F	D	B	E	C	
Approach Delay (s)		41.5			47.5			87.0			30.1	
Approach LOS		D			D			F			C	

Intersection Summary			
HCM 2000 Control Delay	53.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

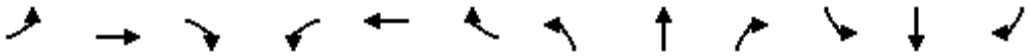
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	10	120	10	40	10	120	400	20	10	770	250
Future Volume (vph)	140	10	120	10	40	10	120	400	20	10	770	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96		1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1526		1798		1763	1847		1766	3368	
Flt Permitted	0.72	1.00	1.00		0.97		0.15	1.00		0.38	1.00	
Satd. Flow (perm)	1347	1863	1526		1752		273	1847		710	3368	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	187	13	160	13	53	13	160	533	27	13	1027	333
RTOR Reduction (vph)	0	0	101	0	8	0	0	2	0	0	37	0
Lane Group Flow (vph)	187	13	59	0	71	0	160	558	0	13	1323	0
Confl. Peds. (#/hr)			9	9			39		7	7		39
Confl. Bikes (#/hr)			14			7			1			2
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	21.3	21.3	21.3		21.3		61.4	61.4		61.4	61.4	
Effective Green, g (s)	21.8	21.8	21.8		21.8		61.4	61.4		61.4	61.4	
Actuated g/C Ratio	0.24	0.24	0.24		0.24		0.67	0.67		0.67	0.67	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	319	441	361		415		182	1234		474	2250	
v/s Ratio Prot		0.01						0.30			0.39	
v/s Ratio Perm	c0.14		0.04		0.04		c0.59			0.02		
v/c Ratio	0.59	0.03	0.16		0.17		0.88	0.45		0.03	0.59	
Uniform Delay, d1	31.1	26.9	27.8		27.9		12.3	7.3		5.2	8.3	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.65	0.55	
Incremental Delay, d2	1.8	0.0	0.1		0.1		33.9	0.1		0.0	0.2	
Delay (s)	32.8	26.9	27.9		27.9		46.2	7.3		3.4	4.8	
Level of Service	C	C	C		C		D	A		A	A	
Approach Delay (s)		30.4			27.9			16.0			4.7	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	91.9	Sum of lost time (s)	13.2
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

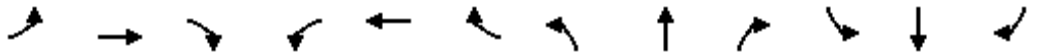
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	10	10	60	10	130	0	380	40	150	440	20
Future Volume (vph)	10	10	10	60	10	130	0	380	40	150	440	20
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
Hourly flow rate (vph)	11	11	11	65	11	140	0	409	43	161	473	22

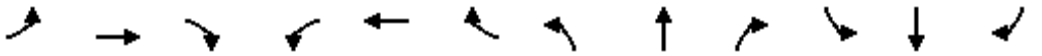
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	33	76	140	452	656
Volume Left (vph)	11	65	0	0	161
Volume Right (vph)	11	0	140	43	22
Hadj (s)	-0.08	0.22	-0.55	-0.01	0.08
Departure Headway (s)	6.7	6.9	3.2	5.1	5.0
Degree Utilization, x	0.06	0.14	0.12	0.64	0.90
Capacity (veh/h)	488	486	1121	679	711
Control Delay (s)	10.2	11.0	6.7	16.8	36.3
Approach Delay (s)	10.2	8.2		16.8	36.3
Approach LOS	B	A		C	E

Intersection Summary				
Delay	24.7			
Level of Service	C			
Intersection Capacity Utilization	74.2%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	10	20	140	10	210	20	490	130	160	720	10
Future Volume (vph)	20	10	20	140	10	210	20	490	130	160	720	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1696			1750	1568	1752	3505	1503	1752	3496	
Flt Permitted		0.86			0.78	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1484			1422	1568	1752	3505	1503	1752	3496	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	21	10	21	144	10	216	21	505	134	165	742	10
RTOR Reduction (vph)	0	17	0	0	0	115	0	0	75	0	1	0
Lane Group Flow (vph)	0	35	0	0	154	101	21	505	59	165	751	0
Confl. Peds. (#/hr)			8	8					11			9
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		14.2			14.2	38.3	10.3	35.8	35.8	19.6	45.1	
Effective Green, g (s)		14.7			14.7	38.8	10.3	36.5	36.5	19.6	45.8	
Actuated g/C Ratio		0.18			0.18	0.47	0.12	0.44	0.44	0.24	0.55	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		263			252	734	217	1545	662	414	1933	
v/s Ratio Prot						0.06	0.01	0.14		c0.09	c0.21	
v/s Ratio Perm		0.02			c0.11				0.04			
v/c Ratio		0.13			0.61	0.14	0.10	0.33	0.09	0.40	0.39	
Uniform Delay, d1		28.7			31.4	12.5	32.1	15.1	13.5	26.6	10.5	
Progression Factor		1.00			1.00	1.00	1.33	0.74	0.67	1.00	1.00	
Incremental Delay, d2		0.1			3.1	0.0	0.1	0.1	0.1	0.2	0.1	
Delay (s)		28.8			34.5	12.5	42.9	11.3	9.1	26.9	10.7	
Level of Service		C			C	B	D	B	A	C	B	
Approach Delay (s)		28.8			21.7			11.8			13.6	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	12.5
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	60	150	60	70	10	160	930	70	10	670	180
Future Volume (vph)	180	60	150	60	70	10	160	930	70	10	670	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1386		1752	1810		1752	3460		1752	3505	1532
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1386		1752	1810		1752	3460		1752	3505	1532
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	184	61	153	61	71	10	163	949	71	10	684	184
RTOR Reduction (vph)	0	88	0	0	5	0	0	3	0	0	0	95
Lane Group Flow (vph)	184	126	0	61	76	0	163	1017	0	10	684	89
Confl. Peds. (#/hr)			1						3			1
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	20.1	17.0		11.7	8.6		16.4	72.4		1.0	57.0	57.0
Effective Green, g (s)	20.7	17.6		12.7	8.6		16.4	73.7		1.0	58.3	58.3
Actuated g/C Ratio	0.17	0.15		0.11	0.07		0.14	0.61		0.01	0.49	0.49
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	257	203		185	129		239	2125		14	1702	744
v/s Ratio Prot	c0.12	c0.09		0.03	0.04		c0.09	c0.29		0.01	0.20	
v/s Ratio Perm												0.06
v/c Ratio	0.72	0.62		0.33	0.59		0.68	0.48		0.71	0.40	0.12
Uniform Delay, d1	46.9	48.1		49.7	54.0		49.3	12.6		59.4	19.7	16.8
Progression Factor	1.00	1.00		1.00	1.00		0.95	1.93		1.00	1.00	1.00
Incremental Delay, d2	9.1	5.8		1.0	7.1		6.4	0.6		100.1	0.7	0.3
Delay (s)	56.0	53.9		50.8	61.1		53.3	25.0		159.5	20.4	17.2
Level of Service	E	D		D	E		D	C		F	C	B
Approach Delay (s)		54.9			56.7			28.9			21.3	
Approach LOS		D			E			C			C	

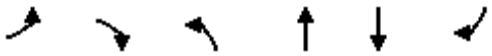
Intersection Summary			
HCM 2000 Control Delay	31.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	150	10	130	0	470	170	220	560	10
Future Volume (vph)	0	0	10	150	10	130	0	470	170	220	560	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		3.0		4.0	3.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			0.98		1.00	0.95		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.96		1.00	1.00	
Flt Protected			1.00		0.96	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1558		1762	1266		1494		1490	1561	
Flt Permitted			1.00		0.96	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1558		1762	1266		1494		183	1561	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	153	10	133	0	480	173	224	571	10
RTOR Reduction (vph)	0	0	9	0	0	114	0	10	0	0	1	0
Lane Group Flow (vph)	0	0	1	0	163	19	0	643	0	224	580	0
Confl. Peds. (#/hr)	9		1			9	25		7			25
Confl. Bikes (#/hr)									2			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			15.1		15.1	15.1		55.4		53.1	53.1	
Effective Green, g (s)			15.1		15.1	15.1		55.4		53.1	53.1	
Actuated g/C Ratio			0.14		0.14	0.14		0.51		0.49	0.49	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			217		245	176		763		317	764	
v/s Ratio Prot					c0.09			c0.43		0.12	c0.37	
v/s Ratio Perm			0.00			0.01				0.22		
v/c Ratio			0.01		0.67	0.11		0.84		0.71	0.76	
Uniform Delay, d1			40.2		44.3	40.7		22.8		25.2	22.5	
Progression Factor			1.00		1.00	1.00		0.32		1.00	1.00	
Incremental Delay, d2			0.0		6.9	0.3		0.9		7.0	4.4	
Delay (s)			40.2		51.2	41.1		8.1		32.2	26.8	
Level of Service			D		D	D		A		C	C	
Approach Delay (s)		40.2			46.6			8.1			28.3	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

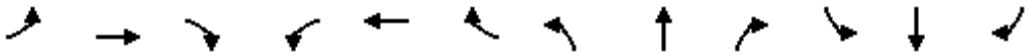


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	280	40	20	360	430	290
Future Volume (vph)	280	40	20	360	430	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.99			1.00	0.94	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.98			1.00	0.95	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1458			1560	1390	
Flt Permitted	0.96			0.94	1.00	
Satd. Flow (perm)	1458			1478	1390	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	42	21	379	453	305
RTOR Reduction (vph)	4	0	0	0	22	0
Lane Group Flow (vph)	333	0	0	400	736	0
Confl. Peds. (#/hr)		25	41			41
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	25.2			30.2	68.2	
Effective Green, g (s)	25.2			29.2	68.2	
Actuated g/C Ratio	0.23			0.27	0.63	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	338			398	874	
v/s Ratio Prot	c0.23				c0.53	
v/s Ratio Perm				c0.27		
v/c Ratio	0.99			1.01	0.84	
Uniform Delay, d1	41.4			39.6	15.9	
Progression Factor	1.00			1.00	0.27	
Incremental Delay, d2	44.8			46.4	6.1	
Delay (s)	86.2			86.0	10.4	
Level of Service	F			F	B	
Approach Delay (s)	86.2			86.0	10.4	
Approach LOS	F			F	B	

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	170	140	100	110	50	70	920	140	50	630	110
Future Volume (vph)	120	170	140	100	110	50	70	920	140	50	630	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.95		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1700		1490	1800		1752	3419		1752	3505	1524
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1700		1490	1485		1752	3419		1752	3505	1524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	125	177	146	104	115	52	73	958	146	52	656	115
RTOR Reduction (vph)	0	25	0	0	15	0	0	9	0	0	0	60
Lane Group Flow (vph)	125	298	0	104	152	0	73	1095	0	52	656	55
Confl. Peds. (#/hr)			9			6			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	23.4	23.4		15.7	15.7		7.1	57.1		6.3	56.3	56.3
Effective Green, g (s)	23.7	23.7		16.0	16.0		7.1	58.0		6.3	57.2	57.2
Actuated g/C Ratio	0.20	0.20		0.13	0.13		0.06	0.48		0.05	0.48	0.48
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	346	335		198	240		103	1652		91	1670	726
v/s Ratio Prot	0.07	c0.18		0.07	c0.08		c0.04	c0.32		0.03	0.19	
v/s Ratio Perm												0.04
v/c Ratio	0.36	0.89		0.53	0.63		0.71	0.66		0.57	0.39	0.08
Uniform Delay, d1	41.6	46.9		48.5	49.2		55.4	23.6		55.5	20.2	17.0
Progression Factor	1.00	1.00		1.00	1.00		1.01	0.74		1.29	0.54	0.09
Incremental Delay, d2	0.6	23.7		2.5	5.4		8.8	0.9		7.8	0.6	0.2
Delay (s)	42.3	70.6		51.0	54.6		64.7	18.4		79.4	11.5	1.7
Level of Service	D	E		D	D		E	B		E	B	A
Approach Delay (s)		62.7			53.2			21.3			14.4	
Approach LOS		E			D			C			B	

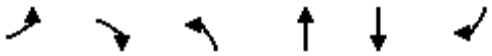
Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	110	200	130	90	220	40	130	260	60	20	240	80
Future Volume (vph)	110	200	130	90	220	40	130	260	60	20	240	80
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
Hourly flow rate (vph)	122	222	144	100	244	44	144	289	67	22	267	89

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	122	366	100	288	500	378
Volume Left (vph)	122	0	100	0	144	22
Volume Right (vph)	0	144	0	44	67	89
Hadj (s)	0.55	-0.22	0.55	-0.06	0.03	-0.08
Departure Headway (s)	9.6	8.8	9.8	9.2	8.7	8.6
Degree Utilization, x	0.32	0.90	0.27	0.74	1.21	0.91
Capacity (veh/h)	369	395	356	378	416	406
Control Delay (s)	15.9	51.3	15.3	33.0	144.0	53.4
Approach Delay (s)	42.5		28.4		144.0	53.4
Approach LOS	E		D		F	F

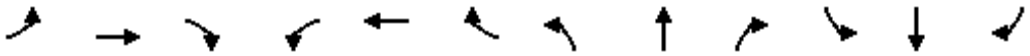
Intersection Summary				
Delay	70.6			
Level of Service	F			
Intersection Capacity Utilization	82.1%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	110	150	140	240	330	190
Future Volume (vph)	110	150	140	240	330	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.1	3.1	3.1	3.1	3.1	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.82	1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1490	1092	1481	1568	1418	
Flt Permitted	0.95	1.00	0.25	1.00	1.00	
Satd. Flow (perm)	1490	1092	395	1568	1418	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	158	147	253	347	200
RTOR Reduction (vph)	0	127	0	0	21	0
Lane Group Flow (vph)	116	31	147	253	526	0
Confl. Peds. (#/hr)	2	78	54			54
Confl. Bikes (#/hr)						3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	12.0	12.0	47.1	47.1	30.6	
Effective Green, g (s)	13.0	13.0	48.1	48.1	31.6	
Actuated g/C Ratio	0.19	0.19	0.71	0.71	0.47	
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	287	210	498	1120	665	
v/s Ratio Prot	c0.08		c0.06	0.16	c0.37	
v/s Ratio Perm		0.03	0.15			
v/c Ratio	0.40	0.15	0.30	0.23	0.79	
Uniform Delay, d1	23.8	22.5	5.3	3.3	15.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.3	0.3	0.1	6.4	
Delay (s)	24.7	22.9	5.6	3.4	21.5	
Level of Service	C	C	A	A	C	
Approach Delay (s)	23.6			4.2	21.5	
Approach LOS	C			A	C	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	67.3	Sum of lost time (s)	9.3
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

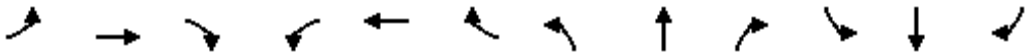
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	80	60	10	40	70	50	30	240	50	70	310	50
Future Volume (vph)	80	60	10	40	70	50	30	240	50	70	310	50
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
Hourly flow rate (vph)	91	68	11	45	80	57	34	273	57	80	352	57

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	170	182	364	489
Volume Left (vph)	91	45	34	80
Volume Right (vph)	11	57	57	57
Hadj (s)	0.12	-0.09	-0.02	0.01
Departure Headway (s)	7.1	6.9	6.1	5.9
Degree Utilization, x	0.33	0.35	0.62	0.80
Capacity (veh/h)	443	465	555	586
Control Delay (s)	13.6	13.5	18.4	28.5
Approach Delay (s)	13.6	13.5	18.4	28.5
Approach LOS	B	B	C	D

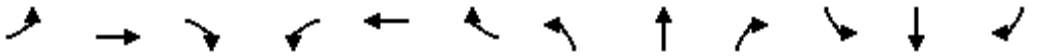
Intersection Summary				
Delay	21.1			
Level of Service	C			
Intersection Capacity Utilization	59.0%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	110	30	40	120	70	30	260	70	80	300	30
Future Volume (vph)	30	110	30	40	120	70	30	260	70	80	300	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.94	1.00		0.96	1.00	
Frt	1.00	0.97		1.00	0.94		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1439	1503		1458	1445		1404	1489		1429	1531	
Flt Permitted	0.63	1.00		0.66	1.00		0.53	1.00		0.53	1.00	
Satd. Flow (perm)	948	1503		1011	1445		779	1489		791	1531	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	122	33	44	133	78	33	289	78	89	333	33
RTOR Reduction (vph)	0	17	0	0	35	0	0	13	0	0	5	0
Lane Group Flow (vph)	33	138	0	44	176	0	33	354	0	89	361	0
Confl. Peds. (#/hr)	41		24	24		41	88		63	63		88
Confl. Bikes (#/hr)						1			2			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	9.5	9.5		9.5	9.5		17.3	17.3		17.3	17.3	
Effective Green, g (s)	9.7	9.7		9.7	9.7		17.5	17.5		17.5	17.5	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	261	414		278	398		387	740		393	761	
v/s Ratio Prot		0.09			c0.12			c0.24			0.24	
v/s Ratio Perm	0.03			0.04			0.04			0.11		
v/c Ratio	0.13	0.33		0.16	0.44		0.09	0.48		0.23	0.47	
Uniform Delay, d1	9.6	10.2		9.7	10.5		4.6	5.8		5.0	5.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.3		0.1	0.5		0.3	0.5	
Delay (s)	9.6	10.3		9.8	10.8		4.7	6.3		5.3	6.3	
Level of Service	A	B		A	B		A	A		A	A	
Approach Delay (s)		10.2			10.6			6.2			6.1	
Approach LOS		B			B			A			A	

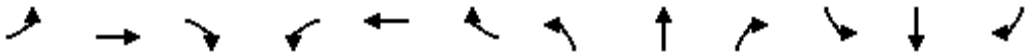
Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	35.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	80	90	60	70	40	50	900	30	10	570	90
Future Volume (vph)	110	80	90	60	70	40	50	900	30	10	570	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1443		1490	1462		1490	1559		1490	1524	
Flt Permitted	0.95	1.00		0.95	1.00		0.28	1.00		0.12	1.00	
Satd. Flow (perm)	1490	1443		1490	1462		442	1559		192	1524	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	87	98	65	76	43	54	978	33	11	620	98
RTOR Reduction (vph)	0	34	0	0	18	0	0	1	0	0	4	0
Lane Group Flow (vph)	120	151	0	65	101	0	54	1010	0	11	714	0
Confl. Peds. (#/hr)						5	10		3	3		10
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.0	19.0		8.3	16.3		79.5	79.5		79.5	79.5	
Effective Green, g (s)	11.0	19.6		8.3	16.9		80.1	80.1		80.1	80.1	
Actuated g/C Ratio	0.09	0.16		0.07	0.14		0.67	0.67		0.67	0.67	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	235		103	205		295	1040		128	1017	
v/s Ratio Prot	c0.08	c0.10		0.04	0.07			c0.65			0.47	
v/s Ratio Perm							0.12			0.06		
v/c Ratio	0.88	0.64		0.63	0.49		0.18	0.97		0.09	0.70	
Uniform Delay, d1	53.9	46.9		54.4	47.6		7.6	18.9		7.0	12.5	
Progression Factor	1.00	1.00		1.00	1.00		0.10	0.43		0.43	0.52	
Incremental Delay, d2	43.9	5.9		11.9	1.9		0.7	14.0		1.2	3.7	
Delay (s)	97.7	52.8		66.3	49.5		1.4	22.0		4.2	10.2	
Level of Service	F	D		E	D		A	C		A	B	
Approach Delay (s)		70.5			55.4			20.9			10.1	
Approach LOS		E			E			C			B	

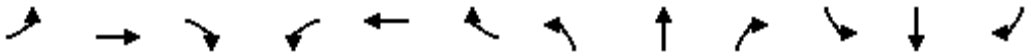
Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	70	10	10	10	40	960	30	10	660	30
Future Volume (Veh/h)	30	10	70	10	10	10	40	960	30	10	660	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	32	11	75	11	11	11	43	1032	32	11	710	32
Pedestrians		16			3						15	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		1			0						1	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.72	0.72	0.74	0.72	0.72	0.59	0.74			0.59		
vC, conflicting volume	1914	1917	742	1950	1917	1066	758			1067		
vC1, stage 1 conf vol	764	764		1137	1137							
vC2, stage 2 conf vol	1150	1153		812	780							
vCu, unblocked vol	1259	1264	475	1309	1264	760	497			761		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	78	94	83	93	94	95	94			98		
cM capacity (veh/h)	146	176	429	160	187	234	775			495		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	118	33	43	1064	11	742
Volume Left	32	11	43	0	11	0
Volume Right	75	11	0	32	0	32
cSH	258	189	775	1700	495	1700
Volume to Capacity	0.46	0.17	0.06	0.63	0.02	0.44
Queue Length 95th (ft)	56	15	4	0	2	0
Control Delay (s)	30.1	28.1	9.9	0.0	12.4	0.0
Lane LOS	D	D	A		B	
Approach Delay (s)	30.1	28.1	0.4		0.2	
Approach LOS	D	D				

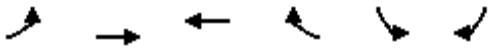
Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	67.0%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	210	70	40	270	20	20	10	40	20	10	30
Future Volume (Veh/h)	20	210	70	40	270	20	20	10	40	20	10	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	20	214	71	41	276	20	20	10	41	20	10	31
Pedestrians		2			1			36			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked												
vC, conflicting volume	305			321			732	712	286	714	738	297
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	305			321			732	712	286	714	738	297
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			97			93	97	94	93	97	96
cM capacity (veh/h)	1241			1196			284	326	727	295	315	733

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	305	337	71	61
Volume Left	20	41	20	20
Volume Right	71	20	41	31
cSH	1241	1196	451	430
Volume to Capacity	0.02	0.03	0.16	0.14
Queue Length 95th (ft)	1	3	14	12
Control Delay (s)	0.7	1.3	14.5	14.7
Lane LOS	A	A	B	B
Approach Delay (s)	0.7	1.3	14.5	14.7
Approach LOS			B	B

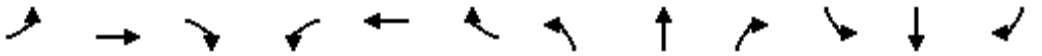
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	39.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	280	50	60	30	90	260
Future Volume (Veh/h)	280	50	60	30	90	260
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	308	55	66	33	99	286
Pedestrians		15			8	
Lane Width (ft)		13.0			13.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		1			1	
Right turn flare (veh)						1
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1220				
pX, platoon unblocked						
vC, conflicting volume	107				762	106
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	107				762	106
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	79				66	69
cM capacity (veh/h)	1467				292	927

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	363	99	385
Volume Left	308	0	99
Volume Right	0	33	286
cSH	1467	1700	864
Volume to Capacity	0.21	0.06	0.45
Queue Length 95th (ft)	20	0	58
Control Delay (s)	7.1	0.0	12.5
Lane LOS	A		B
Approach Delay (s)	7.1	0.0	12.5
Approach LOS			B

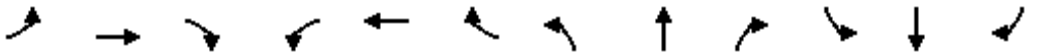
Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	1100	10	10	850	40	10	10	10	70	50	340
Future Volume (vph)	240	1100	10	10	850	40	10	10	10	70	50	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.1	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.95			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1752	3500		1770	3478			1750			1706	1490
Flt Permitted	0.95	1.00		0.95	1.00			0.91			0.81	1.00
Satd. Flow (perm)	1752	3500		1770	3478			1620			1427	1490
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	267	1222	11	11	944	44	11	11	11	78	56	378
RTOR Reduction (vph)	0	0	0	0	3	0	0	9	0	0	0	145
Lane Group Flow (vph)	267	1233	0	11	985	0	0	24	0	0	134	233
Confl. Peds. (#/hr)						1				3		
Heavy Vehicles (%)	3%	3%	2%	2%	3%	3%	2%	2%	2%	3%	2%	3%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	17.9	51.3		1.1	34.6			17.2			17.2	17.2
Effective Green, g (s)	17.9	52.7		1.1	36.0			17.2			17.2	17.2
Actuated g/C Ratio	0.22	0.63		0.01	0.43			0.21			0.21	0.21
Clearance Time (s)	4.0	5.4		4.1	5.4			4.0			4.0	4.0
Vehicle Extension (s)	2.0	3.0		3.0	3.0			2.0			2.0	2.0
Lane Grp Cap (vph)	377	2219		23	1506			335			295	308
v/s Ratio Prot	c0.15	0.35		0.01	c0.28							
v/s Ratio Perm								0.01			0.09	c0.16
v/c Ratio	0.71	0.56		0.48	0.65			0.07			0.45	0.76
Uniform Delay, d1	30.2	8.6		40.7	18.6			26.5			28.8	31.0
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	4.9	0.3		14.8	1.0			0.0			0.4	9.0
Delay (s)	35.1	8.9		55.6	19.7			26.6			29.2	40.0
Level of Service	D	A		E	B			C			C	D
Approach Delay (s)		13.6			20.1			26.6			37.2	
Approach LOS		B			C			C			D	

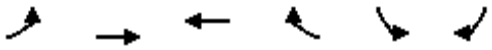
Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	83.1	Sum of lost time (s)	12.1
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	990	110	70	690	60	70	80	40	40	80	210
Future Volume (vph)	160	990	110	70	690	60	70	80	40	40	80	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.7
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1544	3400	3455		1752	1845	1516	1752	1845	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1544	3400	3455		1752	1845	1516	1752	1845	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	1076	120	76	750	65	76	87	43	43	87	228
RTOR Reduction (vph)	0	0	38	0	5	0	0	0	33	0	0	201
Lane Group Flow (vph)	174	1076	82	76	810	0	76	87	10	43	87	27
Confl. Peds. (#/hr)			7			3			22			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	13.8	36.9	50.1	9.2	36.3		13.2	19.9	19.9	4.4	11.1	11.1
Effective Green, g (s)	13.8	38.1	50.1	9.2	37.5		13.2	20.6	20.6	4.4	11.8	11.1
Actuated g/C Ratio	0.15	0.41	0.54	0.10	0.41		0.14	0.22	0.22	0.05	0.13	0.12
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	4.7
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	261	1446	838	338	1403		250	411	338	83	235	184
v/s Ratio Prot	c0.10	c0.31	0.01	0.02	c0.23		c0.04	0.05		c0.02	c0.05	
v/s Ratio Perm			0.04						0.01			0.02
v/c Ratio	0.67	0.74	0.10	0.22	0.58		0.30	0.21	0.03	0.52	0.37	0.15
Uniform Delay, d1	37.1	23.0	10.2	38.3	21.3		35.4	29.2	28.0	42.9	36.8	36.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	2.1	0.0	0.1	0.6		0.3	0.1	0.0	2.3	0.4	0.1
Delay (s)	42.0	25.1	10.2	38.4	21.8		35.7	29.3	28.0	45.2	37.2	36.5
Level of Service	D	C	B	D	C		D	C	C	D	D	D
Approach Delay (s)		25.9			23.2			31.4			37.7	
Approach LOS		C			C			C			D	

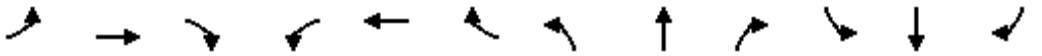
Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	92.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	170	850	620	150	180	140
Future Volume (vph)	170	850	620	150	180	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.9	3.9		3.9	3.9
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3376		1490	1308
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3376		1490	1308
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	895	653	158	189	147
RTOR Reduction (vph)	0	0	17	0	0	103
Lane Group Flow (vph)	179	895	794	0	189	44
Confl. Peds. (#/hr)	5			5	3	3
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10	10
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	16.9	75.1	54.2		35.1	35.1
Effective Green, g (s)	17.9	76.1	55.2		36.1	36.1
Actuated g/C Ratio	0.15	0.63	0.46		0.30	0.30
Clearance Time (s)	4.0	4.9	4.9		4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	261	2222	1552		448	393
v/s Ratio Prot	c0.10	0.26	c0.24		c0.13	
v/s Ratio Perm						0.03
v/c Ratio	0.69	0.40	0.51		0.42	0.11
Uniform Delay, d1	48.4	10.8	22.9		33.6	30.4
Progression Factor	1.00	1.00	0.72		1.00	1.00
Incremental Delay, d2	7.3	0.5	1.1		2.9	0.6
Delay (s)	55.7	11.3	17.6		36.5	30.9
Level of Service	E	B	B		D	C
Approach Delay (s)		18.7	17.6		34.1	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

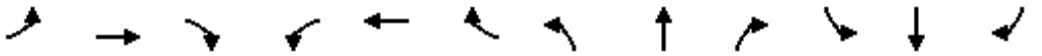
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	450	210	250	280	20	170	750	570	50	440	260
Future Volume (vph)	340	450	210	250	280	20	170	750	570	50	440	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1568	3400	3465		3400	1845	1541	1752	3033	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1568	3400	3465		3400	1845	1541	1752	3033	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	489	228	272	304	22	185	815	620	54	478	283
RTOR Reduction (vph)	0	0	184	0	5	0	0	0	211	0	62	0
Lane Group Flow (vph)	370	489	44	272	321	0	185	815	409	54	699	0
Confl. Peds. (#/hr)						4			3			9
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	14.0	22.5	22.5	14.9	23.4		10.4	58.5	58.5	6.3	54.4	
Effective Green, g (s)	14.0	23.4	23.4	14.9	24.3		10.4	59.4	59.4	6.3	55.3	
Actuated g/C Ratio	0.12	0.19	0.19	0.12	0.20		0.09	0.49	0.49	0.05	0.46	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	683	305	422	701		294	913	762	91	1397	
v/s Ratio Prot	c0.11	c0.14		c0.08	0.09		c0.05	c0.44		0.03	0.23	
v/s Ratio Perm			0.03						0.27			
v/c Ratio	0.93	0.72	0.15	0.64	0.46		0.63	0.89	0.54	0.59	0.50	
Uniform Delay, d1	52.5	45.2	40.0	50.0	42.1		52.9	27.4	20.8	55.6	22.7	
Progression Factor	0.87	0.78	0.25	1.00	1.00		1.00	1.00	1.00	1.12	0.79	
Incremental Delay, d2	27.6	3.3	0.2	3.4	0.5		4.2	12.9	2.7	8.2	1.0	
Delay (s)	73.5	38.4	10.0	53.4	42.5		57.1	40.3	23.5	70.7	18.9	
Level of Service	E	D	B	D	D		E	D	C	E	B	
Approach Delay (s)		44.4			47.5			35.8			22.4	
Approach LOS		D			D			D			C	

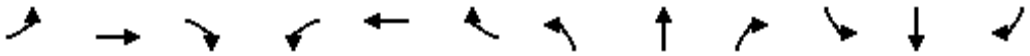
Intersection Summary			
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	10	70	10	10	10	60	580	10	10	740	170
Future Volume (vph)	50	10	70	10	10	10	60	580	10	10	740	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1538		1729		1750	1839		1751	3393	
Flt Permitted	0.73	1.00	1.00		0.93		0.20	1.00		0.28	1.00	
Satd. Flow (perm)	1350	1845	1538		1630		363	1839		517	3393	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	67	13	93	13	13	13	80	773	13	13	987	227
RTOR Reduction (vph)	0	0	76	0	11	0	0	1	0	0	20	0
Lane Group Flow (vph)	67	13	17	0	28	0	80	785	0	13	1194	0
Confl. Peds. (#/hr)			5	5			20		5	5		20
Confl. Bikes (#/hr)			1									4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	14.2	14.2	14.2		14.2		59.4	59.4		59.4	59.4	
Effective Green, g (s)	14.7	14.7	14.7		14.7		59.4	59.4		59.4	59.4	
Actuated g/C Ratio	0.18	0.18	0.18		0.18		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	239	327	273		289		260	1319		370	2434	
v/s Ratio Prot		0.01						c0.43			0.35	
v/s Ratio Perm	c0.05		0.01		0.02		0.22			0.03		
v/c Ratio	0.28	0.04	0.06		0.10		0.31	0.60		0.04	0.49	
Uniform Delay, d1	29.5	28.2	28.3		28.5		4.2	5.8		3.4	5.1	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.82	0.75	
Incremental Delay, d2	0.2	0.0	0.0		0.1		0.2	0.5		0.0	0.1	
Delay (s)	29.7	28.2	28.3		28.6		4.5	6.3		2.8	3.9	
Level of Service	C	C	C		C		A	A		A	A	
Approach Delay (s)		28.9			28.6			6.1			3.9	
Approach LOS		C			C			A			A	

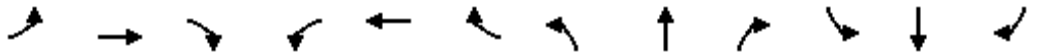
Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	82.8	Sum of lost time (s)	13.2
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	0	10	90	0	220	0	330	90	150	500	10
Future Volume (vph)	10	0	10	90	0	220	0	330	90	150	500	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	0	12	106	0	259	0	388	106	176	588	12

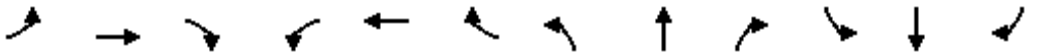
Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	24	106	259	494	776
Volume Left (vph)	12	106	0	0	176
Volume Right (vph)	12	0	259	106	12
Hadj (s)	-0.15	0.25	-0.55	-0.08	0.09
Departure Headway (s)	6.9	7.0	3.2	5.2	5.1
Degree Utilization, x	0.05	0.21	0.23	0.71	1.11
Capacity (veh/h)	471	482	1122	678	691
Control Delay (s)	10.3	11.8	7.2	20.0	89.0
Approach Delay (s)	10.3	8.5		20.0	89.0
Approach LOS	B	A		C	F

Intersection Summary				
Delay	49.6			
Level of Service	E			
Intersection Capacity Utilization	78.2%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	170	10	410	20	440	100	190	830	10
Future Volume (vph)	10	10	10	170	10	410	20	440	100	190	830	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1708			1714	1568	1752	3505	1485	1752	3493	
Flt Permitted		0.89			0.71	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1541			1273	1568	1752	3505	1485	1752	3493	
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	13	13	13	221	13	532	26	571	130	247	1078	13
RTOR Reduction (vph)	0	10	0	0	0	92	0	0	73	0	1	0
Lane Group Flow (vph)	0	29	0	0	234	440	26	571	57	247	1090	0
Confl. Peds. (#/hr)	1		27	27		1			15			67
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		20.5			20.5	45.0	10.0	40.1	40.1	20.0	50.1	
Effective Green, g (s)		21.0			21.0	45.5	10.0	40.8	40.8	20.0	50.8	
Actuated g/C Ratio		0.22			0.22	0.49	0.11	0.43	0.43	0.21	0.54	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		345			285	760	186	1524	645	373	1891	
v/s Ratio Prot						c0.28	0.01	0.16		c0.14	c0.31	
v/s Ratio Perm		0.02			c0.18				0.04			
v/c Ratio		0.08			0.82	0.58	0.14	0.37	0.09	0.66	0.58	
Uniform Delay, d1		28.8			34.6	17.3	38.0	17.9	15.6	33.8	14.3	
Progression Factor		1.00			1.00	1.00	1.16	1.07	1.40	1.00	1.00	
Incremental Delay, d2		0.0			16.3	0.7	0.1	0.1	0.1	3.4	0.4	
Delay (s)		28.8			50.9	18.0	44.2	19.3	21.9	37.2	14.8	
Level of Service		C			D	B	D	B	C	D	B	
Approach Delay (s)		28.8			28.0			20.7			18.9	
Approach LOS		C			C			C			B	

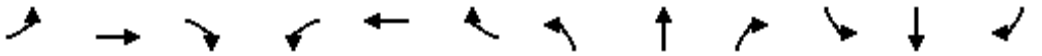
Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	93.8	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	30	80	190	50	10	160	690	40	10	1090	420
Future Volume (vph)	140	30	80	190	50	10	160	690	40	10	1090	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1379		1752	1798		1752	3469		1752	3505	1505
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1379		1752	1798		1752	3469		1752	3505	1505
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	179	38	103	244	64	13	205	885	51	13	1397	538
RTOR Reduction (vph)	0	91	0	0	6	0	0	3	0	0	0	215
Lane Group Flow (vph)	179	51	0	244	71	0	205	933	0	13	1397	323
Confl. Peds. (#/hr)			3						5			6
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	21.4	10.8		15.6	5.0		19.2	73.7		2.0	56.5	56.5
Effective Green, g (s)	22.0	11.4		16.6	5.0		19.2	75.0		2.0	57.8	57.8
Actuated g/C Ratio	0.18	0.10		0.14	0.04		0.16	0.62		0.02	0.48	0.48
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	273	131		242	74		280	2168		29	1688	724
v/s Ratio Prot	c0.12	0.04		c0.14	c0.04		c0.12	0.27		0.01	c0.40	
v/s Ratio Perm												0.21
v/c Ratio	0.66	0.39		1.01	0.96		0.73	0.43		0.45	0.83	0.45
Uniform Delay, d1	45.5	51.0		51.7	57.4		48.0	11.5		58.5	26.8	20.5
Progression Factor	1.00	1.00		1.00	1.00		1.15	0.52		1.00	1.00	1.00
Incremental Delay, d2	5.6	1.9		60.0	91.3		8.3	0.5		10.6	4.8	2.0
Delay (s)	51.1	52.9		111.7	148.7		63.6	6.6		69.1	31.6	22.5
Level of Service	D	D		F	F		E	A		E	C	C
Approach Delay (s)		51.9			120.6			16.8			29.4	
Approach LOS		D			F			B			C	

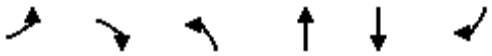
Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



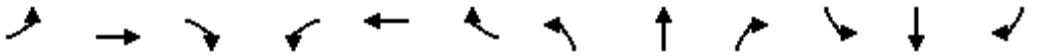
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	280	10	230	0	360	70	240	630	10
Future Volume (vph)	0	0	10	280	10	230	0	360	70	240	630	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			1.00		1.00	0.91		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.98		1.00	1.00	
Flt Protected			1.00		0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1596		1760	1218		1520		1490	1561	
Flt Permitted			1.00		0.95	1.00		1.00		0.19	1.00	
Satd. Flow (perm)			1596		1760	1218		1520		299	1561	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	11	301	11	247	0	387	75	258	677	11
RTOR Reduction (vph)	0	0	9	0	0	201	0	6	0	0	1	0
Lane Group Flow (vph)	0	0	2	0	312	46	0	456	0	258	687	0
Confl. Peds. (#/hr)	20					20	32		11			32
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			20.2		20.2	20.2		49.1		54.4	54.4	
Effective Green, g (s)			20.2		20.2	20.2		47.1		54.4	53.4	
Actuated g/C Ratio			0.19		0.19	0.19		0.43		0.50	0.49	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			297		327	226		660		370	768	
v/s Ratio Prot					c0.18			c0.30		0.13	c0.44	
v/s Ratio Perm			0.00			0.04				0.22		
v/c Ratio			0.01		0.95	0.20		0.69		0.70	0.90	
Uniform Delay, d1			35.9		43.6	37.3		24.8		19.4	25.0	
Progression Factor			1.00		1.00	1.00		0.12		1.00	1.00	
Incremental Delay, d2			0.0		37.7	0.5		2.7		5.6	12.9	
Delay (s)			35.9		81.3	37.8		5.6		25.0	37.9	
Level of Service			D		F	D		A		C	D	
Approach Delay (s)		35.9			62.1			5.6			34.4	
Approach LOS		D			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	10	10	260	500	400
Future Volume (vph)	170	10	10	260	500	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.94	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1484			1565	1422	
Flt Permitted	0.95			0.96	1.00	
Satd. Flow (perm)	1484			1510	1422	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	177	10	10	271	521	417
RTOR Reduction (vph)	2	0	0	0	22	0
Lane Group Flow (vph)	185	0	0	281	916	0
Confl. Peds. (#/hr)		3	18			18
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	18.8			30.3	74.6	
Effective Green, g (s)	18.8			29.3	74.6	
Actuated g/C Ratio	0.17			0.27	0.69	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	257			408	978	
v/s Ratio Prot	c0.12				c0.64	
v/s Ratio Perm				0.19		
v/c Ratio	0.72			0.69	0.94	
Uniform Delay, d1	42.3			35.5	14.8	
Progression Factor	1.00			1.00	0.39	
Incremental Delay, d2	10.2			5.2	9.1	
Delay (s)	52.5			40.7	14.9	
Level of Service	D			D	B	
Approach Delay (s)	52.5			40.7	14.9	
Approach LOS	D			D	B	

Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	160	140	120	270	80	80	770	80	70	790	220
Future Volume (vph)	50	160	140	120	270	80	80	770	80	70	790	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.98		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1669		1490	1800		1752	3444		1752	3505	1485
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1669		1490	1491		1752	3444		1752	3505	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	172	151	129	290	86	86	828	86	75	849	237
RTOR Reduction (vph)	0	28	0	0	10	0	0	5	0	0	0	133
Lane Group Flow (vph)	54	295	0	129	366	0	86	909	0	75	849	104
Confl. Peds. (#/hr)			30			34			4			8
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	15.3	29.7		16.8	31.2		8.6	47.7		8.3	47.4	47.4
Effective Green, g (s)	15.6	30.0		17.1	31.5		8.6	48.6		8.3	48.3	48.3
Actuated g/C Ratio	0.13	0.25		0.14	0.26		0.07	0.41		0.07	0.40	0.40
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	227	417		212	472		125	1394		121	1410	597
v/s Ratio Prot	0.03	0.18		c0.09	c0.20		c0.05	c0.26		0.04	0.24	
v/s Ratio Perm												0.07
v/c Ratio	0.24	0.71		0.61	0.78		0.69	0.65		0.62	0.60	0.17
Uniform Delay, d1	46.9	41.0		48.3	41.0		54.4	28.9		54.3	28.3	23.0
Progression Factor	1.00	1.00		1.00	1.00		0.97	1.17		0.70	0.94	2.30
Incremental Delay, d2	0.5	5.4		4.9	7.8		12.7	2.0		4.9	1.0	0.3
Delay (s)	47.4	46.4		53.2	48.8		65.3	35.8		43.0	27.7	53.4
Level of Service	D	D		D	D		E	D		D	C	D
Approach Delay (s)		46.6			49.9			38.3			33.9	
Approach LOS		D			D			D			C	

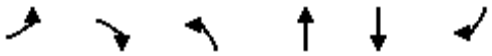
Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	200	130	20	160	10	80	140	30	10	330	170
Future Volume (vph)	50	200	130	20	160	10	80	140	30	10	330	170
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	55	220	143	22	176	11	88	154	33	11	363	187

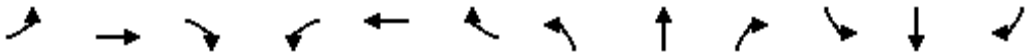
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	55	363	22	187	275	561
Volume Left (vph)	55	0	22	0	88	11
Volume Right (vph)	0	143	0	11	33	187
Hadj (s)	0.55	-0.22	0.55	0.01	0.04	-0.15
Departure Headway (s)	8.4	7.6	9.0	8.4	7.6	6.8
Degree Utilization, x	0.13	0.77	0.05	0.44	0.58	1.07
Capacity (veh/h)	418	461	380	398	450	516
Control Delay (s)	11.4	30.5	11.3	16.6	20.7	84.1
Approach Delay (s)	28.0		16.1		20.7	84.1
Approach LOS	D		C		C	F

Intersection Summary				
Delay	46.4			
Level of Service	E			
Intersection Capacity Utilization	77.6%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	80	140	90	190	410	90
Future Volume (vph)	80	140	90	190	410	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1490	1275	1490	1568	1516	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1490	1275	1490	1568	1516	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	88	154	99	209	451	99
RTOR Reduction (vph)	0	125	0	0	7	0
Lane Group Flow (vph)	88	29	99	209	543	0
Confl. Peds. (#/hr)		12	15			15
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	10.9	10.9	8.5	44.9	32.3	
Effective Green, g (s)	12.0	12.0	9.6	46.0	33.4	
Actuated g/C Ratio	0.19	0.19	0.15	0.72	0.52	
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	279	239	223	1127	791	
v/s Ratio Prot	c0.06		c0.07	0.13	c0.36	
v/s Ratio Perm		0.02				
v/c Ratio	0.32	0.12	0.44	0.19	0.69	
Uniform Delay, d1	22.5	21.6	24.8	2.9	11.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	0.2	1.4	0.1	2.5	
Delay (s)	23.1	21.8	26.2	3.0	13.9	
Level of Service	C	C	C	A	B	
Approach Delay (s)	22.3			10.5	13.9	
Approach LOS	C			B	B	

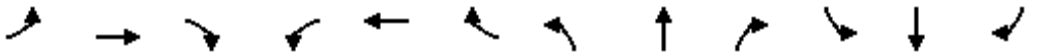
Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	50	60	50	100	50	40	130	60	60	290	70
Future Volume (vph)	50	50	60	50	100	50	40	130	60	60	290	70
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
Hourly flow rate (vph)	57	57	68	57	114	57	45	148	68	68	330	80

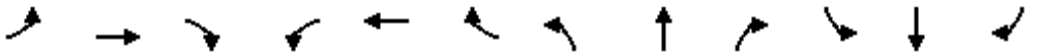
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	182	228	261	478
Volume Left (vph)	57	57	45	68
Volume Right (vph)	68	57	68	80
Hadj (s)	-0.11	-0.05	-0.07	-0.02
Departure Headway (s)	6.6	6.5	6.2	5.8
Degree Utilization, x	0.33	0.41	0.45	0.77
Capacity (veh/h)	477	482	530	602
Control Delay (s)	12.9	14.1	14.0	25.5
Approach Delay (s)	12.9	14.1	14.0	25.5
Approach LOS	B	B	B	D

Intersection Summary				
Delay	18.6			
Level of Service	C			
Intersection Capacity Utilization	49.7%	ICU Level of Service	A	
Analysis Period (min)	15			



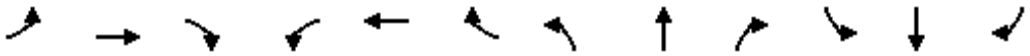
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	140	20	40	140	30	20	220	30	80	360	40
Future Volume (vph)	20	140	20	40	140	30	20	220	30	80	360	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		0.98	1.00		0.95	1.00		0.97	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1412	1531		1466	1504		1423	1528		1440	1527	
Flt Permitted	0.64	1.00		0.64	1.00		0.43	1.00		0.58	1.00	
Satd. Flow (perm)	944	1531		990	1504		639	1528		885	1527	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	23	161	23	46	161	34	23	253	34	92	414	46
RTOR Reduction (vph)	0	8	0	0	13	0	0	6	0	0	5	0
Lane Group Flow (vph)	23	176	0	46	182	0	23	281	0	92	455	0
Confl. Peds. (#/hr)	54		16	16		54	74		39	39		74
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	12.0	12.0		12.0	12.0		20.2	20.2		20.2	20.2	
Effective Green, g (s)	12.2	12.2		12.2	12.2		20.4	20.4		20.4	20.4	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	460		297	451		321	767		444	767	
v/s Ratio Prot		0.11			c0.12			0.18			c0.30	
v/s Ratio Perm	0.02			0.05			0.04			0.10		
v/c Ratio	0.08	0.38		0.15	0.40		0.07	0.37		0.21	0.59	
Uniform Delay, d1	10.2	11.2		10.4	11.3		5.2	6.2		5.6	7.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.1	0.2		0.1	0.3		0.2	1.2	
Delay (s)	10.2	11.4		10.5	11.5		5.3	6.5		5.8	8.4	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.3			11.3			6.4			8.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	40.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	80	90	70	100	30	60	710	40	20	850	70
Future Volume (vph)	30	80	90	70	100	30	60	710	40	20	850	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1414		1490	1500		1490	1553		1490	1544	
Flt Permitted	0.95	1.00		0.95	1.00		0.18	1.00		0.27	1.00	
Satd. Flow (perm)	1490	1414		1490	1500		274	1553		417	1544	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	31	82	92	71	102	31	61	724	41	20	867	71
RTOR Reduction (vph)	0	35	0	0	9	0	0	2	0	0	2	0
Lane Group Flow (vph)	31	139	0	71	124	0	61	763	0	20	936	0
Confl. Peds. (#/hr)			5			5	8		3	3		8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	5.6	16.8		8.4	19.6		81.6	81.6		81.6	81.6	
Effective Green, g (s)	5.6	17.4		8.4	20.2		82.2	82.2		82.2	82.2	
Actuated g/C Ratio	0.05	0.14		0.07	0.17		0.69	0.69		0.69	0.69	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	69	205		104	252		187	1063		285	1057	
v/s Ratio Prot	0.02	c0.10		c0.05	c0.08			0.49			c0.61	
v/s Ratio Perm							0.22			0.05		
v/c Ratio	0.45	0.68		0.68	0.49		0.33	0.72		0.07	0.89	
Uniform Delay, d1	55.7	48.6		54.5	45.2		7.7	11.7		6.3	15.1	
Progression Factor	1.00	1.00		1.00	1.00		0.13	0.30		2.31	2.23	
Incremental Delay, d2	4.6	8.6		16.9	1.5		3.2	2.9		0.4	9.2	
Delay (s)	60.3	57.2		71.4	46.8		4.1	6.4		14.9	43.0	
Level of Service	E	E		E	D		A	A		B	D	
Approach Delay (s)		57.7			55.3			6.3			42.4	
Approach LOS		E			E			A			D	

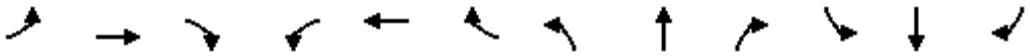
Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	10	20	20	30	760	20	10	910	80
Future Volume (Veh/h)	10	10	40	10	20	20	30	760	20	10	910	80
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	10	10	41	10	21	21	31	784	21	10	938	82
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.65	0.65	0.51	0.65	0.65	0.71	0.51			0.71		
vC, conflicting volume	1924	1891	999	1866	1922	828	1040			810		
vC1, stage 1 conf vol	1019	1019		862	862							
vC2, stage 2 conf vol	906	872		1004	1060							
vCu, unblocked vol	1150	1099	516	1060	1146	552	596			528		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	95	85	94	89	94	94			99		
cM capacity (veh/h)	191	219	279	175	188	367	488			731		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	52	31	805	10	1020
Volume Left	10	10	31	0	10	0
Volume Right	41	21	0	21	0	82
cSH	249	230	488	1700	731	1700
Volume to Capacity	0.24	0.23	0.06	0.47	0.01	0.60
Queue Length 95th (ft)	23	21	5	0	1	0
Control Delay (s)	24.1	25.2	12.9	0.0	10.0	0.0
Lane LOS	C	D	B		A	
Approach Delay (s)	24.1	25.2	0.5		0.1	
Approach LOS	C	D				

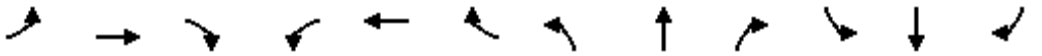
Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	69.6%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	250	110	10	370	10	40	10	10	10	10	40
Future Volume (Veh/h)	20	250	110	10	370	10	40	10	10	10	10	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	313	138	13	463	13	50	13	13	13	13	50
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.93			0.93	0.93	0.93	0.93	0.93	
vC, conflicting volume	512			459			992	978	392	985	1040	506
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	512			380			953	938	308	946	1006	506
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			72	94	98	93	94	91
cM capacity (veh/h)	1017			1083			180	227	673	192	207	548

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	476	489	76	76
Volume Left	25	13	50	13
Volume Right	138	13	13	50
cSH	1017	1083	214	343
Volume to Capacity	0.02	0.01	0.36	0.22
Queue Length 95th (ft)	2	1	38	21
Control Delay (s)	0.7	0.4	30.8	18.5
Lane LOS	A	A	D	C
Approach Delay (s)	0.7	0.4	30.8	18.5
Approach LOS			D	C

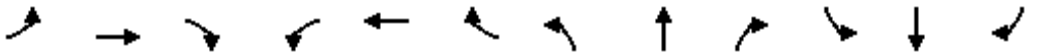
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	170	50	50	180	110	50	10	90	50	40	150	270
Future Volume (vph)	170	50	50	180	110	50	10	90	50	40	150	270
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
Hourly flow rate (vph)	185	54	54	196	120	54	11	98	54	43	163	293

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	293	370	163	206	293
Volume Left (vph)	185	196	11	43	0
Volume Right (vph)	54	54	54	0	293
Hadj (s)	0.05	0.05	-0.15	0.14	-0.67
Departure Headway (s)	6.8	6.6	7.2	7.3	6.4
Degree Utilization, x	0.55	0.68	0.33	0.42	0.52
Capacity (veh/h)	485	510	425	467	520
Control Delay (s)	17.9	22.5	13.7	14.1	15.1
Approach Delay (s)	17.9	22.5	13.7	14.7	
Approach LOS	C	C	B	B	

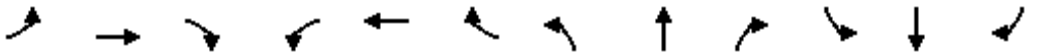
Intersection Summary				
Delay	17.5			
Level of Service	C			
Intersection Capacity Utilization	53.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	840	10	10	1110	80	10	30	10	80	10	260
Future Volume (vph)	160	840	10	10	1110	80	10	30	10	80	10	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	1.00
Frt	1.00	1.00		1.00	0.99			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (prot)	1752	3499		1752	3465			1777			1746	1568
Flt Permitted	0.95	1.00		0.95	1.00			0.94			0.80	1.00
Satd. Flow (perm)	1752	3499		1752	3465			1686			1462	1568
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.93	0.93	0.90	0.90	0.90	0.93	0.90	0.93
Adj. Flow (vph)	172	903	11	11	1194	86	11	33	11	86	11	280
RTOR Reduction (vph)	0	0	0	0	4	0	0	8	0	0	0	159
Lane Group Flow (vph)	172	914	0	11	1276	0	0	47	0	0	97	121
Confl. Peds. (#/hr)						1				13		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	13.1	51.7		1.0	39.7			11.7			11.7	11.7
Effective Green, g (s)	13.1	53.1		1.1	41.1			11.7			11.7	11.7
Actuated g/C Ratio	0.17	0.68		0.01	0.53			0.15			0.15	0.15
Clearance Time (s)	4.0	5.4		4.1	5.4			4.0			4.0	4.0
Vehicle Extension (s)	2.0	3.0		3.0	3.0			2.0			2.0	2.0
Lane Grp Cap (vph)	294	2385		24	1828			253			219	235
v/s Ratio Prot	c0.10	0.26		0.01	c0.37							
v/s Ratio Perm								0.03			0.07	c0.08
v/c Ratio	0.59	0.38		0.46	0.70			0.18			0.44	0.52
Uniform Delay, d1	29.9	5.3		38.1	13.8			28.9			30.1	30.5
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.9	0.1		13.2	1.2			0.1			0.5	0.8
Delay (s)	31.8	5.4		51.3	14.9			29.1			30.7	31.3
Level of Service	C	A		D	B			C			C	C
Approach Delay (s)		9.6			15.3			29.1			31.1	
Approach LOS		A			B			C			C	

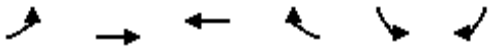
Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	620	200	350	800	110	180	160	230	50	180	220
Future Volume (vph)	110	620	200	350	800	110	180	160	230	50	180	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.7
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1541	3400	3396		1752	1845	1533	1752	1845	1490
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1541	3400	3396		1752	1845	1533	1752	1845	1490
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	133	747	241	422	964	133	217	193	277	60	217	265
RTOR Reduction (vph)	0	0	71	0	8	0	0	0	196	0	0	217
Lane Group Flow (vph)	133	747	170	422	1089	0	217	193	81	60	217	48
Confl. Peds. (#/hr)			9			24			8			31
Confl. Bikes (#/hr)			6			7			1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	13.2	28.8	47.3	22.6	42.2		18.5	32.0	32.0	7.0	20.5	20.5
Effective Green, g (s)	13.2	30.0	47.3	22.6	43.4		18.5	32.7	32.7	7.0	21.2	20.5
Actuated g/C Ratio	0.12	0.27	0.42	0.20	0.39		0.16	0.29	0.29	0.06	0.19	0.18
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	4.7
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	205	936	649	684	1312		288	537	446	109	348	271
v/s Ratio Prot	c0.08	0.21	0.04	0.12	c0.32		c0.12	0.10		0.03	c0.12	
v/s Ratio Perm			0.07						0.05			0.03
v/c Ratio	0.65	0.80	0.26	0.62	0.83		0.75	0.36	0.18	0.55	0.62	0.18
Uniform Delay, d1	47.3	38.3	21.1	40.9	31.1		44.7	31.5	29.8	51.1	41.9	38.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.2	4.8	0.1	1.2	4.6		9.5	0.2	0.1	3.4	2.5	0.1
Delay (s)	52.5	43.1	21.2	42.1	35.7		54.2	31.7	29.9	54.5	44.4	38.9
Level of Service	D	D	C	D	D		D	C	C	D	D	D
Approach Delay (s)		39.5			37.5			38.1			42.8	
Approach LOS		D			D			D			D	

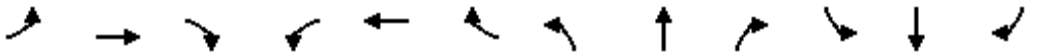
Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	112.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	170	730	1040	290	190	220
Future Volume (vph)	170	730	1040	290	190	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3369		1490	1333
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3369		1490	1333
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	198	849	1209	337	221	256
RTOR Reduction (vph)	0	0	20	0	0	177
Lane Group Flow (vph)	198	849	1526	0	221	79
Confl. Peds. (#/hr)	2			2	1	
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10	10
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	17.8	75.1	53.3		35.1	35.1
Effective Green, g (s)	18.8	77.0	55.2		37.0	37.0
Actuated g/C Ratio	0.16	0.64	0.46		0.31	0.31
Clearance Time (s)	4.0	4.9	4.9		4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	274	2249	1549		459	411
v/s Ratio Prot	c0.11	0.24	c0.45		c0.15	
v/s Ratio Perm						0.06
v/c Ratio	0.72	0.38	0.99		0.48	0.19
Uniform Delay, d1	48.1	10.2	32.0		33.7	30.5
Progression Factor	1.00	1.00	0.88		1.00	1.00
Incremental Delay, d2	9.1	0.5	8.9		3.6	1.0
Delay (s)	57.2	10.7	36.9		37.3	31.5
Level of Service	E	B	D		D	C
Approach Delay (s)		19.5	36.9		34.2	
Approach LOS		B	D		C	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

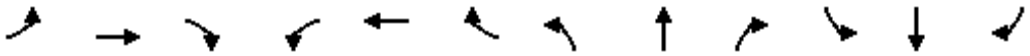
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	400	290	310	740	30	380	590	130	30	690	230
Future Volume (vph)	230	400	290	310	740	30	380	590	130	30	690	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1543	3400	3482		3400	1845	1544	1752	3104	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1543	3400	3482		3400	1845	1544	1752	3104	
Peak-hour factor, PHF	0.89	0.90	0.89	0.90	0.90	0.90	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	258	444	326	344	822	33	427	663	144	33	775	258
RTOR Reduction (vph)	0	0	149	0	2	0	0	0	75	0	26	0
Lane Group Flow (vph)	258	444	177	344	853	0	427	663	69	33	1007	0
Confl. Peds. (#/hr)			1			4			2			7
Confl. Bikes (#/hr)			2			3						1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	13.0	21.5	21.5	23.7	32.2		11.0	52.3	52.3	4.7	46.0	
Effective Green, g (s)	13.0	22.4	22.4	23.7	33.1		11.0	53.2	53.2	4.7	46.9	
Actuated g/C Ratio	0.11	0.19	0.19	0.20	0.28		0.09	0.44	0.44	0.04	0.39	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	368	654	288	671	960		311	817	684	68	1213	
v/s Ratio Prot	0.08	c0.13		0.10	c0.24		c0.13	c0.36		0.02	0.32	
v/s Ratio Perm			0.11						0.04			
v/c Ratio	0.70	0.68	0.62	0.51	0.89		1.37	0.81	0.10	0.49	0.83	
Uniform Delay, d1	51.6	45.5	44.8	43.0	41.7		54.5	29.0	19.5	56.5	33.0	
Progression Factor	0.81	0.82	0.63	1.00	1.00		1.00	1.00	1.00	1.07	0.75	
Incremental Delay, d2	5.6	2.6	3.6	0.7	10.0		187.0	8.6	0.3	3.7	4.6	
Delay (s)	47.2	40.0	32.0	43.7	51.7		241.5	37.7	19.8	64.2	29.5	
Level of Service	D	D	C	D	D		F	D	B	E	C	
Approach Delay (s)		39.3			49.4			106.1			30.6	
Approach LOS		D			D			F			C	

Intersection Summary			
HCM 2000 Control Delay	58.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

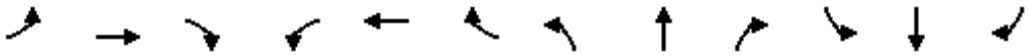
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	10	120	10	40	10	140	410	30	10	750	250
Future Volume (vph)	140	10	120	10	40	10	140	410	30	10	750	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96		1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1524		1797		1763	1840		1766	3365	
Flt Permitted	0.72	1.00	1.00		0.97		0.16	1.00		0.37	1.00	
Satd. Flow (perm)	1337	1863	1524		1750		292	1840		690	3365	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	187	13	160	13	53	13	187	547	40	13	1000	333
RTOR Reduction (vph)	0	0	109	0	8	0	0	3	0	0	36	0
Lane Group Flow (vph)	187	13	51	0	71	0	187	584	0	13	1297	0
Confl. Peds. (#/hr)			9	9			39		7	7		39
Confl. Bikes (#/hr)			14			7			1			2
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	20.5	20.5	20.5		20.5		64.1	64.1		64.1	64.1	
Effective Green, g (s)	21.0	21.0	21.0		21.0		64.1	64.1		64.1	64.1	
Actuated g/C Ratio	0.22	0.22	0.22		0.22		0.68	0.68		0.68	0.68	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	299	417	341		391		199	1257		471	2299	
v/s Ratio Prot		0.01						0.32			0.39	
v/s Ratio Perm	c0.14		0.03		0.04		c0.64			0.02		
v/c Ratio	0.63	0.03	0.15		0.18		0.94	0.46		0.03	0.56	
Uniform Delay, d1	32.9	28.4	29.2		29.5		13.1	6.9		4.8	7.7	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.64	0.53	
Incremental Delay, d2	2.9	0.0	0.1		0.1		45.8	0.1		0.0	0.2	
Delay (s)	35.8	28.5	29.3		29.5		59.0	7.0		3.1	4.2	
Level of Service	D	C	C		C		E	A		A	A	
Approach Delay (s)		32.6			29.5			19.5			4.2	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	93.8	Sum of lost time (s)	13.2
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

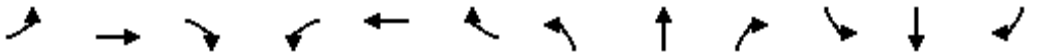
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	10	10	70	10	130	0	440	50	150	480	20
Future Volume (vph)	10	10	10	70	10	130	0	440	50	150	480	20
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
Hourly flow rate (vph)	11	11	11	75	11	140	0	473	54	161	516	22

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	33	86	140	527	699
Volume Left (vph)	11	75	0	0	161
Volume Right (vph)	11	0	140	54	22
Hadj (s)	-0.08	0.22	-0.55	-0.01	0.08
Departure Headway (s)	7.1	7.2	3.2	5.3	5.1
Degree Utilization, x	0.07	0.17	0.12	0.77	1.00
Capacity (veh/h)	475	475	1121	677	695
Control Delay (s)	10.6	11.7	6.7	23.7	56.1
Approach Delay (s)	10.6	8.6		23.7	56.1
Approach LOS	B	A		C	F

Intersection Summary				
Delay	36.4			
Level of Service	E			
Intersection Capacity Utilization	81.3%	ICU Level of Service	D	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	10	20	140	10	220	20	490	130	160	760	10
Future Volume (vph)	30	10	20	140	10	220	20	490	130	160	760	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1706			1750	1568	1752	3505	1503	1752	3497	
Flt Permitted		0.81			0.75	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1423			1378	1568	1752	3505	1503	1752	3497	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	10	21	144	10	227	21	505	134	165	784	10
RTOR Reduction (vph)	0	17	0	0	0	119	0	0	75	0	1	0
Lane Group Flow (vph)	0	45	0	0	154	108	21	505	59	165	793	0
Confl. Peds. (#/hr)			8	8					11			9
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		14.4			14.4	38.6	10.3	36.0	36.0	19.7	45.4	
Effective Green, g (s)		14.9			14.9	39.1	10.3	36.7	36.7	19.7	46.1	
Actuated g/C Ratio		0.18			0.18	0.47	0.12	0.44	0.44	0.24	0.55	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		254			246	736	216	1544	662	414	1935	
v/s Ratio Prot						0.07	0.01	0.14		c0.09	c0.23	
v/s Ratio Perm		0.03			c0.11				0.04			
v/c Ratio		0.18			0.63	0.15	0.10	0.33	0.09	0.40	0.41	
Uniform Delay, d1		29.0			31.6	12.6	32.4	15.2	13.6	26.8	10.7	
Progression Factor		1.00			1.00	1.00	1.34	0.73	0.65	1.00	1.00	
Incremental Delay, d2		0.1			3.6	0.0	0.1	0.1	0.1	0.2	0.1	
Delay (s)		29.1			35.2	12.6	43.5	11.2	8.8	27.0	10.9	
Level of Service		C			D	B	D	B	A	C	B	
Approach Delay (s)		29.1			21.7			11.8			13.7	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	12.5
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	60	150	60	70	10	160	940	70	10	680	180
Future Volume (vph)	180	60	150	60	70	10	160	940	70	10	680	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1386		1752	1810		1752	3461		1752	3505	1532
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1386		1752	1810		1752	3461		1752	3505	1532
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	184	61	153	61	71	10	163	959	71	10	694	184
RTOR Reduction (vph)	0	88	0	0	5	0	0	3	0	0	0	95
Lane Group Flow (vph)	184	126	0	61	76	0	163	1027	0	10	694	89
Confl. Peds. (#/hr)			1						3			1
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	20.1	17.0		11.7	8.6		16.4	72.4		1.0	57.0	57.0
Effective Green, g (s)	20.7	17.6		12.7	8.6		16.4	73.7		1.0	58.3	58.3
Actuated g/C Ratio	0.17	0.15		0.11	0.07		0.14	0.61		0.01	0.49	0.49
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	257	203		185	129		239	2125		14	1702	744
v/s Ratio Prot	c0.12	c0.09		0.03	0.04		c0.09	c0.30		0.01	0.20	
v/s Ratio Perm												0.06
v/c Ratio	0.72	0.62		0.33	0.59		0.68	0.48		0.71	0.41	0.12
Uniform Delay, d1	46.9	48.1		49.7	54.0		49.3	12.7		59.4	19.8	16.8
Progression Factor	1.00	1.00		1.00	1.00		0.94	1.96		1.00	1.00	1.00
Incremental Delay, d2	9.1	5.8		1.0	7.1		6.3	0.6		100.1	0.7	0.3
Delay (s)	56.0	53.9		50.8	61.1		52.5	25.5		159.5	20.5	17.2
Level of Service	E	D		D	E		D	C		F	C	B
Approach Delay (s)		54.9			56.7			29.2			21.4	
Approach LOS		D			E			C			C	

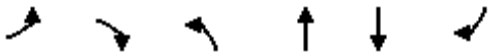
Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	150	10	130	0	550	160	220	620	10
Future Volume (vph)	0	0	10	150	10	130	0	550	160	220	620	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			0.98		1.00	0.95		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.97		1.00	1.00	
Flt Protected			1.00		0.96	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1558		1762	1266		1505		1490	1562	
Flt Permitted			1.00		0.96	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1558		1762	1266		1505		183	1562	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	153	10	133	0	561	163	224	633	10
RTOR Reduction (vph)	0	0	9	0	0	114	0	8	0	0	1	0
Lane Group Flow (vph)	0	0	1	0	163	19	0	716	0	224	642	0
Confl. Peds. (#/hr)	9		1			9	25		7			25
Confl. Bikes (#/hr)									2			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			15.1		15.1	15.1		55.4		53.1	53.1	
Effective Green, g (s)			15.1		15.1	15.1		53.4		53.1	52.1	
Actuated g/C Ratio			0.14		0.14	0.14		0.49		0.49	0.48	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			217		245	176		741		317	750	
v/s Ratio Prot					c0.09			c0.48		0.12	c0.41	
v/s Ratio Perm			0.00			0.01				0.22		
v/c Ratio			0.01		0.67	0.11		0.97		0.71	0.86	
Uniform Delay, d1			40.2		44.3	40.7		26.6		25.2	24.9	
Progression Factor			1.00		1.00	1.00		0.40		1.00	1.00	
Incremental Delay, d2			0.0		6.9	0.3		4.5		7.0	9.5	
Delay (s)			40.2		51.2	41.1		15.3		32.2	34.4	
Level of Service			D		D	D		B		C	C	
Approach Delay (s)		40.2			46.6			15.3			33.8	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

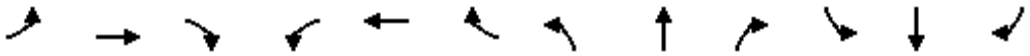


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	280	50	20	430	480	300
Future Volume (vph)	280	50	20	430	480	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.98			1.00	0.94	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.98			1.00	0.95	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1450			1562	1397	
Flt Permitted	0.96			0.95	1.00	
Satd. Flow (perm)	1450			1485	1397	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	53	21	453	505	316
RTOR Reduction (vph)	5	0	0	0	20	0
Lane Group Flow (vph)	343	0	0	474	801	0
Confl. Peds. (#/hr)		25	41			41
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	25.2			30.2	68.2	
Effective Green, g (s)	25.2			29.2	68.2	
Actuated g/C Ratio	0.23			0.27	0.63	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	337			400	878	
v/s Ratio Prot	c0.24				c0.57	
v/s Ratio Perm				c0.32		
v/c Ratio	1.02			1.19	0.91	
Uniform Delay, d1	41.6			39.6	17.5	
Progression Factor	1.00			1.00	0.32	
Incremental Delay, d2	53.3			105.9	10.5	
Delay (s)	94.9			145.5	16.1	
Level of Service	F			F	B	
Approach Delay (s)	94.9			145.5	16.1	
Approach LOS	F			F	B	

Intersection Summary			
HCM 2000 Control Delay	70.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	170	140	120	110	50	70	940	140	50	650	110
Future Volume (vph)	110	170	140	120	110	50	70	940	140	50	650	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.95		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1700		1490	1800		1752	3421		1752	3505	1524
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1700		1490	1485		1752	3421		1752	3505	1524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	115	177	146	125	115	52	73	979	146	52	677	115
RTOR Reduction (vph)	0	25	0	0	15	0	0	8	0	0	0	60
Lane Group Flow (vph)	115	298	0	125	152	0	73	1117	0	52	677	55
Confl. Peds. (#/hr)			9			6			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	23.4	23.4		15.7	15.7		7.1	57.1		6.3	56.3	56.3
Effective Green, g (s)	23.7	23.7		16.0	16.0		7.1	58.0		6.3	57.2	57.2
Actuated g/C Ratio	0.20	0.20		0.13	0.13		0.06	0.48		0.05	0.48	0.48
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	346	335		198	240		103	1653		91	1670	726
v/s Ratio Prot	0.07	c0.18		0.08	c0.08		c0.04	c0.33		0.03	0.19	
v/s Ratio Perm												0.04
v/c Ratio	0.33	0.89		0.63	0.63		0.71	0.68		0.57	0.41	0.08
Uniform Delay, d1	41.4	46.9		49.2	49.2		55.4	23.8		55.5	20.4	17.0
Progression Factor	1.00	1.00		1.00	1.00		1.01	0.74		1.30	0.53	0.08
Incremental Delay, d2	0.6	23.7		6.4	5.4		9.6	1.0		7.8	0.7	0.2
Delay (s)	41.9	70.6		55.6	54.6		65.9	18.5		79.7	11.5	1.6
Level of Service	D	E		E	D		E	B		E	B	A
Approach Delay (s)		63.1			55.1			21.4			14.3	
Approach LOS		E			E			C			B	

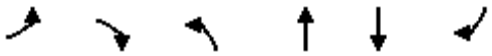
Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	110	250	130	90	280	40	140	260	60	20	240	80
Future Volume (vph)	110	250	130	90	280	40	140	260	60	20	240	80
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
Hourly flow rate (vph)	122	278	144	100	311	44	156	289	67	22	267	89

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	122	422	100	355	512	378
Volume Left (vph)	122	0	100	0	156	22
Volume Right (vph)	0	144	0	44	67	89
Hadj (s)	0.55	-0.19	0.55	-0.04	0.03	-0.08
Departure Headway (s)	10.0	9.3	10.1	9.5	9.3	9.2
Degree Utilization, x	0.34	1.09	0.28	0.94	1.32	0.97
Capacity (veh/h)	356	397	351	371	396	378
Control Delay (s)	16.9	101.0	15.8	62.7	187.7	68.5
Approach Delay (s)	82.1		52.4		187.7	68.5
Approach LOS	F		F		F	F

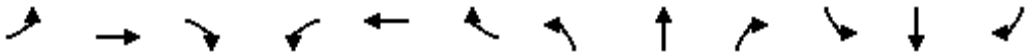
Intersection Summary				
Delay	100.8			
Level of Service	F			
Intersection Capacity Utilization	85.1%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	110	220	210	240	340	170
Future Volume (vph)	110	220	210	240	340	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.81	1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1490	1081	1490	1568	1428	
Flt Permitted	0.95	1.00	0.25	1.00	1.00	
Satd. Flow (perm)	1490	1081	394	1568	1428	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	232	221	253	358	179
RTOR Reduction (vph)	0	187	0	0	18	0
Lane Group Flow (vph)	116	45	221	253	519	0
Confl. Peds. (#/hr)	2	78	54			54
Confl. Bikes (#/hr)						3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	12.5	12.5	49.9	49.9	31.3	
Effective Green, g (s)	13.6	13.6	51.0	51.0	32.4	
Actuated g/C Ratio	0.19	0.19	0.72	0.72	0.46	
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	287	208	526	1132	655	
v/s Ratio Prot	c0.08		c0.09	0.16	c0.36	
v/s Ratio Perm		0.04	0.21			
v/c Ratio	0.40	0.21	0.42	0.22	0.79	
Uniform Delay, d1	25.0	24.0	5.9	3.2	16.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.5	0.5	0.1	6.5	
Delay (s)	25.9	24.5	6.4	3.3	22.7	
Level of Service	C	C	A	A	C	
Approach Delay (s)	25.0			4.8	22.7	
Approach LOS	C			A	C	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

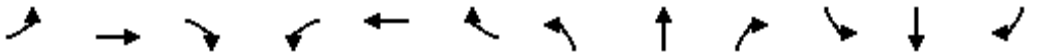
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	80	60	20	60	70	50	60	240	60	70	300	50
Future Volume (vph)	80	60	20	60	70	50	60	240	60	70	300	50
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
Hourly flow rate (vph)	91	68	23	68	80	57	68	273	68	80	341	57

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	182	205	409	478
Volume Left (vph)	91	68	68	80
Volume Right (vph)	23	57	68	57
Hadj (s)	0.08	-0.05	-0.02	0.01
Departure Headway (s)	7.5	7.3	6.4	6.3
Degree Utilization, x	0.38	0.41	0.73	0.84
Capacity (veh/h)	427	445	537	553
Control Delay (s)	14.9	15.3	24.7	33.5
Approach Delay (s)	14.9	15.3	24.7	33.5
Approach LOS	B	C	C	D

Intersection Summary				
Delay	25.1			
Level of Service	D			
Intersection Capacity Utilization	51.3%	ICU Level of Service	A	
Analysis Period (min)	15			



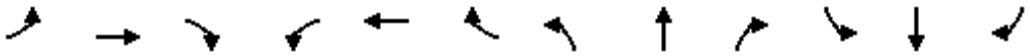
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	130	30	40	130	70	30	270	70	80	300	30
Future Volume (vph)	30	130	30	40	130	70	30	270	70	80	300	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.94	1.00		0.96	1.00	
Frt	1.00	0.97		1.00	0.95		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1440	1511		1459	1451		1404	1491		1430	1531	
Flt Permitted	0.62	1.00		0.65	1.00		0.52	1.00		0.51	1.00	
Satd. Flow (perm)	939	1511		991	1451		773	1491		769	1531	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	144	33	44	144	78	33	300	78	89	333	33
RTOR Reduction (vph)	0	14	0	0	32	0	0	13	0	0	5	0
Lane Group Flow (vph)	33	163	0	44	190	0	33	365	0	89	361	0
Confl. Peds. (#/hr)	41		24	24		41	88		63	63		88
Confl. Bikes (#/hr)						1			2			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	10.0	10.0		10.0	10.0		17.1	17.1		17.1	17.1	
Effective Green, g (s)	10.2	10.2		10.2	10.2		17.3	17.3		17.3	17.3	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.49	0.49		0.49	0.49	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	269	434		284	416		376	726		374	746	
v/s Ratio Prot		0.11			c0.13			c0.24			0.24	
v/s Ratio Perm	0.04			0.04			0.04			0.12		
v/c Ratio	0.12	0.38		0.15	0.46		0.09	0.50		0.24	0.48	
Uniform Delay, d1	9.3	10.1		9.4	10.4		4.9	6.2		5.3	6.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.3		0.1	0.6		0.3	0.5	
Delay (s)	9.4	10.3		9.5	10.7		5.0	6.7		5.6	6.6	
Level of Service	A	B		A	B		A	A		A	A	
Approach Delay (s)		10.2			10.5			6.6			6.4	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	35.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	80	120	60	70	40	90	890	30	10	570	90
Future Volume (vph)	110	80	120	60	70	40	90	890	30	10	570	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1427		1490	1462		1490	1559		1490	1524	
Flt Permitted	0.95	1.00		0.95	1.00		0.28	1.00		0.12	1.00	
Satd. Flow (perm)	1490	1427		1490	1462		436	1559		192	1524	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	87	130	65	76	43	98	967	33	11	620	98
RTOR Reduction (vph)	0	45	0	0	18	0	0	1	0	0	4	0
Lane Group Flow (vph)	120	172	0	65	101	0	98	999	0	11	714	0
Confl. Peds. (#/hr)						5	10		3	3		10
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.0	19.9		8.3	17.2		78.6	78.6		78.6	78.6	
Effective Green, g (s)	11.0	20.5		8.3	17.8		79.2	79.2		79.2	79.2	
Actuated g/C Ratio	0.09	0.17		0.07	0.15		0.66	0.66		0.66	0.66	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	243		103	216		287	1028		126	1005	
v/s Ratio Prot	c0.08	c0.12		0.04	0.07			c0.64			0.47	
v/s Ratio Perm							0.22			0.06		
v/c Ratio	0.88	0.71		0.63	0.47		0.34	0.97		0.09	0.71	
Uniform Delay, d1	53.9	46.9		54.4	46.8		9.0	19.3		7.4	13.1	
Progression Factor	1.00	1.00		1.00	1.00		0.13	0.42		0.51	0.52	
Incremental Delay, d2	43.9	9.1		11.9	1.6		1.7	14.6		1.2	3.8	
Delay (s)	97.7	56.0		66.3	48.4		2.9	22.7		5.0	10.6	
Level of Service	F	E		E	D		A	C		A	B	
Approach Delay (s)		70.9			54.7			20.9			10.5	
Approach LOS		E			D			C			B	

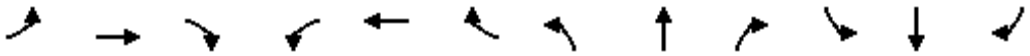
Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	60	10	10	10	40	970	30	10	680	40
Future Volume (Veh/h)	60	10	60	10	10	10	40	970	30	10	680	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	65	11	65	11	11	11	43	1043	32	11	731	43
Pedestrians		16			3						15	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		1			0						1	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.73	0.73	0.73	0.73	0.73	0.59	0.73			0.59		
vC, conflicting volume	1951	1954	768	1972	1960	1077	790			1078		
vC1, stage 1 conf vol	790	790		1148	1148							
vC2, stage 2 conf vol	1160	1164		824	812							
vCu, unblocked vol	1292	1297	501	1320	1304	785	531			787		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	54	94	84	93	94	95	94			98		
cM capacity (veh/h)	142	172	410	158	182	228	746			489		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	141	33	43	1075	11	774
Volume Left	65	11	43	0	11	0
Volume Right	65	11	0	32	0	43
cSH	207	185	746	1700	489	1700
Volume to Capacity	0.68	0.18	0.06	0.63	0.02	0.46
Queue Length 95th (ft)	106	16	5	0	2	0
Control Delay (s)	53.0	28.7	10.1	0.0	12.5	0.0
Lane LOS	F	D	B		B	
Approach Delay (s)	53.0	28.7	0.4		0.2	
Approach LOS	F	D				

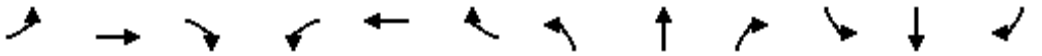
Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	70.9%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	200	130	50	240	10	80	10	60	10	10	30
Future Volume (Veh/h)	20	200	130	50	240	10	80	10	60	10	10	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	20	204	133	51	245	10	82	10	61	10	10	31
Pedestrians		2			1			36			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked												
vC, conflicting volume	264			373			736	712	308	738	774	261
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	264			373			736	712	308	738	774	261
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			96			71	97	91	96	97	96
cM capacity (veh/h)	1285			1145			280	323	708	273	297	768

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	357	306	153	51
Volume Left	20	51	82	10
Volume Right	133	10	61	31
cSH	1285	1145	373	461
Volume to Capacity	0.02	0.04	0.41	0.11
Queue Length 95th (ft)	1	3	49	9
Control Delay (s)	0.6	1.7	21.2	13.8
Lane LOS	A	A	C	B
Approach Delay (s)	0.6	1.7	21.2	13.8
Approach LOS			C	B

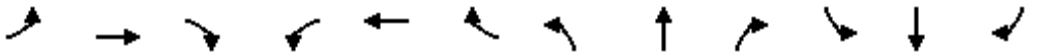
Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	52.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	210	50	10	70	40	30	10	170	110	70	90	250
Future Volume (vph)	210	50	10	70	40	30	10	170	110	70	90	250
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
Hourly flow rate (vph)	228	54	11	76	43	33	11	185	120	76	98	272

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	293	152	316	174	272
Volume Left (vph)	228	76	11	76	0
Volume Right (vph)	11	33	120	0	272
Hadj (s)	0.17	0.00	-0.19	0.25	-0.67
Departure Headway (s)	6.5	6.8	6.1	6.9	5.9
Degree Utilization, x	0.53	0.29	0.54	0.33	0.45
Capacity (veh/h)	503	455	547	497	564
Control Delay (s)	16.7	12.5	16.0	12.0	12.5
Approach Delay (s)	16.7	12.5	16.0	12.3	
Approach LOS	C	B	C	B	

Intersection Summary				
Delay	14.4			
Level of Service	B			
Intersection Capacity Utilization	56.4%	ICU Level of Service		B
Analysis Period (min)	15			



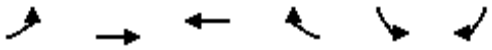
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	1270	10	10	910	40	10	10	10	70	50	340
Future Volume (vph)	250	1270	10	10	910	40	10	10	10	70	50	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.95			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1752	3501		1770	3480			1750			1706	1490
Flt Permitted	0.95	1.00		0.95	1.00			0.91			0.81	1.00
Satd. Flow (perm)	1752	3501		1770	3480			1619			1425	1490
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	278	1411	11	11	1011	44	11	11	11	78	56	378
RTOR Reduction (vph)	0	0	0	0	3	0	0	9	0	0	0	146
Lane Group Flow (vph)	278	1422	0	11	1052	0	0	24	0	0	134	232
Confl. Peds. (#/hr)						1				3		
Heavy Vehicles (%)	3%	3%	2%	2%	3%	3%	2%	2%	2%	3%	2%	3%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	19.1	55.0		1.1	37.1			17.5			17.5	17.5
Effective Green, g (s)	19.1	56.4		1.2	38.5			17.5			17.5	17.5
Actuated g/C Ratio	0.22	0.65		0.01	0.44			0.20			0.20	0.20
Clearance Time (s)	4.0	5.4		4.1	5.4			4.0			4.0	4.0
Vehicle Extension (s)	2.0	3.0		3.0	3.0			2.0			2.0	2.0
Lane Grp Cap (vph)	384	2267		24	1538			325			286	299
v/s Ratio Prot	c0.16	0.41		0.01	c0.30							
v/s Ratio Perm								0.01			0.09	c0.16
v/c Ratio	0.72	0.63		0.46	0.68			0.07			0.47	0.78
Uniform Delay, d1	31.6	9.1		42.6	19.4			28.2			30.7	32.9
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	5.6	0.5		13.2	1.3			0.0			0.4	10.9
Delay (s)	37.2	9.7		55.9	20.7			28.3			31.1	43.8
Level of Service	D	A		E	C			C			C	D
Approach Delay (s)		14.2			21.1			28.3			40.5	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	1010	110	70	670	40	70	80	40	40	90	220
Future Volume (vph)	230	1010	110	70	670	40	70	80	40	40	90	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1544	3400	3470		1752	1845	1515	1752	1845	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1544	3400	3470		1752	1845	1515	1752	1845	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	1098	120	76	728	43	76	87	43	43	98	239
RTOR Reduction (vph)	0	0	39	0	3	0	0	0	33	0	0	208
Lane Group Flow (vph)	250	1098	81	76	768	0	76	87	10	43	98	31
Confl. Peds. (#/hr)			7			3			22			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	18.2	37.1	50.3	10.7	33.6		13.2	20.4	20.4	4.5	11.7	11.7
Effective Green, g (s)	18.2	38.3	50.3	10.7	34.8		13.2	21.1	21.1	4.5	12.4	12.4
Actuated g/C Ratio	0.19	0.40	0.53	0.11	0.37		0.14	0.22	0.22	0.05	0.13	0.13
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	4.7
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	337	1419	820	384	1276		244	411	337	83	241	201
v/s Ratio Prot	c0.14	c0.31	0.01	0.02	c0.22		c0.04	0.05		0.02	c0.05	
v/s Ratio Perm			0.04						0.01			0.02
v/c Ratio	0.74	0.77	0.10	0.20	0.60		0.31	0.21	0.03	0.52	0.41	0.16
Uniform Delay, d1	36.0	24.4	10.9	38.1	24.3		36.6	30.0	28.7	44.0	37.7	36.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.5	2.7	0.0	0.1	0.8		0.3	0.1	0.0	2.3	0.4	0.1
Delay (s)	43.5	27.1	11.0	38.1	25.1		36.9	30.1	28.7	46.3	38.1	36.6
Level of Service	D	C	B	D	C		D	C	C	D	D	D
Approach Delay (s)		28.6			26.3			32.3			38.1	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	94.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	230	860	600	200	200	180
Future Volume (vph)	230	860	600	200	200	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3340		1490	1308
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3340		1490	1308
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	242	905	632	211	211	189
RTOR Reduction (vph)	0	0	27	0	0	131
Lane Group Flow (vph)	242	905	816	0	211	58
Confl. Peds. (#/hr)	5			5	3	3
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10	10
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	19.4	75.1	51.7		35.1	35.1
Effective Green, g (s)	20.4	77.0	53.6		37.0	37.0
Actuated g/C Ratio	0.17	0.64	0.45		0.31	0.31
Clearance Time (s)	4.0	4.9	4.9		4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	297	2249	1491		459	403
v/s Ratio Prot	c0.14	0.26	c0.24		c0.14	
v/s Ratio Perm						0.04
v/c Ratio	0.81	0.40	0.55		0.46	0.14
Uniform Delay, d1	48.0	10.4	24.3		33.4	30.0
Progression Factor	1.00	1.00	0.70		1.00	1.00
Incremental Delay, d2	15.6	0.5	1.3		3.3	0.8
Delay (s)	63.6	10.9	18.3		36.7	30.8
Level of Service	E	B	B		D	C
Approach Delay (s)		22.0	18.3		33.9	
Approach LOS		C	B		C	

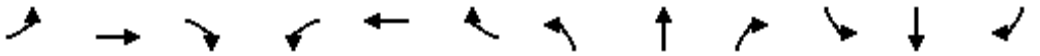
Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	510	210	260	310	20	170	740	580	50	450	270
Future Volume (vph)	340	510	210	260	310	20	170	740	580	50	450	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1568	3400	3469		3400	1845	1541	1752	3032	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1568	3400	3469		3400	1845	1541	1752	3032	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	554	228	283	337	22	185	804	630	54	489	293
RTOR Reduction (vph)	0	0	181	0	5	0	0	0	224	0	65	0
Lane Group Flow (vph)	370	554	47	283	354	0	185	804	406	54	717	0
Confl. Peds. (#/hr)						4			3			9
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	14.0	24.0	24.0	15.2	25.2		10.4	56.7	56.7	6.3	52.6	
Effective Green, g (s)	14.0	24.9	24.9	15.2	26.1		10.4	57.6	57.6	6.3	53.5	
Actuated g/C Ratio	0.12	0.21	0.21	0.13	0.22		0.09	0.48	0.48	0.05	0.45	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	727	325	430	754		294	885	739	91	1351	
v/s Ratio Prot	c0.11	c0.16		c0.08	0.10		c0.05	c0.44		0.03	0.24	
v/s Ratio Perm			0.03						0.26			
v/c Ratio	0.93	0.76	0.15	0.66	0.47		0.63	0.91	0.55	0.59	0.53	
Uniform Delay, d1	52.5	44.8	38.9	49.9	40.9		52.9	28.8	22.0	55.6	24.1	
Progression Factor	0.87	0.79	0.27	1.00	1.00		1.00	1.00	1.00	1.08	0.85	
Incremental Delay, d2	27.7	4.4	0.2	3.6	0.5		4.2	14.8	2.9	8.1	1.2	
Delay (s)	73.5	39.9	10.5	53.5	41.4		57.1	43.6	25.0	68.3	21.7	
Level of Service	E	D	B	D	D		E	D	C	E	C	
Approach Delay (s)		44.9			46.7			37.9			24.7	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	38.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	10	80	10	10	10	70	590	10	10	740	170
Future Volume (vph)	50	10	80	10	10	10	70	590	10	10	740	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1538		1729		1750	1839		1751	3393	
Flt Permitted	0.73	1.00	1.00		0.93		0.20	1.00		0.27	1.00	
Satd. Flow (perm)	1350	1845	1538		1631		362	1839		503	3393	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	67	13	107	13	13	13	93	787	13	13	987	227
RTOR Reduction (vph)	0	0	88	0	11	0	0	1	0	0	20	0
Lane Group Flow (vph)	67	13	19	0	28	0	93	799	0	13	1194	0
Confl. Peds. (#/hr)			5	5			20		5	5		20
Confl. Bikes (#/hr)			1									4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	14.4	14.4	14.4		14.4		59.7	59.7		59.7	59.7	
Effective Green, g (s)	14.9	14.9	14.9		14.9		59.7	59.7		59.7	59.7	
Actuated g/C Ratio	0.18	0.18	0.18		0.18		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	241	330	275		291		259	1317		360	2431	
v/s Ratio Prot		0.01						c0.43			0.35	
v/s Ratio Perm	c0.05		0.01		0.02		0.26			0.03		
v/c Ratio	0.28	0.04	0.07		0.10		0.36	0.61		0.04	0.49	
Uniform Delay, d1	29.6	28.3	28.4		28.6		4.5	5.9		3.4	5.2	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.82	0.72	
Incremental Delay, d2	0.2	0.0	0.0		0.1		0.3	0.5		0.0	0.1	
Delay (s)	29.8	28.3	28.5		28.6		4.8	6.5		2.8	3.8	
Level of Service	C	C	C		C		A	A		A	A	
Approach Delay (s)		28.9			28.6			6.3			3.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	13.2
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

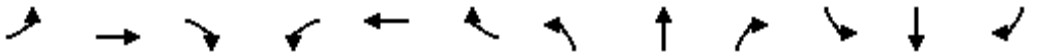
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	10	90	0	210	0	290	60	140	480	10
Future Volume (vph)	10	0	10	90	0	210	0	290	60	140	480	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	4.0		4.0			4.0	
Lane Util. Factor		1.00			1.00	1.00		1.00			1.00	
Frpb, ped/bikes		0.99			1.00	0.97		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.93			1.00	0.85		0.98			1.00	
Flt Protected		0.98			0.95	1.00		1.00			0.99	
Satd. Flow (prot)		1658			1745	1288		1793			1820	
Flt Permitted		0.86			0.74	1.00		1.00			0.82	
Satd. Flow (perm)		1457			1362	1288		1793			1509	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	12	0	12	106	0	247	0	341	71	165	565	12
RTOR Reduction (vph)	0	19	0	0	0	190	0	10	0	0	1	0
Lane Group Flow (vph)	0	5	0	0	106	57	0	402	0	0	741	0
Confl. Peds. (#/hr)			3	3		10			3	3		
Confl. Bikes (#/hr)									7			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10						
Turn Type	Perm	NA		Perm	NA	Perm		NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		12.1			12.1	12.1		34.2			34.2	
Effective Green, g (s)		12.1			12.1	13.1		35.2			35.2	
Actuated g/C Ratio		0.21			0.21	0.23		0.63			0.63	
Clearance Time (s)		5.0			5.0	5.0		5.0			5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		313			292	299		1121			943	
v/s Ratio Prot								0.22				
v/s Ratio Perm		0.00			c0.08	0.04					c0.49	
v/c Ratio		0.02			0.36	0.19		0.36			0.79	
Uniform Delay, d1		17.4			18.8	17.4		5.1			7.8	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.0			0.8	0.3		0.2			4.4	
Delay (s)		17.4			19.6	17.7		5.3			12.1	
Level of Service		B			B	B		A			B	
Approach Delay (s)		17.4			18.2			5.3			12.1	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	56.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	160	10	410	20	430	80	170	830	10
Future Volume (vph)	10	10	10	160	10	410	20	430	80	170	830	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1709			1715	1568	1752	3505	1486	1752	3493	
Flt Permitted		0.89			0.71	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1544			1275	1568	1752	3505	1486	1752	3493	
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	13	13	13	208	13	532	26	558	104	221	1078	13
RTOR Reduction (vph)	0	10	0	0	0	96	0	0	59	0	1	0
Lane Group Flow (vph)	0	29	0	0	221	436	26	558	45	221	1090	0
Confl. Peds. (#/hr)	1		27	27		1			15			67
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		19.7			19.7	44.3	10.1	39.1	39.1	20.1	49.1	
Effective Green, g (s)		20.2			20.2	44.8	10.1	39.8	39.8	20.1	49.8	
Actuated g/C Ratio		0.22			0.22	0.49	0.11	0.43	0.43	0.22	0.54	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		338			279	762	192	1514	642	382	1888	
v/s Ratio Prot						c0.28	0.01	0.16		0.13	c0.31	
v/s Ratio Perm		0.02			c0.17				0.03			
v/c Ratio		0.09			0.79	0.57	0.14	0.37	0.07	0.58	0.58	
Uniform Delay, d1		28.6			34.0	16.8	37.1	17.7	15.3	32.2	14.1	
Progression Factor		1.00			1.00	1.00	1.24	0.99	1.08	1.00	1.00	
Incremental Delay, d2		0.0			13.3	0.7	0.1	0.1	0.0	1.3	0.4	
Delay (s)		28.6			47.3	17.5	45.9	17.7	16.6	33.5	14.6	
Level of Service		C			D	B	D	B	B	C	B	
Approach Delay (s)		28.6			26.2			18.6			17.8	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	92.1	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



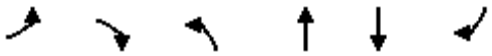
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	30	70	190	50	10	130	310	40	10	1050	420
Future Volume (vph)	140	30	70	190	50	10	130	310	40	10	1050	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	0.97	1.00		0.96		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1415	1442	1310		1767		1752	3429		1752	3505	1505
Flt Permitted	0.95	0.97	1.00		0.96		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1415	1442	1310		1767		1752	3429		1752	3505	1505
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	179	38	90	244	64	13	167	397	51	13	1346	538
RTOR Reduction (vph)	0	0	79	0	1	0	0	6	0	0	0	208
Lane Group Flow (vph)	107	110	11	0	320	0	167	442	0	13	1346	330
Confl. Peds. (#/hr)			3						5			6
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	14.5	14.5	14.5		6.0		15.9	79.2		2.4	65.7	65.7
Effective Green, g (s)	15.1	15.1	15.1		6.0		15.9	80.5		2.4	67.0	67.0
Actuated g/C Ratio	0.13	0.13	0.13		0.05		0.13	0.67		0.02	0.56	0.56
Clearance Time (s)	4.6	4.6	4.6		4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	178	181	164		88		232	2300		35	1956	840
v/s Ratio Prot	0.08	c0.08			c0.18		c0.10	0.13		0.01	c0.38	
v/s Ratio Perm			0.01									0.22
v/c Ratio	0.60	0.61	0.07		3.64		0.72	0.19		0.37	0.69	0.39
Uniform Delay, d1	49.6	49.6	46.3		57.0		49.9	7.5		58.1	19.0	15.0
Progression Factor	1.00	1.00	1.00		1.00		0.89	2.50		1.00	1.00	1.00
Incremental Delay, d2	5.6	5.7	0.2		1214.2		9.7	0.2		6.5	2.0	1.4
Delay (s)	55.2	55.3	46.4		1271.2		54.1	18.9		64.6	21.0	16.4
Level of Service	E	E	D		F		D	B		E	C	B
Approach Delay (s)		52.7			1271.2			28.4			20.0	
Approach LOS		D			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	152.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

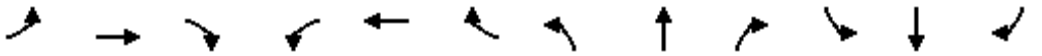
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	270	10	230	0	340	50	240	630	10
Future Volume (vph)	0	0	0	270	10	230	0	340	50	240	630	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor					1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes					1.00	0.91		0.99		1.00	1.00	
Flpb, ped/bikes					1.00	1.00		1.00		1.00	1.00	
Frt					1.00	0.85		0.98		1.00	1.00	
Flt Protected					0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)					1760	1218		1530		1490	1561	
Flt Permitted					0.95	1.00		1.00		0.24	1.00	
Satd. Flow (perm)					1760	1218		1530		370	1561	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	290	11	247	0	366	54	258	677	11
RTOR Reduction (vph)	0	0	0	0	0	201	0	5	0	0	1	0
Lane Group Flow (vph)	0	0	0	0	301	46	0	415	0	258	687	0
Confl. Peds. (#/hr)	20					20	32		11			32
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)					20.2	20.2		48.4		54.3	54.3	
Effective Green, g (s)					20.2	20.2		46.4		54.3	53.3	
Actuated g/C Ratio					0.19	0.19		0.43		0.50	0.50	
Clearance Time (s)					4.0	4.0				4.0	3.0	
Vehicle Extension (s)					3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)					330	228		659		394	773	
v/s Ratio Prot					c0.17			c0.27		0.12	c0.44	
v/s Ratio Perm						0.04				0.21		
v/c Ratio					0.91	0.20		0.63		0.65	0.89	
Uniform Delay, d1					42.8	36.9		23.9		18.3	24.5	
Progression Factor					1.00	1.00		0.12		1.00	1.00	
Incremental Delay, d2					28.7	0.5		1.9		3.9	12.2	
Delay (s)					71.5	37.4		4.7		22.2	36.6	
Level of Service					E	D		A		C	D	
Approach Delay (s)		0.0			56.1			4.7			32.7	
Approach LOS		A			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	160	10	10	230	490	410
Future Volume (vph)	160	10	10	230	490	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.94	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1483			1564	1418	
Flt Permitted	0.95			0.96	1.00	
Satd. Flow (perm)	1483			1503	1418	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	167	10	10	240	510	427
RTOR Reduction (vph)	2	0	0	0	23	0
Lane Group Flow (vph)	175	0	0	250	914	0
Confl. Peds. (#/hr)		3	18			18
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	18.1			30.3	74.5	
Effective Green, g (s)	18.1			29.3	74.5	
Actuated g/C Ratio	0.17			0.27	0.69	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	249			409	981	
v/s Ratio Prot	c0.12				c0.64	
v/s Ratio Perm				0.17		
v/c Ratio	0.70			0.61	0.93	
Uniform Delay, d1	42.2			34.2	14.4	
Progression Factor	1.00			1.00	0.37	
Incremental Delay, d2	9.3			3.1	8.8	
Delay (s)	51.6			37.3	14.1	
Level of Service	D			D	B	
Approach Delay (s)	51.6			37.3	14.1	
Approach LOS	D			D	B	

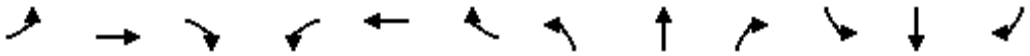
Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	19.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	160	120	120	270	70	60	400	70	60	750	210
Future Volume (vph)	30	160	120	120	270	70	60	400	70	60	750	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	0.99		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1683		1490	1800		1752	3409		1752	3505	1485
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1683		1490	1499		1752	3409		1752	3505	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	32	172	129	129	290	75	65	430	75	65	806	226
RTOR Reduction (vph)	0	23	0	0	8	0	0	11	0	0	0	131
Lane Group Flow (vph)	32	278	0	129	357	0	65	494	0	65	806	95
Confl. Peds. (#/hr)			30			34			4			8
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	22.2	22.2		23.7	23.7		7.1	49.5		7.1	49.5	49.5
Effective Green, g (s)	22.5	22.5		24.0	24.0		7.1	50.4		7.1	50.4	50.4
Actuated g/C Ratio	0.19	0.19		0.20	0.20		0.06	0.42		0.06	0.42	0.42
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	328	315		298	360		103	1431		103	1472	623
v/s Ratio Prot	0.02	c0.17		0.09	c0.20		c0.04	0.14		0.04	c0.23	
v/s Ratio Perm												0.06
v/c Ratio	0.10	0.88		0.43	0.99		0.63	0.35		0.63	0.55	0.15
Uniform Delay, d1	40.3	47.5		42.0	47.9		55.2	23.6		55.2	26.2	21.6
Progression Factor	1.00	1.00		1.00	1.00		0.99	0.99		1.40	0.67	0.62
Incremental Delay, d2	0.1	24.0		1.0	45.0		11.5	0.6		1.1	0.1	0.0
Delay (s)	40.5	71.5		43.1	92.9		66.0	24.1		78.5	17.6	13.3
Level of Service	D	E		D	F		E	C		E	B	B
Approach Delay (s)		68.5			79.9			28.9			20.3	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

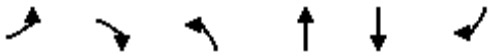
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	150	110	20	110	10	60	120	30	10	270	140
Future Volume (vph)	40	150	110	20	110	10	60	120	30	10	270	140
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	44	165	121	22	121	11	66	132	33	11	297	154

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	44	286	22	132	66	165	11	451
Volume Left (vph)	44	0	22	0	66	0	11	0
Volume Right (vph)	0	121	0	11	0	33	0	154
Hadj (s)	0.55	-0.25	0.55	-0.01	0.55	-0.09	0.55	-0.19
Departure Headway (s)	7.4	6.6	7.7	7.2	7.3	6.7	7.0	6.2
Degree Utilization, x	0.09	0.52	0.05	0.26	0.13	0.31	0.02	0.78
Capacity (veh/h)	458	511	426	450	461	505	492	561
Control Delay (s)	9.9	15.4	9.9	11.5	10.3	11.4	8.9	26.7
Approach Delay (s)	14.7		11.3		11.1		26.3	
Approach LOS	B		B		B		D	

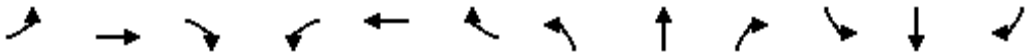
Intersection Summary				
Delay	18.1			
Level of Service	C			
Intersection Capacity Utilization	53.1%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	80	110	60	130	410	90
Future Volume (vph)	80	110	60	130	410	90
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	88	121	66	143	451	99

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	88	121	66	143	550
Volume Left (vph)	88	0	66	0	0
Volume Right (vph)	0	121	0	0	99
Hadj (s)	0.55	-0.65	0.55	0.05	-0.06
Departure Headway (s)	7.0	5.8	6.3	5.8	5.2
Degree Utilization, x	0.17	0.19	0.12	0.23	0.79
Capacity (veh/h)	480	573	543	590	683
Control Delay (s)	10.2	9.0	9.0	9.4	25.0
Approach Delay (s)	9.5		9.2		25.0
Approach LOS	A		A		D

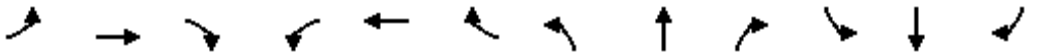
Intersection Summary			
Delay	18.3		
Level of Service	C		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	50	40	40	90	50	20	130	30	40	290	60
Future Volume (vph)	40	50	40	40	90	50	20	130	30	40	290	60
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
Hourly flow rate (vph)	45	57	45	45	102	57	23	148	34	45	330	68

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	147	204	205	443
Volume Left (vph)	45	45	23	45
Volume Right (vph)	45	57	34	68
Hadj (s)	-0.07	-0.07	-0.03	-0.02
Departure Headway (s)	6.1	5.9	5.7	5.3
Degree Utilization, x	0.25	0.34	0.32	0.65
Capacity (veh/h)	510	542	570	650
Control Delay (s)	11.0	11.9	11.4	17.8
Approach Delay (s)	11.0	11.9	11.4	17.8
Approach LOS	B	B	B	C

Intersection Summary				
Delay	14.3			
Level of Service	B			
Intersection Capacity Utilization	47.0%	ICU Level of Service	A	
Analysis Period (min)	15			

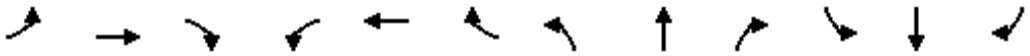


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	100	20	40	130	30	10	140	30	80	360	40
Future Volume (vph)	10	100	20	40	130	30	10	140	30	80	360	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		0.98	1.00		0.95	1.00		0.96	1.00	
Frt	1.00	0.97		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1410	1519		1464	1499		1422	1509		1433	1527	
Flt Permitted	0.64	1.00		0.67	1.00		0.43	1.00		0.64	1.00	
Satd. Flow (perm)	953	1519		1031	1499		644	1509		958	1527	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	11	115	23	46	149	34	11	161	34	92	414	46
RTOR Reduction (vph)	0	12	0	0	13	0	0	10	0	0	5	0
Lane Group Flow (vph)	11	126	0	46	170	0	11	185	0	92	455	0
Confl. Peds. (#/hr)	54		16	16		54	74		39	39		74
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	11.8	11.8		11.8	11.8		20.8	20.8		20.8	20.8	
Effective Green, g (s)	12.0	12.0		12.0	12.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.51	0.51		0.51	0.51	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	278	444		301	438		329	772		490	782	
v/s Ratio Prot		0.08			c0.11			0.12			c0.30	
v/s Ratio Perm	0.01			0.04			0.02			0.10		
v/c Ratio	0.04	0.28		0.15	0.39		0.03	0.24		0.19	0.58	
Uniform Delay, d1	10.4	11.2		10.7	11.6		5.0	5.6		5.4	6.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.2		0.0	0.2		0.2	1.1	
Delay (s)	10.4	11.3		10.8	11.8		5.0	5.7		5.6	8.1	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.2			11.6			5.7			7.6	
Approach LOS		B			B			A			A	

Intersection Summary				
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	41.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	50.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	80	80	50	100	20	40	400	40	20	840	70
Future Volume (vph)	40	80	80	50	100	20	40	400	40	20	840	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.98		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1423		1490	1520		1490	1542		1483	1544	
Flt Permitted	0.95	1.00		0.95	1.00		0.19	1.00		0.46	1.00	
Satd. Flow (perm)	1490	1423		1490	1520		298	1542		711	1544	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	41	82	82	51	102	20	41	408	41	20	857	71
RTOR Reduction (vph)	0	31	0	0	6	0	0	2	0	0	2	0
Lane Group Flow (vph)	41	133	0	51	116	0	41	447	0	20	926	0
Confl. Peds. (#/hr)			5			5	8		3	3		8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.4	15.6		7.9	16.1		83.3	83.3		83.3	83.3	
Effective Green, g (s)	7.4	16.2		7.9	16.7		83.9	83.9		83.9	83.9	
Actuated g/C Ratio	0.06	0.13		0.07	0.14		0.70	0.70		0.70	0.70	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	91	192		98	211		208	1078		497	1079	
v/s Ratio Prot	0.03	c0.09		c0.03	0.08			0.29			c0.60	
v/s Ratio Perm							0.14			0.03		
v/c Ratio	0.45	0.69		0.52	0.55		0.20	0.41		0.04	0.86	
Uniform Delay, d1	54.3	49.5		54.2	48.1		6.3	7.6		5.6	13.6	
Progression Factor	1.00	1.00		1.00	1.00		0.21	0.30		0.39	0.81	
Incremental Delay, d2	3.5	10.3		4.9	2.9		1.9	1.1		0.1	7.5	
Delay (s)	57.9	59.8		59.1	51.1		3.2	3.4		2.3	18.5	
Level of Service	E	E		E	D		A	A		A	B	
Approach Delay (s)		59.4			53.4			3.4			18.2	
Approach LOS		E			D			A			B	

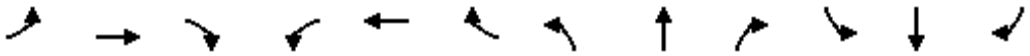
Intersection Summary			
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	10	20	20	30	440	20	10	910	50
Future Volume (Veh/h)	10	10	40	10	20	20	30	440	20	10	910	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	10	10	41	10	21	21	31	454	21	10	938	52
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.57	0.57	0.54	0.57	0.57	0.95	0.54			0.95		
vC, conflicting volume	1580	1546	984	1536	1562	498	1010			480		
vC1, stage 1 conf vol	1004	1004		532	532							
vC2, stage 2 conf vol	576	542		1004	1030							
vCu, unblocked vol	1454	1395	553	1377	1422	448	601			430		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	96	86	94	90	96	94			99		
cM capacity (veh/h)	219	232	284	175	201	564	521			1067		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	52	31	475	10	990
Volume Left	10	10	31	0	10	0
Volume Right	41	21	0	21	0	52
cSH	262	261	521	1700	1067	1700
Volume to Capacity	0.23	0.20	0.06	0.28	0.01	0.58
Queue Length 95th (ft)	22	18	5	0	1	0
Control Delay (s)	22.9	22.2	12.4	0.0	8.4	0.0
Lane LOS	C	C	B		A	
Approach Delay (s)	22.9	22.2	0.8		0.1	
Approach LOS	C	C				

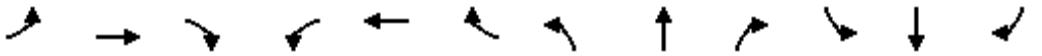
Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	67.8%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	200	130	10	290	10	60	10	10	10	10	40
Future Volume (Veh/h)	20	200	130	10	290	10	60	10	10	10	10	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	250	163	13	363	13	75	13	13	13	13	50
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	412			421			842	828	342	834	902	406
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	412			350			798	783	265	790	863	406
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			68	95	98	95	95	92
cM capacity (veh/h)	1107			1121			236	283	718	250	254	624

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	438	389	101	76
Volume Left	25	13	75	13
Volume Right	163	13	13	50
cSH	1107	1121	265	415
Volume to Capacity	0.02	0.01	0.38	0.18
Queue Length 95th (ft)	2	1	43	17
Control Delay (s)	0.7	0.4	26.7	15.6
Lane LOS	A	A	D	C
Approach Delay (s)	0.7	0.4	26.7	15.6
Approach LOS			D	C

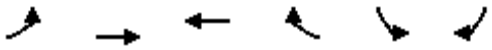
Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	45.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	150	20	50	180	50	20	10	50	50	40	130	250
Future Volume (vph)	150	20	50	180	50	20	10	50	50	40	130	250
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
Hourly flow rate (vph)	163	22	54	196	54	22	11	54	54	43	141	272

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	239	272	119	275	181
Volume Left (vph)	163	196	11	43	0
Volume Right (vph)	54	22	54	91	181
Hadj (s)	0.03	0.13	-0.22	-0.12	-0.67
Departure Headway (s)	6.0	6.0	6.1	6.1	5.6
Degree Utilization, x	0.40	0.45	0.20	0.47	0.28
Capacity (veh/h)	555	560	509	555	608
Control Delay (s)	12.9	13.9	10.7	13.2	9.6
Approach Delay (s)	12.9	13.9	10.7	11.8	
Approach LOS	B	B	B	B	

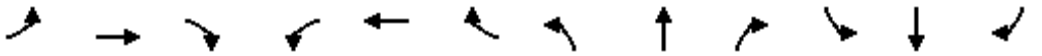
Intersection Summary				
Delay	12.4			
Level of Service	B			
Intersection Capacity Utilization	43.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	130	600	1020	50	80	240
Future Volume (vph)	130	600	1020	50	80	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3477		1733	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3477		1733	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	140	645	1097	54	86	258
RTOR Reduction (vph)	0	0	3	0	0	198
Lane Group Flow (vph)	140	645	1148	0	86	60
Confl. Peds. (#/hr)				1	13	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	8.2	40.3	28.1		9.4	9.4
Effective Green, g (s)	8.2	41.7	29.5		9.4	9.4
Actuated g/C Ratio	0.14	0.71	0.50		0.16	0.16
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	243	2473	1735		275	249
v/s Ratio Prot	c0.08	0.18	c0.33			
v/s Ratio Perm					c0.05	0.04
v/c Ratio	0.58	0.26	0.66		0.31	0.24
Uniform Delay, d1	23.8	3.1	11.1		22.0	21.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.1	0.1	1.0		0.2	0.2
Delay (s)	25.9	3.2	12.0		22.2	21.9
Level of Service	C	A	B		C	C
Approach Delay (s)		7.2	12.0		22.0	
Approach LOS		A	B		C	

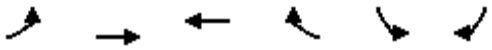
Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	400	180	350	760	90	140	160	210	40	180	170
Future Volume (vph)	100	400	180	350	760	90	140	160	210	40	180	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.98	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1543	3400	3412		1752	1845	1535	1752	1671	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1543	3400	3412		1752	1845	1535	1752	1671	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	120	482	217	422	916	108	169	193	253	48	217	205
RTOR Reduction (vph)	0	0	81	0	7	0	0	0	170	0	23	0
Lane Group Flow (vph)	120	482	136	422	1017	0	169	193	83	48	399	0
Confl. Peds. (#/hr)			9			24			8			31
Confl. Bikes (#/hr)			6			7			1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	11.6	19.8	35.0	21.9	34.1		15.2	33.3	33.3	6.2	24.3	
Effective Green, g (s)	11.6	21.0	35.0	21.9	35.3		15.2	34.0	34.0	6.2	25.0	
Actuated g/C Ratio	0.11	0.20	0.34	0.21	0.34		0.15	0.33	0.33	0.06	0.24	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	197	713	523	722	1168		258	608	506	105	405	
v/s Ratio Prot	0.07	0.14	0.04	c0.12	c0.30		c0.10	0.10		0.03	c0.24	
v/s Ratio Perm			0.05						0.05			
v/c Ratio	0.61	0.68	0.26	0.58	0.87		0.66	0.32	0.16	0.46	0.98	
Uniform Delay, d1	43.6	37.9	24.7	36.5	31.8		41.5	25.9	24.5	46.8	38.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.6	2.5	0.1	0.8	7.3		4.5	0.1	0.1	1.1	40.1	
Delay (s)	47.2	40.5	24.8	37.3	39.1		46.0	26.0	24.5	48.0	79.0	
Level of Service	D	D	C	D	D		D	C	C	D	E	
Approach Delay (s)		37.3			38.5			30.9			75.8	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	103.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

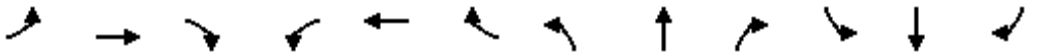


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	510	980	140	190	220
Future Volume (Veh/h)	140	510	980	140	190	220
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	163	593	1140	163	221	256
Pedestrians			1		2	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.79				0.83	0.79
vC, conflicting volume	1305				1847	654
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	850				1181	24
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	73				0	69
cM capacity (veh/h)	612				146	826

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	163	296	296	760	543	221	256
Volume Left	163	0	0	0	0	221	0
Volume Right	0	0	0	0	163	0	256
cSH	612	1700	1700	1700	1700	146	826
Volume to Capacity	0.27	0.17	0.17	0.45	0.32	1.51	0.31
Queue Length 95th (ft)	27	0	0	0	0	372	33
Control Delay (s)	13.0	0.0	0.0	0.0	0.0	317.5	11.3
Lane LOS	B					F	B
Approach Delay (s)	2.8			0.0		153.2	
Approach LOS						F	

Intersection Summary			
Average Delay	29.6		
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

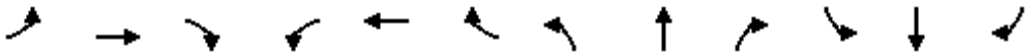
* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	220	290	310	680	30	140	350	60	30	690	230
Future Volume (vph)	190	220	290	310	680	30	140	350	60	30	690	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1543	1752	3480		3400	1845	1544	1752	3104	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1543	1752	3480		3400	1845	1544	1752	3104	
Peak-hour factor, PHF	0.89	0.90	0.89	0.90	0.90	0.90	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	213	244	326	344	756	33	157	393	67	33	775	258
RTOR Reduction (vph)	0	0	154	0	3	0	0	0	36	0	25	0
Lane Group Flow (vph)	213	244	172	344	786	0	157	393	31	33	1008	0
Confl. Peds. (#/hr)			1			4			2			7
Confl. Bikes (#/hr)			2			3						1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	12.3	18.2	18.2	25.0	30.9		10.1	54.3	54.3	4.7	48.9	
Effective Green, g (s)	12.3	19.1	19.1	25.0	31.8		10.1	55.2	55.2	4.7	49.8	
Actuated g/C Ratio	0.10	0.16	0.16	0.21	0.27		0.08	0.46	0.46	0.04	0.41	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	348	557	245	365	922		286	848	710	68	1288	
v/s Ratio Prot	0.06	0.07		c0.20	0.23		c0.05	0.21		0.02	c0.32	
v/s Ratio Perm			c0.11						0.02			
v/c Ratio	0.61	0.44	0.70	0.94	0.85		0.55	0.46	0.04	0.49	0.78	
Uniform Delay, d1	51.6	45.6	47.8	46.8	41.9		52.8	22.2	17.9	56.5	30.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.15	0.67	
Incremental Delay, d2	3.2	0.6	8.8	32.4	7.7		2.2	1.8	0.1	3.8	3.4	
Delay (s)	54.7	46.2	56.6	79.2	49.6		54.9	24.1	18.0	68.5	23.6	
Level of Service	D	D	E	E	D		D	C	B	E	C	
Approach Delay (s)		52.8			58.6			31.2			25.0	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	42.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

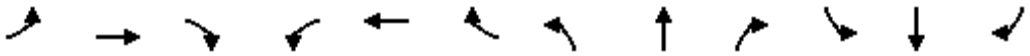
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	3	130	20	33	4	135	415	20	4	730	266
Future Volume (vph)	111	3	130	20	33	4	135	415	20	4	730	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96		1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1524		1804		1763	1848		1766	3353	
Flt Permitted	0.73	1.00	1.00		0.92		0.16	1.00		0.38	1.00	
Satd. Flow (perm)	1358	1863	1524		1682		296	1848		701	3353	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	148	4	173	27	44	5	180	553	27	5	973	355
RTOR Reduction (vph)	0	0	116	0	2	0	0	2	0	0	41	0
Lane Group Flow (vph)	148	4	57	0	74	0	180	578	0	5	1287	0
Confl. Peds. (#/hr)			9	9			39		7	7		39
Confl. Bikes (#/hr)			14			7			1			2
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	19.7	19.7	19.7		19.7		63.2	63.2		63.2	63.2	
Effective Green, g (s)	20.2	20.2	20.2		20.2		63.2	63.2		63.2	63.2	
Actuated g/C Ratio	0.22	0.22	0.22		0.22		0.69	0.69		0.69	0.69	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	297	408	334		368		203	1268		481	2300	
v/s Ratio Prot		0.00						0.31			0.38	
v/s Ratio Perm	c0.11		0.04		0.04		c0.61			0.01		
v/c Ratio	0.50	0.01	0.17		0.20		0.89	0.46		0.01	0.56	
Uniform Delay, d1	31.5	28.1	29.2		29.4		11.6	6.6		4.6	7.4	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.66	0.53	
Incremental Delay, d2	0.5	0.0	0.1		0.1		33.0	0.1		0.0	0.1	
Delay (s)	32.0	28.1	29.3		29.5		44.6	6.7		3.0	4.0	
Level of Service	C	C	C		C		D	A		A	A	
Approach Delay (s)		30.5			29.5			15.7			4.0	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	92.1	Sum of lost time (s)	13.2
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

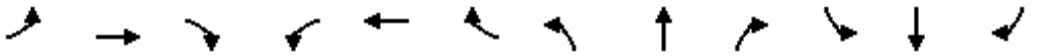
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	40	10	100	0	440	40	150	480	10
Future Volume (vph)	10	10	10	40	10	100	0	440	40	150	480	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	4.0		4.0			4.0	
Lane Util. Factor		1.00			1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00			1.00	0.98		1.00			1.00	
Flpb, ped/bikes		1.00			0.99	1.00		1.00			1.00	
Frt		0.95			1.00	0.85		0.99			1.00	
Flt Protected		0.98			0.96	1.00		1.00			0.99	
Satd. Flow (prot)		1733			1766	1300		1820			1818	
Flt Permitted		0.90			0.75	1.00		1.00			0.79	
Satd. Flow (perm)		1578			1372	1300		1820			1446	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	11	11	43	11	108	0	473	43	161	516	11
RTOR Reduction (vph)	0	9	0	0	0	89	0	4	0	0	1	0
Lane Group Flow (vph)	0	24	0	0	54	19	0	512	0	0	687	0
Confl. Peds. (#/hr)				6		3	13		3	3		13
Confl. Bikes (#/hr)									5			6
Heavy Vehicles (%)	3%	3%	3%	3%	2%	3%	2%	3%	3%	3%	3%	2%
Parking (#/hr)				10		10						
Turn Type	Perm	NA		Perm	NA	Perm		NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		9.3			9.3	9.3		38.1			38.1	
Effective Green, g (s)		9.3			9.3	10.3		39.1			39.1	
Actuated g/C Ratio		0.16			0.16	0.18		0.68			0.68	
Clearance Time (s)		5.0			5.0	5.0		5.0			5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		255			222	233		1239			984	
v/s Ratio Prot								0.28				
v/s Ratio Perm		0.02			c0.04	0.01					c0.48	
v/c Ratio		0.09			0.24	0.08		0.41			0.70	
Uniform Delay, d1		20.5			21.0	19.6		4.1			5.6	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.2			0.6	0.2		0.2			2.2	
Delay (s)		20.6			21.6	19.8		4.3			7.8	
Level of Service		C			C	B		A			A	
Approach Delay (s)		20.6			20.4			4.3			7.8	
Approach LOS		C			C			A			A	

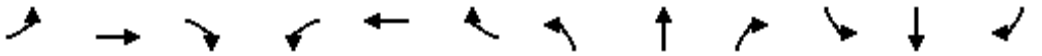
Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	57.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	10	20	100	10	190	20	490	130	160	760	10
Future Volume (vph)	20	10	20	100	10	190	20	490	130	160	760	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1696			1753	1568	1752	3505	1504	1752	3497	
Flt Permitted		0.87			0.78	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1501			1434	1568	1752	3505	1504	1752	3497	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	21	10	21	103	10	196	21	505	134	165	784	10
RTOR Reduction (vph)	0	17	0	0	0	105	0	0	74	0	1	0
Lane Group Flow (vph)	0	35	0	0	113	91	21	505	60	165	793	0
Confl. Peds. (#/hr)			8	8					11			9
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		13.2			13.2	36.8	10.4	35.2	35.2	19.1	43.9	
Effective Green, g (s)		13.7			13.7	37.3	10.4	35.9	35.9	19.1	44.6	
Actuated g/C Ratio		0.17			0.17	0.46	0.13	0.44	0.44	0.24	0.55	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		254			243	724	225	1559	669	414	1932	
v/s Ratio Prot						0.06	0.01	0.14		c0.09	c0.23	
v/s Ratio Perm		0.02			c0.08				0.04			
v/c Ratio		0.14			0.47	0.13	0.09	0.32	0.09	0.40	0.41	
Uniform Delay, d1		28.5			30.2	12.4	31.0	14.5	12.9	26.0	10.4	
Progression Factor		1.00			1.00	1.00	1.25	0.91	0.79	1.00	1.00	
Incremental Delay, d2		0.1			0.5	0.0	0.1	0.1	0.1	0.2	0.1	
Delay (s)		28.6			30.7	12.4	38.8	13.3	10.2	26.2	10.6	
Level of Service		C			C	B	D	B	B	C	B	
Approach Delay (s)		28.6			19.1			13.5			13.3	
Approach LOS		C			B			B			B	

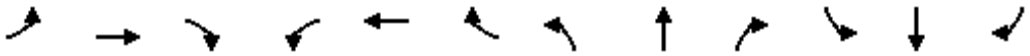
Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	12.5
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	60	120	60	70	10	130	840	70	10	450	120
Future Volume (vph)	180	60	120	60	70	10	130	840	70	10	450	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00		1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85		0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	0.98	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1415	1453	1315		1789		1752	3456		1752	3505	1532
Flt Permitted	0.95	0.98	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1415	1453	1315		1789		1752	3456		1752	3505	1532
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	184	61	122	61	71	10	133	857	71	10	459	122
RTOR Reduction (vph)	0	0	106	0	2	0	0	4	0	0	0	53
Lane Group Flow (vph)	121	124	16	0	140	0	133	924	0	10	459	69
Confl. Peds. (#/hr)			1						3			1
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Split	NA	Perm	Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	3		4	4		5	2		1	6	
Permitted Phases			3									6
Actuated Green, G (s)	15.5	15.5	15.5		6.0		14.2	79.4		1.2	66.4	66.4
Effective Green, g (s)	16.1	16.1	16.1		6.0		14.2	80.7		1.2	67.7	67.7
Actuated g/C Ratio	0.13	0.13	0.13		0.05		0.12	0.67		0.01	0.56	0.56
Clearance Time (s)	4.6	4.6	4.6		4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	189	194	176		89		207	2324		17	1977	864
v/s Ratio Prot	c0.09	0.09			c0.08		c0.08	c0.27		0.01	0.13	
v/s Ratio Perm			0.01									0.04
v/c Ratio	0.64	0.64	0.09		1.57		0.64	0.40		0.59	0.23	0.08
Uniform Delay, d1	49.2	49.2	45.5		57.0		50.5	8.8		59.2	13.1	11.9
Progression Factor	1.00	1.00	1.00		1.00		0.73	2.33		1.00	1.00	1.00
Incremental Delay, d2	7.2	6.8	0.2		305.3		5.5	0.4		42.8	0.3	0.2
Delay (s)	56.4	56.0	45.8		362.3		42.2	20.9		101.9	13.4	12.1
Level of Service	E	E	D		F		D	C		F	B	B
Approach Delay (s)		52.7			362.3			23.6			14.6	
Approach LOS		D			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	48.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

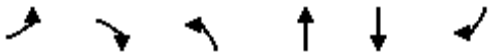
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	120	10	130	0	490	120	220	590	10
Future Volume (vph)	0	0	10	120	10	130	0	490	120	220	590	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			0.98		1.00	0.95		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.97		1.00	1.00	
Flt Protected			1.00		0.96	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1559		1763	1267		1513		1490	1561	
Flt Permitted			1.00		0.96	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1559		1763	1267		1513		183	1561	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	122	10	133	0	500	122	224	602	10
RTOR Reduction (vph)	0	0	9	0	0	116	0	7	0	0	1	0
Lane Group Flow (vph)	0	0	1	0	132	17	0	615	0	224	611	0
Confl. Peds. (#/hr)	9		1			9	25		7			25
Confl. Bikes (#/hr)									2			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			13.6		13.6	13.6		55.4		52.9	52.9	
Effective Green, g (s)			13.6		13.6	13.6		53.4		52.9	51.9	
Actuated g/C Ratio			0.13		0.13	0.13		0.50		0.50	0.49	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			198		224	161		757		319	759	
v/s Ratio Prot					c0.07			c0.41		0.12	c0.39	
v/s Ratio Perm			0.00			0.01				0.22		
v/c Ratio			0.01		0.59	0.11		0.81		0.70	0.81	
Uniform Delay, d1			40.7		43.9	41.2		22.4		24.4	23.1	
Progression Factor			1.00		1.00	1.00		0.29		1.00	1.00	
Incremental Delay, d2			0.0		4.2	0.3		0.7		6.8	6.2	
Delay (s)			40.7		48.1	41.5		7.1		31.2	29.4	
Level of Service			D		D	D		A		C	C	
Approach Delay (s)		40.7			44.8			7.1			29.9	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

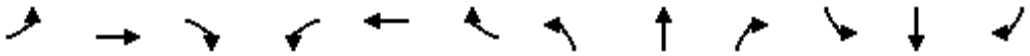


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	270	50	20	370	450	280
Future Volume (vph)	270	50	20	370	450	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.98			1.00	0.94	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.98			1.00	0.95	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1449			1561	1399	
Flt Permitted	0.96			0.95	1.00	
Satd. Flow (perm)	1449			1479	1399	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	53	21	389	474	295
RTOR Reduction (vph)	5	0	0	0	21	0
Lane Group Flow (vph)	332	0	0	410	748	0
Confl. Peds. (#/hr)		25	41			41
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	25.2			30.2	66.5	
Effective Green, g (s)	25.2			29.2	66.5	
Actuated g/C Ratio	0.24			0.27	0.62	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	342			404	871	
v/s Ratio Prot	c0.23				c0.53	
v/s Ratio Perm				c0.28		
v/c Ratio	0.97			1.01	0.86	
Uniform Delay, d1	40.4			38.8	16.3	
Progression Factor	1.00			1.00	0.30	
Incremental Delay, d2	40.3			48.6	6.9	
Delay (s)	80.6			87.3	11.7	
Level of Service	F			F	B	
Approach Delay (s)	80.6			87.3	11.7	
Approach LOS	F			F	B	

Intersection Summary			
HCM 2000 Control Delay	47.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	19.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	170	110	120	110	40	50	890	140	40	450	80
Future Volume (vph)	60	170	110	120	110	40	50	890	140	40	450	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.96		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1718		1490	1800		1752	3417		1752	3505	1524
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1718		1490	1497		1752	3417		1752	3505	1524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	62	177	115	125	115	42	52	927	146	42	469	83
RTOR Reduction (vph)	0	20	0	0	12	0	0	9	0	0	0	42
Lane Group Flow (vph)	63	272	0	125	145	0	52	1064	0	42	469	41
Confl. Peds. (#/hr)			9			6			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	21.8	21.8		15.6	15.6		6.9	58.4		6.7	58.2	58.2
Effective Green, g (s)	22.1	22.1		15.9	15.9		6.9	59.3		6.7	59.1	59.1
Actuated g/C Ratio	0.18	0.18		0.13	0.13		0.06	0.49		0.06	0.49	0.49
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	322	316		197	238		100	1688		97	1726	750
v/s Ratio Prot	0.04	c0.16		c0.08	0.08		c0.03	c0.31		0.02	0.13	
v/s Ratio Perm												0.03
v/c Ratio	0.20	0.86		0.63	0.61		0.52	0.63		0.43	0.27	0.05
Uniform Delay, d1	41.4	47.5		49.3	49.1		54.9	22.3		54.8	17.8	15.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	0.76		1.46	0.68	0.28
Incremental Delay, d2	0.3	20.7		6.5	4.4		2.9	1.1		2.9	0.4	0.1
Delay (s)	41.7	68.2		55.8	53.5		57.9	18.0		82.9	12.5	4.6
Level of Service	D	E		E	D		E	B		F	B	A
Approach Delay (s)		63.5			54.5			19.8			16.4	
Approach LOS		E			D			B			B	

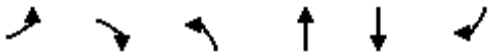
Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	90	250	130	50	210	40	140	220	60	20	200	60
Future Volume (vph)	90	250	130	50	210	40	140	220	60	20	200	60
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
Hourly flow rate (vph)	100	278	144	56	233	44	156	244	67	22	222	67

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	100	422	56	277	156	311	22	289
Volume Left (vph)	100	0	56	0	156	0	22	0
Volume Right (vph)	0	144	0	44	0	67	0	67
Hadj (s)	0.55	-0.19	0.55	-0.06	0.55	-0.10	0.55	-0.11
Departure Headway (s)	8.4	7.7	8.8	8.2	8.6	8.0	8.8	8.2
Degree Utilization, x	0.23	0.90	0.14	0.63	0.37	0.69	0.05	0.66
Capacity (veh/h)	414	463	389	418	395	434	386	418
Control Delay (s)	12.8	46.9	12.0	22.8	15.4	25.5	11.1	24.3
Approach Delay (s)	40.4		21.0		22.1		23.4	
Approach LOS	E		C		C		C	

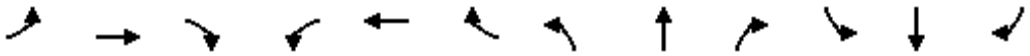
Intersection Summary				
Delay	28.0			
Level of Service	D			
Intersection Capacity Utilization	61.4%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	110	220	190	240	300	90
Future Volume (vph)	110	220	190	240	300	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	116	232	200	253	316	95

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	116	232	200	253	411
Volume Left (vph)	116	0	200	0	0
Volume Right (vph)	0	232	0	0	95
Hadj (s)	0.55	-0.65	0.55	0.05	-0.09
Departure Headway (s)	7.4	6.1	6.8	6.3	5.9
Degree Utilization, x	0.24	0.40	0.38	0.44	0.68
Capacity (veh/h)	462	551	516	557	594
Control Delay (s)	11.4	11.9	12.6	12.9	20.4
Approach Delay (s)	11.8		12.7		20.4
Approach LOS	B		B		C

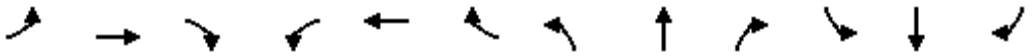
Intersection Summary			
Delay	15.1		
Level of Service	C		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	60	20	40	70	50	60	240	50	60	240	40
Future Volume (vph)	50	60	20	40	70	50	60	240	50	60	240	40
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
Hourly flow rate (vph)	57	68	23	45	80	57	68	273	57	68	273	45

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	148	182	398	386
Volume Left (vph)	57	45	68	68
Volume Right (vph)	23	57	57	45
Hadj (s)	0.03	-0.09	0.00	0.02
Departure Headway (s)	6.7	6.4	5.7	5.8
Degree Utilization, x	0.27	0.33	0.63	0.62
Capacity (veh/h)	457	477	599	598
Control Delay (s)	12.2	12.5	18.0	17.6
Approach Delay (s)	12.2	12.5	18.0	17.6
Approach LOS	B	B	C	C

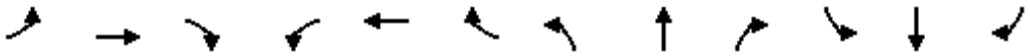
Intersection Summary			
Delay	16.2		
Level of Service	C		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	130	20	40	110	70	30	270	70	80	250	30
Future Volume (vph)	20	130	20	40	110	70	30	270	70	80	250	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.94	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1439	1527		1459	1439		1397	1492		1430	1524	
Flt Permitted	0.63	1.00		0.65	1.00		0.57	1.00		0.52	1.00	
Satd. Flow (perm)	958	1527		1001	1439		840	1492		780	1524	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	144	22	44	122	78	33	300	78	89	278	33
RTOR Reduction (vph)	0	9	0	0	39	0	0	12	0	0	5	0
Lane Group Flow (vph)	22	157	0	44	161	0	33	366	0	89	306	0
Confl. Peds. (#/hr)	41		24	24		41	88		63	63		88
Confl. Bikes (#/hr)						1			2			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	9.2	9.2		9.2	9.2		17.3	17.3		17.3	17.3	
Effective Green, g (s)	9.4	9.4		9.4	9.4		17.5	17.5		17.5	17.5	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	258	411		269	387		421	748		391	764	
v/s Ratio Prot		0.10			c0.11			c0.25			0.20	
v/s Ratio Perm	0.02			0.04			0.04			0.11		
v/c Ratio	0.09	0.38		0.16	0.42		0.08	0.49		0.23	0.40	
Uniform Delay, d1	9.5	10.4		9.7	10.5		4.5	5.7		4.9	5.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.3		0.1	0.5		0.3	0.3	
Delay (s)	9.6	10.6		9.8	10.8		4.6	6.3		5.2	5.8	
Level of Service	A	B		A	B		A	A		A	A	
Approach Delay (s)		10.5			10.6			6.1			5.6	
Approach LOS		B			B			A			A	

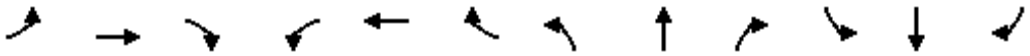
Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	34.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	80	90	50	70	40	90	810	30	10	530	70
Future Volume (vph)	110	80	90	50	70	40	90	810	30	10	530	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1443		1490	1462		1490	1558		1490	1530	
Flt Permitted	0.95	1.00		0.95	1.00		0.32	1.00		0.18	1.00	
Satd. Flow (perm)	1490	1443		1490	1462		504	1558		279	1530	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	87	98	54	76	43	98	880	33	11	576	76
RTOR Reduction (vph)	0	34	0	0	18	0	0	1	0	0	4	0
Lane Group Flow (vph)	120	151	0	54	101	0	98	912	0	11	648	0
Confl. Peds. (#/hr)						5	10		3	3		10
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.0	19.0		7.9	15.9		79.9	79.9		79.9	79.9	
Effective Green, g (s)	11.0	19.6		7.9	16.5		80.5	80.5		80.5	80.5	
Actuated g/C Ratio	0.09	0.16		0.07	0.14		0.67	0.67		0.67	0.67	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	235		98	201		338	1045		187	1026	
v/s Ratio Prot	c0.08	c0.10		0.04	0.07			c0.59			0.42	
v/s Ratio Perm							0.19			0.04		
v/c Ratio	0.88	0.64		0.55	0.50		0.29	0.87		0.06	0.63	
Uniform Delay, d1	53.9	46.9		54.3	47.9		8.1	15.7		6.8	11.3	
Progression Factor	1.00	1.00		1.00	1.00		0.16	0.46		0.62	0.74	
Incremental Delay, d2	43.9	5.9		6.6	2.0		1.4	6.6		0.6	2.8	
Delay (s)	97.7	52.8		60.9	49.9		2.6	13.9		4.8	11.1	
Level of Service	F	D		E	D		A	B		A	B	
Approach Delay (s)		70.5			53.3			12.8			11.0	
Approach LOS		E			D			B			B	

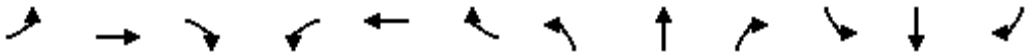
Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	60	10	10	10	30	900	30	10	580	30
Future Volume (Veh/h)	30	10	60	10	10	10	30	900	30	10	580	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	32	11	65	11	11	11	32	968	32	11	624	32
Pedestrians		16			3						15	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		1			0						1	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.79	0.79	0.80	0.79	0.79	0.69	0.80			0.69		
vC, conflicting volume	1742	1745	656	1768	1745	1002	672			1003		
vC1, stage 1 conf vol	678	678		1051	1051							
vC2, stage 2 conf vol	1064	1067		716	694							
vCu, unblocked vol	1228	1232	441	1261	1232	775	462			776		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	83	95	87	95	95	96	96			98		
cM capacity (veh/h)	187	218	483	202	228	268	861			572		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	108	33	32	1000	11	656
Volume Left	32	11	32	0	11	0
Volume Right	65	11	0	32	0	32
cSH	303	230	861	1700	572	1700
Volume to Capacity	0.36	0.14	0.04	0.59	0.02	0.39
Queue Length 95th (ft)	39	12	3	0	1	0
Control Delay (s)	23.3	23.3	9.3	0.0	11.4	0.0
Lane LOS	C	C	A		B	
Approach Delay (s)	23.3	23.3	0.3		0.2	
Approach LOS	C	C				

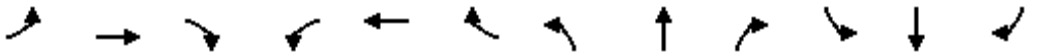
Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	63.3%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	190	130	20	250	10	60	10	60	10	10	30
Future Volume (Veh/h)	20	190	130	20	250	10	60	10	60	10	10	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	20	194	133	20	255	10	61	10	61	10	10	31
Pedestrians		2			1			36			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked												
vC, conflicting volume	274			363			674	650	298	676	712	271
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	274			363			674	650	298	676	712	271
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			81	97	91	97	97	96
cM capacity (veh/h)	1274			1154			315	360	717	308	332	758

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	347	285	132	51
Volume Left	20	20	61	10
Volume Right	133	10	61	31
cSH	1274	1154	431	493
Volume to Capacity	0.02	0.02	0.31	0.10
Queue Length 95th (ft)	1	1	32	9
Control Delay (s)	0.6	0.7	17.0	13.1
Lane LOS	A	A	C	B
Approach Delay (s)	0.6	0.7	17.0	13.1
Approach LOS			C	B

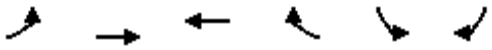
Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	45.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	200	50	10	60	40	30	10	160	110	30	80	230
Future Volume (vph)	200	50	10	60	40	30	10	160	110	30	80	230
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
Hourly flow rate (vph)	217	54	11	65	43	33	11	174	120	33	87	250

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	282	141	305	120	250
Volume Left (vph)	217	65	11	33	0
Volume Right (vph)	11	33	120	0	250
Hadj (s)	0.16	-0.01	-0.19	0.17	-0.67
Departure Headway (s)	6.2	6.4	5.8	6.6	5.7
Degree Utilization, x	0.49	0.25	0.49	0.22	0.40
Capacity (veh/h)	527	482	576	514	591
Control Delay (s)	15.0	11.5	14.3	10.2	11.2
Approach Delay (s)	15.0	11.5	14.3	10.9	
Approach LOS	B	B	B	B	

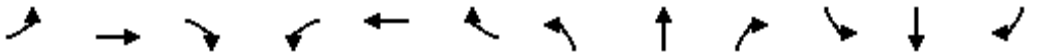
Intersection Summary				
Delay	13.0			
Level of Service	B			
Intersection Capacity Utilization	50.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	210	1180	690	40	60	250
Future Volume (vph)	210	1180	690	40	60	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3472		1748	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3472		1748	1568
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	233	1311	767	44	67	278
RTOR Reduction (vph)	0	0	4	0	0	234
Lane Group Flow (vph)	233	1311	807	0	67	44
Confl. Peds. (#/hr)				1	3	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	12.5	36.6	20.1		8.6	8.6
Effective Green, g (s)	12.5	38.0	21.5		8.6	8.6
Actuated g/C Ratio	0.23	0.70	0.39		0.16	0.16
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	401	2439	1367		275	246
v/s Ratio Prot	0.13	c0.37	0.23			
v/s Ratio Perm					c0.04	0.03
v/c Ratio	0.58	0.54	0.59		0.24	0.18
Uniform Delay, d1	18.7	4.0	13.1		20.2	19.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.4	0.2	0.7		0.2	0.1
Delay (s)	20.1	4.3	13.8		20.3	20.1
Level of Service	C	A	B		C	C
Approach Delay (s)		6.7	13.8		20.1	
Approach LOS		A	B		C	

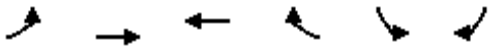
Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	910	110	70	460	50	50	70	40	40	80	220
Future Volume (vph)	220	910	110	70	460	50	50	70	40	40	80	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1542	3400	3444		1752	1845	1514	1752	1620	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1542	3400	3444		1752	1845	1514	1752	1620	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	989	120	76	500	54	54	76	43	43	87	239
RTOR Reduction (vph)	0	0	45	0	7	0	0	0	31	0	69	0
Lane Group Flow (vph)	239	989	75	76	547	0	54	76	12	43	257	0
Confl. Peds. (#/hr)			7			3			22			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	17.2	35.4	46.0	8.9	31.1		10.6	27.6	27.6	4.6	21.6	
Effective Green, g (s)	17.2	36.6	46.0	8.9	32.3		10.6	28.3	28.3	4.6	22.3	
Actuated g/C Ratio	0.17	0.37	0.47	0.09	0.33		0.11	0.29	0.29	0.05	0.23	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	306	1303	720	307	1130		188	530	435	81	367	
v/s Ratio Prot	c0.14	c0.28	0.01	0.02	c0.16		c0.03	0.04		0.02	c0.16	
v/s Ratio Perm			0.04						0.01			
v/c Ratio	0.78	0.76	0.10	0.25	0.48		0.29	0.14	0.03	0.53	0.70	
Uniform Delay, d1	38.8	27.0	14.7	41.6	26.4		40.4	26.0	25.2	45.8	35.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.3	2.6	0.0	0.2	0.3		0.3	0.0	0.0	3.3	4.9	
Delay (s)	50.1	29.6	14.7	41.8	26.7		40.7	26.1	25.2	49.2	39.9	
Level of Service	D	C	B	D	C		D	C	C	D	D	
Approach Delay (s)		31.9			28.5			30.4			40.9	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

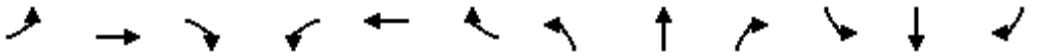


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	850	470	200	90	110
Future Volume (Veh/h)	140	850	470	200	90	110
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	147	895	495	211	95	116
Pedestrians		3	3		5	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.95				0.81	0.95
vC, conflicting volume	711				1350	361
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	583				658	214
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	84				70	85
cM capacity (veh/h)	925				321	776

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	147	448	448	330	376	95	116
Volume Left	147	0	0	0	0	95	0
Volume Right	0	0	0	0	211	0	116
cSH	925	1700	1700	1700	1700	321	776
Volume to Capacity	0.16	0.26	0.26	0.19	0.22	0.30	0.15
Queue Length 95th (ft)	14	0	0	0	0	30	13
Control Delay (s)	9.6	0.0	0.0	0.0	0.0	20.9	10.5
Lane LOS	A					C	B
Approach Delay (s)	1.4			0.0		15.1	
Approach LOS						C	

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	500	100	80	210	20	170	660	450	50	390	210
Future Volume (vph)	340	500	100	80	210	20	170	660	450	50	390	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1568	1752	3453		3400	1845	1541	1752	3046	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1568	1752	3453		3400	1845	1541	1752	3046	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	543	109	87	228	22	185	717	489	54	424	228
RTOR Reduction (vph)	0	0	87	0	7	0	0	0	180	0	49	0
Lane Group Flow (vph)	370	543	22	87	243	0	185	717	309	54	603	0
Confl. Peds. (#/hr)						4			3			9
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	14.0	23.2	23.2	11.3	20.5		10.4	61.4	61.4	6.3	57.3	
Effective Green, g (s)	14.0	24.1	24.1	11.3	21.4		10.4	62.3	62.3	6.3	58.2	
Actuated g/C Ratio	0.12	0.20	0.20	0.09	0.18		0.09	0.52	0.52	0.05	0.49	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	703	314	164	615		294	957	800	91	1477	
v/s Ratio Prot	c0.11	c0.15		c0.05	0.07		c0.05	c0.39		0.03	0.20	
v/s Ratio Perm			0.01						0.20			
v/c Ratio	0.93	0.77	0.07	0.53	0.40		0.63	0.75	0.39	0.59	0.41	
Uniform Delay, d1	52.5	45.4	38.9	51.8	43.6		52.9	22.7	17.3	55.6	19.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.10	0.84	
Incremental Delay, d2	29.0	5.3	0.1	3.3	0.4		4.2	5.4	1.4	8.5	0.7	
Delay (s)	81.5	50.6	39.0	55.1	44.0		57.1	28.1	18.8	69.7	17.4	
Level of Service	F	D	D	E	D		E	C	B	E	B	
Approach Delay (s)		60.6			46.9			28.7			21.4	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	10	70	10	10	10	60	530	10	10	750	120
Future Volume (vph)	100	10	70	10	10	10	60	530	10	10	750	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1538		1730		1750	1839		1750	3422	
Flt Permitted	0.73	1.00	1.00		0.93		0.21	1.00		0.32	1.00	
Satd. Flow (perm)	1350	1845	1538		1627		392	1839		586	3422	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	133	13	93	13	13	13	80	707	13	13	1000	160
RTOR Reduction (vph)	0	0	77	0	11	0	0	1	0	0	12	0
Lane Group Flow (vph)	133	13	16	0	28	0	80	719	0	13	1148	0
Confl. Peds. (#/hr)			5	5			20		5	5		20
Confl. Bikes (#/hr)			1									4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	13.2	13.2	13.2		13.2		58.3	58.3		58.3	58.3	
Effective Green, g (s)	13.7	13.7	13.7		13.7		58.3	58.3		58.3	58.3	
Actuated g/C Ratio	0.17	0.17	0.17		0.17		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	229	313	261		276		283	1328		423	2472	
v/s Ratio Prot		0.01						c0.39			0.34	
v/s Ratio Perm	c0.10		0.01		0.02		0.20			0.02		
v/c Ratio	0.58	0.04	0.06		0.10		0.28	0.54		0.03	0.46	
Uniform Delay, d1	30.9	28.0	28.1		28.3		3.9	5.1		3.2	4.7	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.76	0.68	
Incremental Delay, d2	2.4	0.0	0.0		0.1		0.2	0.2		0.0	0.0	
Delay (s)	33.3	28.0	28.1		28.4		4.1	5.4		2.4	3.2	
Level of Service	C	C	C		C		A	A		A	A	
Approach Delay (s)		31.0			28.4			5.2			3.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	13.2
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	10	90	0	220	0	310	70	140	480	10
Future Volume (vph)	10	0	10	90	0	220	0	310	70	140	480	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	4.0		4.0			4.0	
Lane Util. Factor		1.00			1.00	1.00		1.00			1.00	
Frpb, ped/bikes		0.99			1.00	0.97		1.00			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.93			1.00	0.85		0.98			1.00	
Flt Protected		0.98			0.95	1.00		1.00			0.99	
Satd. Flow (prot)		1658			1745	1287		1790			1820	
Flt Permitted		0.85			0.74	1.00		1.00			0.81	
Satd. Flow (perm)		1444			1362	1287		1790			1493	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	12	0	12	106	0	259	0	365	82	165	565	12
RTOR Reduction (vph)	0	19	0	0	0	204	0	10	0	0	1	0
Lane Group Flow (vph)	0	5	0	0	106	55	0	437	0	0	741	0
Confl. Peds. (#/hr)			3	3		10			3	3		
Confl. Bikes (#/hr)									7			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10						
Turn Type	Perm	NA		Perm	NA	Perm		NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		11.2			11.2	11.2		35.9			35.9	
Effective Green, g (s)		11.2			11.2	12.2		36.9			36.9	
Actuated g/C Ratio		0.20			0.20	0.21		0.65			0.65	
Clearance Time (s)		5.0			5.0	5.0		5.0			5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		283			267	274		1156			964	
v/s Ratio Prot								0.24				
v/s Ratio Perm		0.00			c0.08	0.04					c0.50	
v/c Ratio		0.02			0.40	0.20		0.38			0.77	
Uniform Delay, d1		18.5			20.0	18.4		4.7			7.1	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.0			1.0	0.4		0.2			3.7	
Delay (s)		18.5			21.0	18.8		4.9			10.8	
Level of Service		B			C	B		A			B	
Approach Delay (s)		18.5			19.4			4.9			10.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	57.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	180	10	410	20	430	80	190	830	10
Future Volume (vph)	10	10	10	180	10	410	20	430	80	190	830	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1709			1714	1568	1752	3505	1486	1752	3493	
Flt Permitted		0.89			0.71	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1538			1272	1568	1752	3505	1486	1752	3493	
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	13	13	13	234	13	532	26	558	104	247	1078	13
RTOR Reduction (vph)	0	10	0	0	0	93	0	0	61	0	1	0
Lane Group Flow (vph)	0	29	0	0	247	439	26	558	43	247	1090	0
Confl. Peds. (#/hr)	1		27	27		1			15			67
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		20.7			20.7	45.4	10.1	37.6	37.6	20.2	47.7	
Effective Green, g (s)		21.2			21.2	45.9	10.1	38.3	38.3	20.2	48.4	
Actuated g/C Ratio		0.23			0.23	0.50	0.11	0.42	0.42	0.22	0.53	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		355			294	784	192	1463	620	385	1843	
v/s Ratio Prot						c0.28	0.01	0.16		c0.14	c0.31	
v/s Ratio Perm		0.02			c0.19				0.03			
v/c Ratio		0.08			0.84	0.56	0.14	0.38	0.07	0.64	0.59	
Uniform Delay, d1		27.6			33.6	15.9	36.9	18.5	16.0	32.5	14.9	
Progression Factor		1.00			1.00	1.00	1.18	1.04	1.30	1.00	1.00	
Incremental Delay, d2		0.0			18.3	0.5	0.1	0.2	0.0	2.7	0.5	
Delay (s)		27.7			51.9	16.4	43.7	19.4	20.8	35.2	15.4	
Level of Service		C			D	B	D	B	C	D	B	
Approach Delay (s)		27.7			27.7			20.5			19.0	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

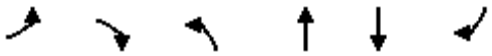
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	30	80	190	50	10	160	380	40	10	1060	420
Future Volume (vph)	140	30	80	190	50	10	160	380	40	10	1060	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1379		1752	1798		1752	3442		1752	3505	1505
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1379		1752	1798		1752	3442		1752	3505	1505
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	179	38	103	244	64	13	205	487	51	13	1359	538
RTOR Reduction (vph)	0	91	0	0	6	0	0	6	0	0	0	221
Lane Group Flow (vph)	179	51	0	244	71	0	205	532	0	13	1359	317
Confl. Peds. (#/hr)			3						5			6
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	21.4	10.8		15.6	5.0		19.2	73.7		2.0	56.5	56.5
Effective Green, g (s)	22.0	11.4		16.6	5.0		19.2	75.0		2.0	57.8	57.8
Actuated g/C Ratio	0.18	0.10		0.14	0.04		0.16	0.62		0.02	0.48	0.48
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	273	131		242	74		280	2151		29	1688	724
v/s Ratio Prot	c0.12	0.04		c0.14	c0.04		c0.12	0.15		0.01	c0.39	
v/s Ratio Perm												0.21
v/c Ratio	0.66	0.39		1.01	0.96		0.73	0.25		0.45	0.81	0.44
Uniform Delay, d1	45.5	51.0		51.7	57.4		48.0	10.0		58.5	26.3	20.4
Progression Factor	1.00	1.00		1.00	1.00		0.92	2.40		1.00	1.00	1.00
Incremental Delay, d2	5.6	1.9		60.0	91.3		8.9	0.3		10.6	4.2	1.9
Delay (s)	51.1	52.9		111.7	148.7		53.0	24.2		69.1	30.5	22.4
Level of Service	D	D		F	F		D	C		E	C	C
Approach Delay (s)		51.9			120.6			32.1			28.5	
Approach LOS		D			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

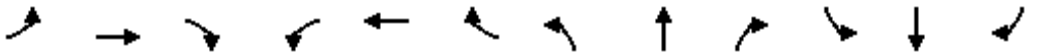
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	280	10	230	0	340	60	240	630	10
Future Volume (vph)	0	0	10	280	10	230	0	340	60	240	630	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		3.0		4.0	3.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			1.00		1.00	0.91		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.98		1.00	1.00	
Flt Protected			1.00		0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1596		1760	1218		1523		1490	1561	
Flt Permitted			1.00		0.95	1.00		1.00		0.22	1.00	
Satd. Flow (perm)			1596		1760	1218		1523		342	1561	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	11	301	11	247	0	366	65	258	677	11
RTOR Reduction (vph)	0	0	9	0	0	201	0	5	0	0	0	0
Lane Group Flow (vph)	0	0	2	0	312	46	0	426	0	258	688	0
Confl. Peds. (#/hr)	20					20	32		11			32
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			20.2		20.2	20.2		49.0		54.4	54.4	
Effective Green, g (s)			20.2		20.2	20.2		49.0		54.4	54.4	
Actuated g/C Ratio			0.19		0.19	0.19		0.45		0.50	0.50	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			297		328	227		689		384	784	
v/s Ratio Prot					c0.18			c0.28		0.12	c0.44	
v/s Ratio Perm			0.00			0.04				0.21		
v/c Ratio			0.01		0.95	0.20		0.62		0.67	0.88	
Uniform Delay, d1			35.9		43.6	37.2		22.5		18.9	24.0	
Progression Factor			1.00		1.00	1.00		0.11		1.00	1.00	
Incremental Delay, d2			0.0		37.0	0.5		1.6		4.6	10.8	
Delay (s)			35.9		80.6	37.8		3.9		23.4	34.8	
Level of Service			D		F	D		A		C	C	
Approach Delay (s)		35.9			61.7			3.9			31.7	
Approach LOS		D			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	108.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	10	10	230	500	410
Future Volume (vph)	170	10	10	230	500	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.94	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1484			1564	1420	
Flt Permitted	0.95			0.96	1.00	
Satd. Flow (perm)	1484			1503	1420	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	177	10	10	240	521	427
RTOR Reduction (vph)	2	0	0	0	22	0
Lane Group Flow (vph)	185	0	0	250	926	0
Confl. Peds. (#/hr)		3	18			18
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	18.7			30.3	74.6	
Effective Green, g (s)	18.7			29.3	74.6	
Actuated g/C Ratio	0.17			0.27	0.69	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	256			406	978	
v/s Ratio Prot	c0.12				c0.65	
v/s Ratio Perm				0.17		
v/c Ratio	0.72			0.62	0.95	
Uniform Delay, d1	42.4			34.6	15.1	
Progression Factor	1.00			1.00	0.41	
Incremental Delay, d2	10.4			3.2	10.5	
Delay (s)	52.7			37.7	16.6	
Level of Service	D			D	B	
Approach Delay (s)	52.7			37.7	16.6	
Approach LOS	D			D	B	

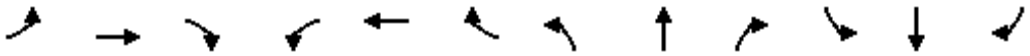
Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	108.3	Sum of lost time (s)	19.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	160	140	120	270	80	80	470	70	70	750	220
Future Volume (vph)	30	160	140	120	270	80	80	470	70	70	750	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.98		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1669		1490	1800		1752	3421		1752	3505	1485
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1669		1490	1491		1752	3421		1752	3505	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	32	172	151	129	290	86	86	505	75	75	806	237
RTOR Reduction (vph)	0	27	0	0	9	0	0	9	0	0	0	142
Lane Group Flow (vph)	32	296	0	129	367	0	86	571	0	75	806	95
Confl. Peds. (#/hr)			30			34			4			8
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	22.9	22.9		23.7	23.7		8.6	48.7		7.2	47.3	47.3
Effective Green, g (s)	23.2	23.2		24.0	24.0		8.6	49.6		7.2	48.2	48.2
Actuated g/C Ratio	0.19	0.19		0.20	0.20		0.07	0.41		0.06	0.40	0.40
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	338	322		298	360		125	1414		105	1407	596
v/s Ratio Prot	0.02	c0.18		0.09	c0.20		c0.05	0.17		0.04	c0.23	
v/s Ratio Perm												0.06
v/c Ratio	0.09	0.92		0.43	1.02		0.69	0.40		0.71	0.57	0.16
Uniform Delay, d1	39.8	47.5		42.0	48.0		54.4	24.8		55.4	27.9	23.0
Progression Factor	1.00	1.00		1.00	1.00		0.93	1.03		1.34	0.55	0.39
Incremental Delay, d2	0.1	30.5		1.0	52.6		13.6	0.8		12.1	0.9	0.3
Delay (s)	39.9	78.0		43.1	100.6		64.0	26.3		86.4	16.3	9.3
Level of Service	D	E		D	F		E	C		F	B	A
Approach Delay (s)		74.5			85.9			31.2			19.5	
Approach LOS		E			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

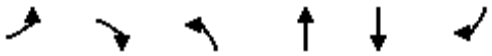
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	150	110	20	120	10	70	140	30	10	330	170
Future Volume (vph)	50	150	110	20	120	10	70	140	30	10	330	170
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	55	165	121	22	132	11	77	154	33	11	363	187

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	55	286	22	143	77	187	11	550
Volume Left (vph)	55	0	22	0	77	0	11	0
Volume Right (vph)	0	121	0	11	0	33	0	187
Hadj (s)	0.55	-0.25	0.55	0.00	0.55	-0.07	0.55	-0.19
Departure Headway (s)	7.9	7.1	8.3	7.7	7.8	7.1	7.2	6.5
Degree Utilization, x	0.12	0.56	0.05	0.31	0.17	0.37	0.02	0.99
Capacity (veh/h)	444	488	419	450	448	487	479	550
Control Delay (s)	10.8	17.7	10.5	12.9	11.1	13.1	9.2	60.2
Approach Delay (s)	16.6		12.6		12.5		59.2	
Approach LOS	C		B		B		F	

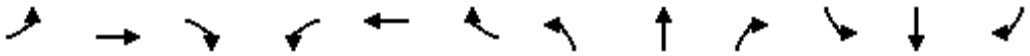
Intersection Summary				
Delay	33.2			
Level of Service	D			
Intersection Capacity Utilization	63.4%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	80	110	60	160	410	90
Future Volume (vph)	80	110	60	160	410	90
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	88	121	66	176	451	99

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	88	121	66	176	550
Volume Left (vph)	88	0	66	0	0
Volume Right (vph)	0	121	0	0	99
Hadj (s)	0.55	-0.65	0.55	0.05	-0.06
Departure Headway (s)	7.1	5.9	6.3	5.8	5.2
Degree Utilization, x	0.17	0.20	0.12	0.29	0.80
Capacity (veh/h)	475	566	543	590	677
Control Delay (s)	10.4	9.1	9.0	10.0	25.9
Approach Delay (s)	9.6		9.7		25.9
Approach LOS	A		A		D

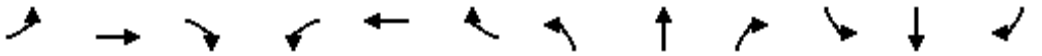
Intersection Summary			
Delay	18.6		
Level of Service	C		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	50	40	40	90	50	30	130	40	40	290	60
Future Volume (vph)	40	50	40	40	90	50	30	130	40	40	290	60
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
Hourly flow rate (vph)	45	57	45	45	102	57	34	148	45	45	330	68

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	147	204	227	443
Volume Left (vph)	45	45	34	45
Volume Right (vph)	45	57	45	68
Hadj (s)	-0.07	-0.07	-0.04	-0.02
Departure Headway (s)	6.1	6.0	5.7	5.4
Degree Utilization, x	0.25	0.34	0.36	0.66
Capacity (veh/h)	501	533	571	642
Control Delay (s)	11.2	12.1	11.9	18.2
Approach Delay (s)	11.2	12.1	11.9	18.2
Approach LOS	B	B	B	C

Intersection Summary				
Delay	14.5			
Level of Service	B			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A	
Analysis Period (min)	15			

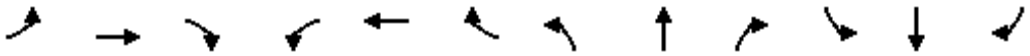


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	110	20	40	140	30	20	170	30	80	360	40
Future Volume (vph)	20	110	20	40	140	30	20	170	30	80	360	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		0.98	1.00		0.95	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1410	1522		1465	1503		1421	1517		1435	1527	
Flt Permitted	0.64	1.00		0.66	1.00		0.43	1.00		0.62	1.00	
Satd. Flow (perm)	943	1522		1021	1503		642	1517		930	1527	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	23	126	23	46	161	34	23	195	34	92	414	46
RTOR Reduction (vph)	0	11	0	0	13	0	0	8	0	0	5	0
Lane Group Flow (vph)	23	138	0	46	182	0	23	221	0	92	455	0
Confl. Peds. (#/hr)	54		16	16		54	74		39	39		74
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	12.0	12.0		12.0	12.0		20.9	20.9		20.9	20.9	
Effective Green, g (s)	12.2	12.2		12.2	12.2		21.1	21.1		21.1	21.1	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.51	0.51		0.51	0.51	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	278	449		301	443		327	775		475	780	
v/s Ratio Prot		0.09			c0.12			0.15			c0.30	
v/s Ratio Perm	0.02			0.05			0.04			0.10		
v/c Ratio	0.08	0.31		0.15	0.41		0.07	0.29		0.19	0.58	
Uniform Delay, d1	10.5	11.3		10.7	11.7		5.1	5.8		5.5	7.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.2		0.1	0.2		0.2	1.1	
Delay (s)	10.6	11.4		10.8	11.9		5.2	6.0		5.7	8.2	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.3			11.7			5.9			7.7	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	41.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	80	80	70	100	30	50	490	40	20	840	70
Future Volume (vph)	40	80	80	70	100	30	50	490	40	20	840	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1423		1490	1500		1490	1546		1485	1544	
Flt Permitted	0.95	1.00		0.95	1.00		0.19	1.00		0.40	1.00	
Satd. Flow (perm)	1490	1423		1490	1500		294	1546		621	1544	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	41	82	82	71	102	31	51	500	41	20	857	71
RTOR Reduction (vph)	0	31	0	0	9	0	0	2	0	0	2	0
Lane Group Flow (vph)	41	133	0	71	124	0	51	539	0	20	926	0
Confl. Peds. (#/hr)			5			5	8		3	3		8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.4	15.6		8.4	16.6		82.8	82.8		82.8	82.8	
Effective Green, g (s)	7.4	16.2		8.4	17.2		83.4	83.4		83.4	83.4	
Actuated g/C Ratio	0.06	0.13		0.07	0.14		0.70	0.70		0.70	0.70	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	91	192		104	215		204	1074		431	1073	
v/s Ratio Prot	0.03	c0.09		c0.05	0.08			0.35			c0.60	
v/s Ratio Perm							0.17			0.03		
v/c Ratio	0.45	0.69		0.68	0.57		0.25	0.50		0.05	0.86	
Uniform Delay, d1	54.3	49.5		54.5	48.0		6.8	8.6		5.8	13.9	
Progression Factor	1.00	1.00		1.00	1.00		0.16	0.24		0.41	0.70	
Incremental Delay, d2	3.5	10.3		16.9	3.7		2.4	1.4		0.2	7.5	
Delay (s)	57.9	59.8		71.4	51.7		3.5	3.5		2.5	17.2	
Level of Service	E	E		E	D		A	A		A	B	
Approach Delay (s)		59.4			58.5			3.5			16.9	
Approach LOS		E			E			A			B	

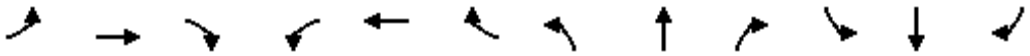
Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	10	20	20	30	550	20	10	910	60
Future Volume (Veh/h)	10	10	40	10	20	20	30	550	20	10	910	60
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	10	10	41	10	21	21	31	567	21	10	938	62
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.61	0.61	0.54	0.61	0.61	0.86	0.54			0.86		
vC, conflicting volume	1698	1664	989	1648	1684	610	1020			593		
vC1, stage 1 conf vol	1009	1009		644	644							
vC2, stage 2 conf vol	688	655		1004	1040							
vCu, unblocked vol	1315	1260	551	1235	1294	469	609			448		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	96	85	94	89	96	94			99		
cM capacity (veh/h)	213	229	282	175	197	497	511			951		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	52	31	588	10	1000
Volume Left	10	10	31	0	10	0
Volume Right	41	21	0	21	0	62
cSH	258	253	511	1700	951	1700
Volume to Capacity	0.24	0.21	0.06	0.35	0.01	0.59
Queue Length 95th (ft)	22	19	5	0	1	0
Control Delay (s)	23.2	22.9	12.5	0.0	8.8	0.0
Lane LOS	C	C	B		A	
Approach Delay (s)	23.2	22.9	0.6		0.1	
Approach LOS	C	C				

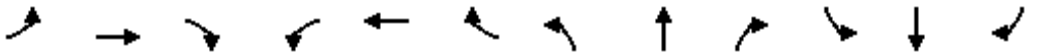
Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	68.4%	ICU Level of Service		C
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	210	130	10	300	10	60	10	10	10	10	40
Future Volume (Veh/h)	20	210	130	10	300	10	60	10	10	10	10	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	263	163	13	375	13	75	13	13	13	13	50
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	424			434			866	852	354	860	928	418
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	424			361			823	808	276	815	888	418
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			67	95	98	95	95	92
cM capacity (veh/h)	1096			1108			226	273	706	239	245	614

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	451	401	101	76
Volume Left	25	13	75	13
Volume Right	163	13	13	50
cSH	1096	1108	254	403
Volume to Capacity	0.02	0.01	0.40	0.19
Queue Length 95th (ft)	2	1	45	17
Control Delay (s)	0.7	0.4	28.2	16.0
Lane LOS	A	A	D	C
Approach Delay (s)	0.7	0.4	28.2	16.0
Approach LOS			D	C

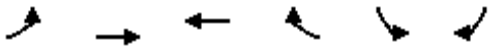
Intersection Summary				
Average Delay	4.4			
Intersection Capacity Utilization	46.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	160	20	50	180	50	30	10	50	50	40	130	260
Future Volume (vph)	160	20	50	180	50	30	10	50	50	40	130	260
Peak Hour Factor	0.78	0.78	0.90	0.90	0.78	0.78	0.90	0.90	0.90	0.78	0.90	0.78
Hourly flow rate (vph)	205	26	56	200	64	38	11	56	56	51	144	333

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	287	302	123	195	333
Volume Left (vph)	205	200	11	51	0
Volume Right (vph)	56	38	56	0	333
Hadj (s)	0.07	0.10	-0.22	0.17	-0.65
Departure Headway (s)	6.4	6.4	6.7	6.8	6.0
Degree Utilization, x	0.51	0.54	0.23	0.37	0.56
Capacity (veh/h)	516	519	456	502	566
Control Delay (s)	15.9	16.6	11.7	12.6	15.0
Approach Delay (s)	15.9	16.6	11.7	14.1	
Approach LOS	C	C	B	B	

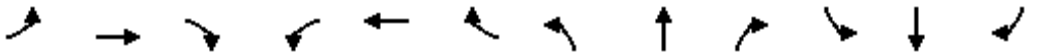
Intersection Summary				
Delay	14.9			
Level of Service	B			
Intersection Capacity Utilization	47.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	150	670	1100	60	80	240
Future Volume (vph)	150	670	1100	60	80	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3474		1731	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3474		1731	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	161	720	1183	65	86	258
RTOR Reduction (vph)	0	0	4	0	0	200
Lane Group Flow (vph)	161	720	1244	0	86	58
Confl. Peds. (#/hr)				1	13	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	11.2	45.8	30.6		9.5	9.5
Effective Green, g (s)	11.2	47.2	32.0		9.5	9.5
Actuated g/C Ratio	0.17	0.73	0.49		0.15	0.15
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	303	2556	1718		254	230
v/s Ratio Prot	c0.09	0.21	c0.36			
v/s Ratio Perm					c0.05	0.04
v/c Ratio	0.53	0.28	0.72		0.34	0.25
Uniform Delay, d1	24.4	3.0	12.9		24.8	24.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.1	1.5		0.3	0.2
Delay (s)	25.3	3.0	14.4		25.1	24.7
Level of Service	C	A	B		C	C
Approach Delay (s)		7.1	14.4		24.8	
Approach LOS		A	B		C	

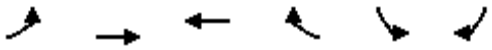
Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	64.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	450	200	350	820	100	170	160	210	50	180	170
Future Volume (vph)	100	450	200	350	820	100	170	160	210	50	180	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.98	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1543	3400	3408		1752	1845	1534	1752	1670	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1543	3400	3408		1752	1845	1534	1752	1670	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	120	542	241	422	988	120	205	193	253	60	217	205
RTOR Reduction (vph)	0	0	78	0	7	0	0	0	170	0	24	0
Lane Group Flow (vph)	120	542	163	422	1101	0	205	193	83	60	398	0
Confl. Peds. (#/hr)			9			24			8			31
Confl. Bikes (#/hr)			6			7			1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	11.9	22.0	39.3	22.7	36.8		17.3	34.7	34.7	6.9	24.3	
Effective Green, g (s)	11.9	23.2	39.3	22.7	38.0		17.3	35.4	35.4	6.9	25.0	
Actuated g/C Ratio	0.11	0.21	0.36	0.21	0.35		0.16	0.33	0.33	0.06	0.23	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	192	751	560	713	1196		280	603	501	111	385	
v/s Ratio Prot	c0.07	0.15	0.05	0.12	c0.32		c0.12	0.10		0.03	c0.24	
v/s Ratio Perm			0.06						0.05			
v/c Ratio	0.62	0.72	0.29	0.59	0.92		0.73	0.32	0.17	0.54	1.03	
Uniform Delay, d1	46.0	39.5	24.5	38.6	33.7		43.2	27.4	25.9	49.1	41.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.5	3.4	0.1	0.9	11.5		8.2	0.1	0.1	2.9	55.0	
Delay (s)	50.5	42.9	24.6	39.5	45.1		51.5	27.5	25.9	52.0	96.6	
Level of Service	D	D	C	D	D		D	C	C	D	F	
Approach Delay (s)		39.1			43.6			34.4			91.0	
Approach LOS		D			D			C			F	

Intersection Summary			
HCM 2000 Control Delay	47.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	108.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

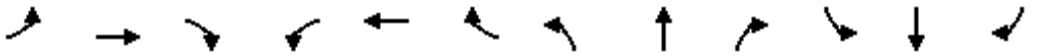


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	160	550	1050	180	190	220
Future Volume (Veh/h)	160	550	1050	180	190	220
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	186	640	1221	209	221	256
Pedestrians			1		2	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.77				0.82	0.77
vC, conflicting volume	1432				2020	717
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	967				1274	40
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	66				0	68
cM capacity (veh/h)	540				114	791

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	186	320	320	814	616	221	256
Volume Left	186	0	0	0	0	221	0
Volume Right	0	0	0	0	209	0	256
cSH	540	1700	1700	1700	1700	114	791
Volume to Capacity	0.34	0.19	0.19	0.48	0.36	1.93	0.32
Queue Length 95th (ft)	38	0	0	0	0	448	35
Control Delay (s)	15.1	0.0	0.0	0.0	0.0	512.6	11.7
Lane LOS	C					F	B
Approach Delay (s)	3.4			0.0		243.8	
Approach LOS						F	

Intersection Summary			
Average Delay	43.6		
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

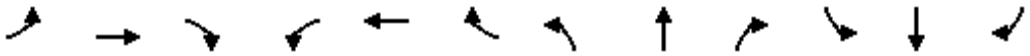
* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	250	290	310	730	30	200	450	70	30	690	230
Future Volume (vph)	200	250	290	310	730	30	200	450	70	30	690	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1543	3400	3482		3400	1845	1544	1752	3104	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1543	3400	3482		3400	1845	1544	1752	3104	
Peak-hour factor, PHF	0.89	0.90	0.89	0.90	0.90	0.90	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	225	278	326	344	811	33	225	506	78	33	775	258
RTOR Reduction (vph)	0	0	153	0	2	0	0	0	43	0	26	0
Lane Group Flow (vph)	225	278	173	344	842	0	225	506	35	33	1007	0
Confl. Peds. (#/hr)			1			4			2			7
Confl. Bikes (#/hr)			2			3						1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	12.5	18.6	18.6	26.1	32.2		10.8	52.8	52.8	4.7	46.7	
Effective Green, g (s)	12.5	19.5	19.5	26.1	33.1		10.8	53.7	53.7	4.7	47.6	
Actuated g/C Ratio	0.10	0.16	0.16	0.22	0.28		0.09	0.45	0.45	0.04	0.40	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	354	569	250	739	960		306	825	690	68	1231	
v/s Ratio Prot	0.07	0.08		0.10	c0.24		c0.07	0.27		0.02	c0.32	
v/s Ratio Perm			c0.11						0.02			
v/c Ratio	0.64	0.49	0.69	0.47	0.88		0.74	0.61	0.05	0.49	0.82	
Uniform Delay, d1	51.6	45.7	47.4	40.9	41.5		53.2	25.2	18.7	56.5	32.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.13	0.69	
Incremental Delay, d2	3.7	0.7	8.0	0.5	9.1		8.9	3.4	0.1	3.7	4.3	
Delay (s)	55.3	46.4	55.4	41.3	50.6		62.1	28.6	18.9	67.8	26.6	
Level of Service	E	D	E	D	D		E	C	B	E	C	
Approach Delay (s)		52.3			47.9			37.0			27.9	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	41.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	10	120	10	40	10	120	400	20	10	770	250
Future Volume (vph)	120	10	120	10	40	10	120	400	20	10	770	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96		1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1525		1798		1763	1847		1766	3368	
Flt Permitted	0.72	1.00	1.00		0.97		0.15	1.00		0.38	1.00	
Satd. Flow (perm)	1346	1863	1525		1751		276	1847		714	3368	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	160	13	160	13	53	13	160	533	27	13	1027	333
RTOR Reduction (vph)	0	0	102	0	8	0	0	2	0	0	36	0
Lane Group Flow (vph)	160	13	58	0	71	0	160	558	0	13	1324	0
Confl. Peds. (#/hr)			9	9			39		7	7		39
Confl. Bikes (#/hr)			14			7			1			2
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	20.7	20.7	20.7		20.7		61.8	61.8		61.8	61.8	
Effective Green, g (s)	21.2	21.2	21.2		21.2		61.8	61.8		61.8	61.8	
Actuated g/C Ratio	0.23	0.23	0.23		0.23		0.67	0.67		0.67	0.67	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	311	430	352		404		186	1244		481	2269	
v/s Ratio Prot		0.01						0.30			0.39	
v/s Ratio Perm	c0.12		0.04		0.04		c0.58			0.02		
v/c Ratio	0.51	0.03	0.16		0.18		0.86	0.45		0.03	0.58	
Uniform Delay, d1	30.8	27.3	28.2		28.3		11.6	7.0		5.0	8.0	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.65	0.54	
Incremental Delay, d2	0.6	0.0	0.1		0.1		30.1	0.1		0.0	0.2	
Delay (s)	31.4	27.3	28.2		28.3		41.7	7.1		3.2	4.6	
Level of Service	C	C	C		C		D	A		A	A	
Approach Delay (s)		29.7			28.3			14.8			4.6	
Approach LOS		C			C			B			A	

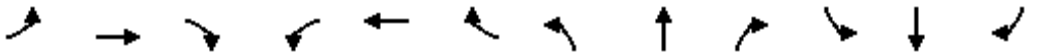
Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	13.2
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	50	10	110	0	440	50	150	480	20
Future Volume (vph)	10	10	10	50	10	110	0	440	50	150	480	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	4.0		4.0			4.0	
Lane Util. Factor		1.00			1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00			1.00	0.98		1.00			1.00	
Flpb, ped/bikes		1.00			0.99	1.00		1.00			1.00	
Frt		0.95			1.00	0.85		0.99			1.00	
Flt Protected		0.98			0.96	1.00		1.00			0.99	
Satd. Flow (prot)		1733			1762	1300		1814			1813	
Flt Permitted		0.89			0.74	1.00		1.00			0.79	
Satd. Flow (perm)		1574			1356	1300		1814			1441	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	11	11	54	11	118	0	473	54	161	516	22
RTOR Reduction (vph)	0	9	0	0	0	97	0	4	0	0	1	0
Lane Group Flow (vph)	0	24	0	0	65	21	0	523	0	0	698	0
Confl. Peds. (#/hr)				6		3	13		3	3		13
Confl. Bikes (#/hr)									5			6
Heavy Vehicles (%)	3%	3%	3%	3%	2%	3%	2%	3%	3%	3%	3%	2%
Parking (#/hr)				10		10						
Turn Type	Perm	NA		Perm	NA	Perm		NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		9.5			9.5	9.5		39.2			39.2	
Effective Green, g (s)		9.5			9.5	10.5		40.2			40.2	
Actuated g/C Ratio		0.16			0.16	0.18		0.68			0.68	
Clearance Time (s)		5.0			5.0	5.0		5.0			5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		254			219	232		1242			986	
v/s Ratio Prot								0.29				
v/s Ratio Perm		0.02			c0.05	0.02					c0.48	
v/c Ratio		0.09			0.30	0.09		0.42			0.71	
Uniform Delay, d1		20.9			21.7	20.1		4.1			5.7	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.2			0.8	0.2		0.2			2.3	
Delay (s)		21.1			22.4	20.3		4.3			8.0	
Level of Service		C			C	C		A			A	
Approach Delay (s)		21.1			21.0			4.3			8.0	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	58.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	10	20	100	10	210	20	490	130	160	760	10
Future Volume (vph)	30	10	20	100	10	210	20	490	130	160	760	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1706			1753	1568	1752	3505	1504	1752	3497	
Flt Permitted		0.83			0.76	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1444			1397	1568	1752	3505	1504	1752	3497	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	10	21	103	10	216	21	505	134	165	784	10
RTOR Reduction (vph)	0	17	0	0	0	116	0	0	74	0	1	0
Lane Group Flow (vph)	0	45	0	0	113	100	21	505	60	165	793	0
Confl. Peds. (#/hr)			8	8					11			9
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		13.2			13.2	36.8	10.4	35.2	35.2	19.1	43.9	
Effective Green, g (s)		13.7			13.7	37.3	10.4	35.9	35.9	19.1	44.6	
Actuated g/C Ratio		0.17			0.17	0.46	0.13	0.44	0.44	0.24	0.55	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		245			237	724	225	1559	669	414	1932	
v/s Ratio Prot						0.06	0.01	0.14		c0.09	c0.23	
v/s Ratio Perm		0.03			c0.08				0.04			
v/c Ratio		0.18			0.48	0.14	0.09	0.32	0.09	0.40	0.41	
Uniform Delay, d1		28.7			30.3	12.5	31.0	14.5	12.9	26.0	10.4	
Progression Factor		1.00			1.00	1.00	1.25	0.91	0.79	1.00	1.00	
Incremental Delay, d2		0.1			0.6	0.0	0.1	0.1	0.1	0.2	0.1	
Delay (s)		28.8			30.8	12.5	38.8	13.3	10.2	26.2	10.6	
Level of Service		C			C	B	D	B	B	C	B	
Approach Delay (s)		28.8			18.8			13.5			13.3	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	12.5
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	60	150	60	70	10	160	940	70	10	450	120
Future Volume (vph)	180	60	150	60	70	10	160	940	70	10	450	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1386		1752	1810		1752	3461		1752	3505	1532
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1386		1752	1810		1752	3461		1752	3505	1532
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	184	61	153	61	71	10	163	959	71	10	459	122
RTOR Reduction (vph)	0	88	0	0	5	0	0	3	0	0	0	63
Lane Group Flow (vph)	184	126	0	61	76	0	163	1027	0	10	459	59
Confl. Peds. (#/hr)			1						3			1
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	20.1	17.0		11.7	8.6		16.4	72.4		1.0	57.0	57.0
Effective Green, g (s)	20.7	17.6		12.7	8.6		16.4	73.7		1.0	58.3	58.3
Actuated g/C Ratio	0.17	0.15		0.11	0.07		0.14	0.61		0.01	0.49	0.49
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	257	203		185	129		239	2125		14	1702	744
v/s Ratio Prot	c0.12	c0.09		0.03	0.04		c0.09	c0.30		0.01	0.13	
v/s Ratio Perm												0.04
v/c Ratio	0.72	0.62		0.33	0.59		0.68	0.48		0.71	0.27	0.08
Uniform Delay, d1	46.9	48.1		49.7	54.0		49.3	12.7		59.4	18.3	16.5
Progression Factor	1.00	1.00		1.00	1.00		0.92	1.99		1.00	1.00	1.00
Incremental Delay, d2	9.1	5.8		1.0	7.1		6.4	0.6		100.1	0.4	0.2
Delay (s)	56.0	53.9		50.8	61.1		51.7	25.9		159.5	18.6	16.7
Level of Service	E	D		D	E		D	C		F	B	B
Approach Delay (s)		54.9			56.7			29.4			20.6	
Approach LOS		D			E			C			C	

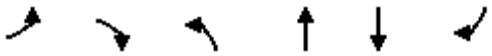
Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	120	10	130	0	550	130	220	610	10
Future Volume (vph)	0	0	10	120	10	130	0	550	130	220	610	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			0.98		1.00	0.95		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.97		1.00	1.00	
Flt Protected			1.00		0.96	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1559		1763	1267		1514		1490	1562	
Flt Permitted			1.00		0.96	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1559		1763	1267		1514		183	1562	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	122	10	133	0	561	133	224	622	10
RTOR Reduction (vph)	0	0	9	0	0	116	0	6	0	0	1	0
Lane Group Flow (vph)	0	0	1	0	132	17	0	688	0	224	631	0
Confl. Peds. (#/hr)	9		1			9	25		7			25
Confl. Bikes (#/hr)									2			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			13.6		13.6	13.6		55.4		52.9	52.9	
Effective Green, g (s)			13.6		13.6	13.6		53.4		52.9	51.9	
Actuated g/C Ratio			0.13		0.13	0.13		0.50		0.50	0.49	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			198		224	161		757		319	759	
v/s Ratio Prot					c0.07			c0.45		0.12	c0.40	
v/s Ratio Perm			0.00			0.01				0.22		
v/c Ratio			0.01		0.59	0.11		0.91		0.70	0.83	
Uniform Delay, d1			40.7		43.9	41.2		24.4		24.6	23.6	
Progression Factor			1.00		1.00	1.00		0.37		1.00	1.00	
Incremental Delay, d2			0.0		4.2	0.3		1.7		6.8	7.8	
Delay (s)			40.7		48.1	41.5		10.7		31.5	31.4	
Level of Service			D		D	D		B		C	C	
Approach Delay (s)		40.7			44.8			10.7			31.4	
Approach LOS		D			D			B			C	

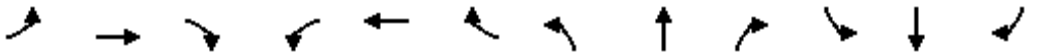
Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



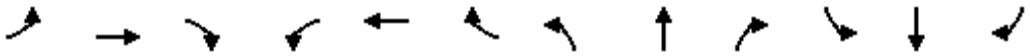
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	270	50	20	410	460	290
Future Volume (vph)	270	50	20	410	460	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.98			1.00	0.94	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.98			1.00	0.95	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1449			1562	1398	
Flt Permitted	0.96			0.95	1.00	
Satd. Flow (perm)	1449			1485	1398	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	53	21	432	484	305
RTOR Reduction (vph)	5	0	0	0	21	0
Lane Group Flow (vph)	332	0	0	453	768	0
Confl. Peds. (#/hr)		25	41			41
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	25.2			30.2	66.5	
Effective Green, g (s)	25.2			29.2	66.5	
Actuated g/C Ratio	0.24			0.27	0.62	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	342			406	871	
v/s Ratio Prot	c0.23				c0.55	
v/s Ratio Perm				c0.31		
v/c Ratio	0.97			1.12	0.88	
Uniform Delay, d1	40.4			38.8	16.8	
Progression Factor	1.00			1.00	0.32	
Incremental Delay, d2	40.3			79.9	8.4	
Delay (s)	80.6			118.7	13.7	
Level of Service	F			F	B	
Approach Delay (s)	80.6			118.7	13.7	
Approach LOS	F			F	B	

Intersection Summary			
HCM 2000 Control Delay	58.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	106.7	Sum of lost time (s)	19.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	170	140	120	110	50	70	940	140	50	450	80
Future Volume (vph)	90	170	140	120	110	50	70	940	140	50	450	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.95		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1700		1490	1800		1752	3421		1752	3505	1524
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1700		1490	1485		1752	3421		1752	3505	1524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	94	177	146	125	115	52	73	979	146	52	469	83
RTOR Reduction (vph)	0	25	0	0	15	0	0	8	0	0	0	43
Lane Group Flow (vph)	94	298	0	125	152	0	73	1117	0	52	469	40
Confl. Peds. (#/hr)			9			6			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	23.4	23.4		15.7	15.7		7.1	57.1		6.3	56.3	56.3
Effective Green, g (s)	23.7	23.7		16.0	16.0		7.1	58.0		6.3	57.2	57.2
Actuated g/C Ratio	0.20	0.20		0.13	0.13		0.06	0.48		0.05	0.48	0.48
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	346	335		198	240		103	1653		91	1670	726
v/s Ratio Prot	0.05	c0.18		0.08	c0.08		c0.04	c0.33		0.03	0.13	
v/s Ratio Perm												0.03
v/c Ratio	0.27	0.89		0.63	0.63		0.71	0.68		0.57	0.28	0.05
Uniform Delay, d1	40.8	46.9		49.2	49.2		55.4	23.8		55.5	19.0	16.9
Progression Factor	1.00	1.00		1.00	1.00		1.01	0.74		1.25	0.67	0.29
Incremental Delay, d2	0.4	23.7		6.4	5.4		9.7	1.0		8.1	0.4	0.1
Delay (s)	41.3	70.6		55.6	54.6		65.9	18.7		77.7	13.1	5.0
Level of Service	D	E		E	D		E	B		E	B	A
Approach Delay (s)		64.0			55.1			21.6			17.5	
Approach LOS		E			E			C			B	

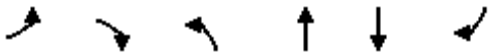
Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	110	250	130	50	220	40	140	260	60	20	240	80
Future Volume (vph)	110	250	130	50	220	40	140	260	60	20	240	80
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
Hourly flow rate (vph)	122	278	144	56	244	44	156	289	67	22	267	89

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	122	422	56	288	156	356	22	356
Volume Left (vph)	122	0	56	0	156	0	22	0
Volume Right (vph)	0	144	0	44	0	67	0	89
Hadj (s)	0.55	-0.19	0.55	-0.06	0.55	-0.08	0.55	-0.12
Departure Headway (s)	9.0	8.3	9.4	8.8	9.1	8.5	9.3	8.6
Degree Utilization, x	0.31	0.97	0.15	0.70	0.40	0.84	0.06	0.85
Capacity (veh/h)	392	422	373	398	390	416	381	411
Control Delay (s)	14.7	63.4	12.8	28.9	16.7	41.3	11.6	43.0
Approach Delay (s)	52.5		26.3		33.8		41.2	
Approach LOS	F		D		D		E	

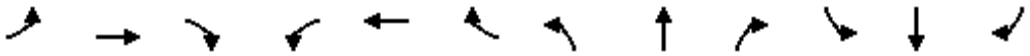
Intersection Summary				
Delay	39.6			
Level of Service	E			
Intersection Capacity Utilization	64.7%	ICU Level of Service		C
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	110	220	190	240	300	90
Future Volume (vph)	110	220	190	240	300	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	116	232	200	253	316	95

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	116	232	200	253	411
Volume Left (vph)	116	0	200	0	0
Volume Right (vph)	0	232	0	0	95
Hadj (s)	0.55	-0.65	0.55	0.05	-0.09
Departure Headway (s)	7.4	6.1	6.8	6.3	5.9
Degree Utilization, x	0.24	0.40	0.38	0.44	0.68
Capacity (veh/h)	462	551	516	557	594
Control Delay (s)	11.4	11.9	12.6	12.9	20.4
Approach Delay (s)	11.8		12.7		20.4
Approach LOS	B		B		C

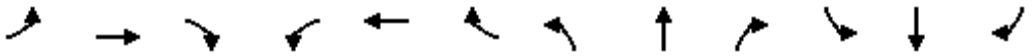
Intersection Summary			
Delay	15.1		
Level of Service	C		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	70	60	20	40	70	50	60	240	50	70	240	50
Future Volume (vph)	70	60	20	40	70	50	60	240	50	70	240	50
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
Hourly flow rate (vph)	80	68	23	45	80	57	68	273	57	80	273	57

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	171	182	398	410
Volume Left (vph)	80	45	68	80
Volume Right (vph)	23	57	57	57
Hadj (s)	0.06	-0.09	0.00	0.01
Departure Headway (s)	6.8	6.7	5.9	5.9
Degree Utilization, x	0.33	0.34	0.65	0.67
Capacity (veh/h)	447	460	577	576
Control Delay (s)	13.1	13.0	19.4	20.2
Approach Delay (s)	13.1	13.0	19.4	20.2
Approach LOS	B	B	C	C

Intersection Summary				
Delay	17.8			
Level of Service	C			
Intersection Capacity Utilization	49.1%	ICU Level of Service	A	
Analysis Period (min)	15			



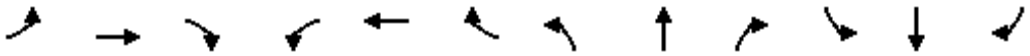
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	130	20	40	110	70	30	270	70	80	250	30
Future Volume (vph)	30	130	20	40	110	70	30	270	70	80	250	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.94	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.94		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1439	1527		1459	1439		1397	1492		1430	1524	
Flt Permitted	0.63	1.00		0.65	1.00		0.57	1.00		0.52	1.00	
Satd. Flow (perm)	958	1527		1001	1439		840	1492		780	1524	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	144	22	44	122	78	33	300	78	89	278	33
RTOR Reduction (vph)	0	9	0	0	39	0	0	12	0	0	5	0
Lane Group Flow (vph)	33	157	0	44	161	0	33	366	0	89	306	0
Confl. Peds. (#/hr)	41		24	24		41	88		63	63		88
Confl. Bikes (#/hr)						1			2			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	9.2	9.2		9.2	9.2		17.3	17.3		17.3	17.3	
Effective Green, g (s)	9.4	9.4		9.4	9.4		17.5	17.5		17.5	17.5	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	258	411		269	387		421	748		391	764	
v/s Ratio Prot		0.10			c0.11			c0.25			0.20	
v/s Ratio Perm	0.03			0.04			0.04			0.11		
v/c Ratio	0.13	0.38		0.16	0.42		0.08	0.49		0.23	0.40	
Uniform Delay, d1	9.6	10.4		9.7	10.5		4.5	5.7		4.9	5.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.3		0.1	0.5		0.3	0.3	
Delay (s)	9.7	10.6		9.8	10.8		4.6	6.3		5.2	5.8	
Level of Service	A	B		A	B		A	A		A	A	
Approach Delay (s)		10.5			10.6			6.1			5.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	34.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	80	110	60	70	40	90	890	30	10	530	80
Future Volume (vph)	110	80	110	60	70	40	90	890	30	10	530	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1432		1490	1462		1490	1559		1490	1526	
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00		0.12	1.00	
Satd. Flow (perm)	1490	1432		1490	1462		488	1559		195	1526	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	87	120	65	76	43	98	967	33	11	576	87
RTOR Reduction (vph)	0	42	0	0	18	0	0	1	0	0	4	0
Lane Group Flow (vph)	120	165	0	65	101	0	98	999	0	11	659	0
Confl. Peds. (#/hr)						5	10		3	3		10
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.0	19.6		8.3	16.9		78.9	78.9		78.9	78.9	
Effective Green, g (s)	11.0	20.2		8.3	17.5		79.5	79.5		79.5	79.5	
Actuated g/C Ratio	0.09	0.17		0.07	0.15		0.66	0.66		0.66	0.66	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	241		103	213		323	1032		129	1010	
v/s Ratio Prot	c0.08	c0.12		0.04	0.07			c0.64			0.43	
v/s Ratio Perm							0.20			0.06		
v/c Ratio	0.88	0.69		0.63	0.47		0.30	0.97		0.09	0.65	
Uniform Delay, d1	53.9	46.9		54.4	47.0		8.6	19.1		7.2	12.0	
Progression Factor	1.00	1.00		1.00	1.00		0.25	0.57		0.66	0.67	
Incremental Delay, d2	43.9	7.9		11.9	1.7		1.5	15.4		1.2	3.0	
Delay (s)	97.7	54.8		66.3	48.7		3.6	26.2		6.0	11.1	
Level of Service	F	D		E	D		A	C		A	B	
Approach Delay (s)		70.5			54.9			24.2			11.0	
Approach LOS		E			D			C			B	

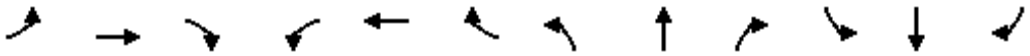
Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	60	10	10	10	40	970	30	10	580	30
Future Volume (Veh/h)	60	10	60	10	10	10	40	970	30	10	580	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	65	11	65	11	11	11	43	1043	32	11	624	32
Pedestrians		16			3						15	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		1			0						1	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.72	0.72	0.80	0.72	0.72	0.62	0.80			0.62		
vC, conflicting volume	1838	1842	656	1864	1842	1077	672			1078		
vC1, stage 1 conf vol	678	678		1148	1148							
vC2, stage 2 conf vol	1160	1164		716	694							
vCu, unblocked vol	1336	1341	441	1373	1341	818	461			819		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	55	94	87	93	94	95	95			98		
cM capacity (veh/h)	145	177	483	167	188	229	861			498		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	141	33	43	1075	11	656
Volume Left	65	11	43	0	11	0
Volume Right	65	11	0	32	0	32
cSH	219	191	861	1700	498	1700
Volume to Capacity	0.64	0.17	0.05	0.63	0.02	0.39
Queue Length 95th (ft)	97	15	4	0	2	0
Control Delay (s)	47.1	27.7	9.4	0.0	12.4	0.0
Lane LOS	E	D	A		B	
Approach Delay (s)	47.1	27.7	0.4		0.2	
Approach LOS	E	D				

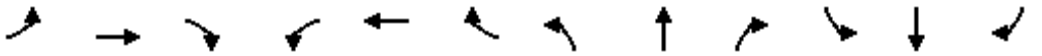
Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	70.9%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	190	130	20	260	10	60	10	60	10	10	30
Future Volume (Veh/h)	20	190	130	20	260	10	60	10	60	10	10	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	20	194	133	20	265	10	61	10	61	10	10	31
Pedestrians		2			1			36			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595			625							
pX, platoon unblocked												
vC, conflicting volume	284			363			684	660	298	686	722	281
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	284			363			684	660	298	686	722	281
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			80	97	91	97	97	96
cM capacity (veh/h)	1263			1154			310	355	717	303	327	749

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	347	295	132	51
Volume Left	20	20	61	10
Volume Right	133	10	61	31
cSH	1263	1154	426	486
Volume to Capacity	0.02	0.02	0.31	0.10
Queue Length 95th (ft)	1	1	33	9
Control Delay (s)	0.6	0.7	17.2	13.3
Lane LOS	A	A	C	B
Approach Delay (s)	0.6	0.7	17.2	13.3
Approach LOS			C	B

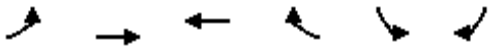
Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	45.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	50	10	60	40	30	10	160	110	30	80	240
Future Volume (vph)	200	50	10	60	40	30	10	160	110	30	80	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		1.00			1.00			1.00			1.00	1.00
Frpb, ped/bikes		1.00			1.00			1.00			1.00	0.98
Flpb, ped/bikes		1.00			1.00			1.00			1.00	1.00
Frt		0.99			0.97			0.95			1.00	0.85
Flt Protected		0.96			0.98			1.00			0.99	1.00
Satd. Flow (prot)		1784			1755			1761			1837	1550
Flt Permitted		0.69			0.79			0.99			0.88	1.00
Satd. Flow (perm)		1287			1415			1748			1636	1550
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	54	11	65	43	33	11	174	120	33	87	261
RTOR Reduction (vph)	0	4	0	0	20	0	0	58	0	0	0	157
Lane Group Flow (vph)	0	278	0	0	121	0	0	247	0	0	120	104
Confl. Bikes (#/hr)						1						1
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		16.0			16.0			16.0			16.0	16.0
Effective Green, g (s)		16.0			16.0			16.0			16.0	16.0
Actuated g/C Ratio		0.40			0.40			0.40			0.40	0.40
Clearance Time (s)		4.0			4.0			4.0			4.0	4.0
Lane Grp Cap (vph)		514			566			699			654	620
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.09			c0.14			0.07	0.07
v/c Ratio		0.54			0.21			0.35			0.18	0.17
Uniform Delay, d1		9.2			7.9			8.4			7.8	7.7
Progression Factor		1.00			1.00			1.00			1.00	1.00
Incremental Delay, d2		4.1			0.9			1.4			0.6	0.6
Delay (s)		13.2			8.7			9.8			8.4	8.3
Level of Service		B			A			A			A	A
Approach Delay (s)		13.2			8.7			9.8			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

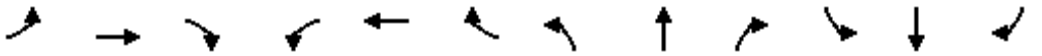
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	250	1220	770	40	60	300
Future Volume (vph)	250	1220	770	40	60	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3476		1748	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3476		1748	1568
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	278	1356	856	44	67	333
RTOR Reduction (vph)	0	0	4	0	0	285
Lane Group Flow (vph)	278	1356	896	0	67	48
Confl. Peds. (#/hr)				1	3	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	15.0	42.2	23.2		8.7	8.7
Effective Green, g (s)	15.0	43.6	24.6		8.7	8.7
Actuated g/C Ratio	0.25	0.72	0.41		0.14	0.14
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	435	2534	1418		252	226
v/s Ratio Prot	c0.16	0.39	c0.26			
v/s Ratio Perm					c0.04	0.03
v/c Ratio	0.64	0.54	0.63		0.27	0.21
Uniform Delay, d1	20.2	3.8	14.2		23.0	22.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.3	0.2	0.9		0.2	0.2
Delay (s)	22.5	4.0	15.2		23.2	22.9
Level of Service	C	A	B		C	C
Approach Delay (s)		7.1	15.2		23.0	
Approach LOS		A	B		C	

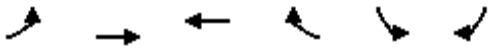
Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	940	110	70	520	40	70	70	40	40	90	220
Future Volume (vph)	230	940	110	70	520	40	70	70	40	40	90	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1543	3400	3461		1752	1845	1513	1752	1627	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1543	3400	3461		1752	1845	1513	1752	1627	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	1022	120	76	565	43	76	76	43	43	98	239
RTOR Reduction (vph)	0	0	44	0	5	0	0	0	30	0	61	0
Lane Group Flow (vph)	250	1022	76	76	603	0	76	76	13	43	276	0
Confl. Peds. (#/hr)			7			3			22			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	18.1	35.7	47.3	9.4	31.0		11.6	28.6	28.6	4.6	21.6	
Effective Green, g (s)	18.1	36.9	47.3	9.4	32.2		11.6	29.3	29.3	4.6	22.3	
Actuated g/C Ratio	0.18	0.37	0.47	0.09	0.32		0.12	0.29	0.29	0.05	0.22	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	316	1290	728	318	1112		202	539	442	80	362	
v/s Ratio Prot	c0.14	c0.29	0.01	0.02	c0.17		c0.04	0.04		0.02	c0.17	
v/s Ratio Perm			0.04						0.01			
v/c Ratio	0.79	0.79	0.10	0.24	0.54		0.38	0.14	0.03	0.54	0.76	
Uniform Delay, d1	39.2	28.2	14.7	42.1	27.9		41.0	26.2	25.3	46.8	36.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.9	3.4	0.0	0.1	0.5		0.4	0.0	0.0	3.4	8.2	
Delay (s)	51.1	31.6	14.7	42.2	28.5		41.4	26.2	25.3	50.2	44.7	
Level of Service	D	C	B	D	C		D	C	C	D	D	
Approach Delay (s)		33.7			30.0			31.9			45.3	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	34.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

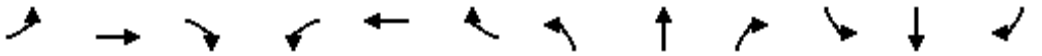


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	850	490	200	90	140
Future Volume (Veh/h)	170	850	490	200	90	140
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	179	895	516	211	95	147
Pedestrians		3	3		5	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.94				0.80	0.94
vC, conflicting volume	732				1435	372
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	575				688	189
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	81				68	81
cM capacity (veh/h)	920				294	790

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	179	448	448	344	383	95	147
Volume Left	179	0	0	0	0	95	0
Volume Right	0	0	0	0	211	0	147
cSH	920	1700	1700	1700	1700	294	790
Volume to Capacity	0.19	0.26	0.26	0.20	0.23	0.32	0.19
Queue Length 95th (ft)	18	0	0	0	0	34	17
Control Delay (s)	9.9	0.0	0.0	0.0	0.0	22.9	10.6
Lane LOS	A					C	B
Approach Delay (s)	1.6			0.0		15.4	
Approach LOS						C	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

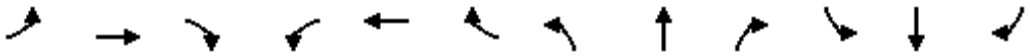
* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	500	100	90	240	20	170	740	560	50	390	230
Future Volume (vph)	340	500	100	90	240	20	170	740	560	50	390	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1568	3400	3459		3400	1845	1541	1752	3034	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1568	3400	3459		3400	1845	1541	1752	3034	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	543	109	98	261	22	185	804	609	54	424	250
RTOR Reduction (vph)	0	0	87	0	6	0	0	0	193	0	57	0
Lane Group Flow (vph)	370	543	22	98	277	0	185	804	416	54	617	0
Confl. Peds. (#/hr)						4			3			9
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	14.0	23.4	23.4	8.9	18.3		10.4	63.6	63.6	6.3	59.5	
Effective Green, g (s)	14.0	24.3	24.3	8.9	19.2		10.4	64.5	64.5	6.3	60.4	
Actuated g/C Ratio	0.12	0.20	0.20	0.07	0.16		0.09	0.54	0.54	0.05	0.50	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	709	317	252	553		294	991	828	91	1527	
v/s Ratio Prot	c0.11	c0.15		0.03	c0.08		c0.05	c0.44		0.03	0.20	
v/s Ratio Perm			0.01						0.27			
v/c Ratio	0.93	0.77	0.07	0.39	0.50		0.63	0.81	0.50	0.59	0.40	
Uniform Delay, d1	52.5	45.2	38.7	53.0	46.0		52.9	22.8	17.6	55.6	18.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.12	0.86	
Incremental Delay, d2	29.0	4.9	0.1	1.0	0.7		4.2	7.2	2.2	8.5	0.7	
Delay (s)	81.5	50.1	38.8	54.0	46.7		57.1	30.0	19.8	70.5	16.7	
Level of Service	F	D	D	D	D		E	C	B	E	B	
Approach Delay (s)		60.3			48.6			29.2			20.7	
Approach LOS		E			D			C			C	

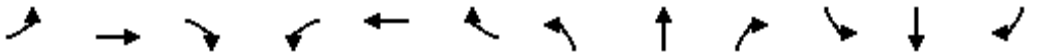
Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	10	70	10	10	10	70	530	10	10	750	120
Future Volume (vph)	100	10	70	10	10	10	70	530	10	10	750	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1538		1730		1750	1839		1750	3422	
Flt Permitted	0.73	1.00	1.00		0.93		0.21	1.00		0.32	1.00	
Satd. Flow (perm)	1350	1845	1538		1627		392	1839		586	3422	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	133	13	93	13	13	13	93	707	13	13	1000	160
RTOR Reduction (vph)	0	0	77	0	11	0	0	1	0	0	12	0
Lane Group Flow (vph)	133	13	16	0	28	0	93	719	0	13	1148	0
Confl. Peds. (#/hr)			5	5			20		5	5		20
Confl. Bikes (#/hr)			1									4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	13.2	13.2	13.2		13.2		58.3	58.3		58.3	58.3	
Effective Green, g (s)	13.7	13.7	13.7		13.7		58.3	58.3		58.3	58.3	
Actuated g/C Ratio	0.17	0.17	0.17		0.17		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	229	313	261		276		283	1328		423	2472	
v/s Ratio Prot		0.01						c0.39			0.34	
v/s Ratio Perm	c0.10		0.01		0.02		0.24			0.02		
v/c Ratio	0.58	0.04	0.06		0.10		0.33	0.54		0.03	0.46	
Uniform Delay, d1	30.9	28.0	28.1		28.3		4.1	5.1		3.2	4.7	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.76	0.68	
Incremental Delay, d2	2.4	0.0	0.0		0.1		0.2	0.2		0.0	0.0	
Delay (s)	33.3	28.0	28.1		28.4		4.3	5.4		2.4	3.3	
Level of Service	C	C	C		C		A	A		A	A	
Approach Delay (s)		31.0			28.4			5.2			3.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.7	Sum of lost time (s)	13.2
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



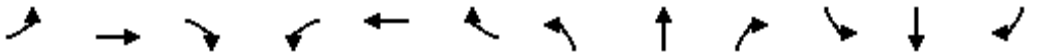
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	0	10	90	0	220	0	330	90	150	500	10
Future Volume (vph)	10	0	10	90	0	220	0	330	90	150	500	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	4.0		4.0			4.0	
Lane Util. Factor		1.00			1.00	1.00		1.00			1.00	
Frpb, ped/bikes		0.99			1.00	0.96		0.99			1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00			1.00	
Frt		0.93			1.00	0.85		0.97			1.00	
Flt Protected		0.98			0.95	1.00		1.00			0.99	
Satd. Flow (prot)		1657			1744	1285		1781			1820	
Flt Permitted		0.85			0.74	1.00		1.00			0.78	
Satd. Flow (perm)		1439			1362	1285		1781			1444	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	12	0	12	106	0	259	0	388	106	176	588	12
RTOR Reduction (vph)	0	20	0	0	0	210	0	11	0	0	1	0
Lane Group Flow (vph)	0	4	0	0	106	49	0	483	0	0	775	0
Confl. Peds. (#/hr)			3	3		10			3	3		
Confl. Bikes (#/hr)									7			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10						
Turn Type	Perm	NA		Perm	NA	Perm		NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		11.4			11.4	11.4		43.6			43.6	
Effective Green, g (s)		11.4			11.4	12.4		44.6			44.6	
Actuated g/C Ratio		0.18			0.18	0.19		0.69			0.69	
Clearance Time (s)		5.0			5.0	5.0		5.0			5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		252			238	245		1222			990	
v/s Ratio Prot								0.27				
v/s Ratio Perm		0.00			c0.08	0.04					c0.54	
v/c Ratio		0.02			0.45	0.20		0.40			0.78	
Uniform Delay, d1		22.2			24.0	22.1		4.4			6.9	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.0			1.3	0.4		0.2			4.1	
Delay (s)		22.2			25.3	22.5		4.6			11.0	
Level of Service		C			C	C		A			B	
Approach Delay (s)		22.2			23.3			4.6			11.0	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	170	10	410	20	440	100	190	830	10
Future Volume (vph)	10	10	10	170	10	410	20	440	100	190	830	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1708			1714	1568	1752	3505	1485	1752	3493	
Flt Permitted		0.89			0.71	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1541			1273	1568	1752	3505	1485	1752	3493	
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	13	13	13	221	13	532	26	571	130	247	1078	13
RTOR Reduction (vph)	0	10	0	0	0	92	0	0	73	0	1	0
Lane Group Flow (vph)	0	29	0	0	234	440	26	571	57	247	1090	0
Confl. Peds. (#/hr)	1		27	27		1			15			67
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		20.5			20.5	45.0	10.0	40.1	40.1	20.0	50.1	
Effective Green, g (s)		21.0			21.0	45.5	10.0	40.8	40.8	20.0	50.8	
Actuated g/C Ratio		0.22			0.22	0.49	0.11	0.43	0.43	0.21	0.54	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		345			285	760	186	1524	645	373	1891	
v/s Ratio Prot						c0.28	0.01	0.16		c0.14	c0.31	
v/s Ratio Perm		0.02			c0.18				0.04			
v/c Ratio		0.08			0.82	0.58	0.14	0.37	0.09	0.66	0.58	
Uniform Delay, d1		28.8			34.6	17.3	38.0	17.9	15.6	33.8	14.3	
Progression Factor		1.00			1.00	1.00	1.16	1.07	1.40	1.00	1.00	
Incremental Delay, d2		0.0			16.3	0.7	0.1	0.1	0.1	3.4	0.4	
Delay (s)		28.8			50.9	18.0	44.2	19.3	21.9	37.2	14.8	
Level of Service		C			D	B	D	B	C	D	B	
Approach Delay (s)		28.8			28.0			20.7			18.9	
Approach LOS		C			C			C			B	

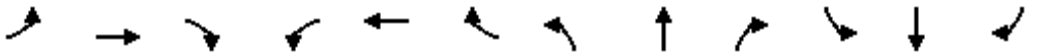
Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	93.8	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	30	80	190	50	10	160	690	40	10	1090	420
Future Volume (vph)	140	30	80	190	50	10	160	690	40	10	1090	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1379		1752	1798		1752	3469		1752	3505	1505
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1379		1752	1798		1752	3469		1752	3505	1505
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	179	38	103	244	64	13	205	885	51	13	1397	538
RTOR Reduction (vph)	0	91	0	0	6	0	0	3	0	0	0	215
Lane Group Flow (vph)	179	51	0	244	71	0	205	933	0	13	1397	323
Confl. Peds. (#/hr)			3						5			6
Confl. Bikes (#/hr)									1			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	21.4	10.8		15.6	5.0		19.2	73.7		2.0	56.5	56.5
Effective Green, g (s)	22.0	11.4		16.6	5.0		19.2	75.0		2.0	57.8	57.8
Actuated g/C Ratio	0.18	0.10		0.14	0.04		0.16	0.62		0.02	0.48	0.48
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	273	131		242	74		280	2168		29	1688	724
v/s Ratio Prot	c0.12	0.04		c0.14	c0.04		c0.12	0.27		0.01	c0.40	
v/s Ratio Perm												0.21
v/c Ratio	0.66	0.39		1.01	0.96		0.73	0.43		0.45	0.83	0.45
Uniform Delay, d1	45.5	51.0		51.7	57.4		48.0	11.5		58.5	26.8	20.5
Progression Factor	1.00	1.00		1.00	1.00		1.15	0.52		1.00	1.00	1.00
Incremental Delay, d2	5.6	1.9		60.0	91.3		8.3	0.5		10.6	4.8	2.0
Delay (s)	51.1	52.9		111.7	148.7		63.7	6.6		69.1	31.6	22.5
Level of Service	D	D		F	F		E	A		E	C	C
Approach Delay (s)		51.9			120.6			16.8			29.4	
Approach LOS		D			F			B			C	

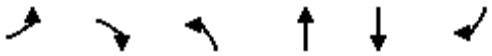
Intersection Summary			
HCM 2000 Control Delay	35.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



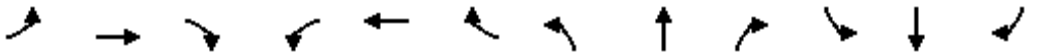
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	280	10	230	0	360	70	240	630	10
Future Volume (vph)	0	0	10	280	10	230	0	360	70	240	630	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			1.00		1.00	0.91		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.98		1.00	1.00	
Flt Protected			1.00		0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1596		1760	1218		1520		1490	1561	
Flt Permitted			1.00		0.95	1.00		1.00		0.19	1.00	
Satd. Flow (perm)			1596		1760	1218		1520		299	1561	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	11	301	11	247	0	387	75	258	677	11
RTOR Reduction (vph)	0	0	9	0	0	201	0	6	0	0	1	0
Lane Group Flow (vph)	0	0	2	0	312	46	0	456	0	258	687	0
Confl. Peds. (#/hr)	20					20	32		11			32
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			20.2		20.2	20.2		49.1		54.4	54.4	
Effective Green, g (s)			20.2		20.2	20.2		47.1		54.4	53.4	
Actuated g/C Ratio			0.19		0.19	0.19		0.43		0.50	0.49	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			297		327	226		660		370	768	
v/s Ratio Prot					c0.18			c0.30		0.13	c0.44	
v/s Ratio Perm			0.00			0.04				0.22		
v/c Ratio			0.01		0.95	0.20		0.69		0.70	0.90	
Uniform Delay, d1			35.9		43.6	37.3		24.8		19.4	25.0	
Progression Factor			1.00		1.00	1.00		0.12		1.00	1.00	
Incremental Delay, d2			0.0		37.7	0.5		2.7		5.6	12.9	
Delay (s)			35.9		81.3	37.8		5.6		25.0	37.9	
Level of Service			D		F	D		A		C	D	
Approach Delay (s)		35.9			62.1			5.6			34.4	
Approach LOS		D			E			A			C	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	170	10	10	260	500	400
Future Volume (vph)	170	10	10	260	500	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.94	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1484			1565	1422	
Flt Permitted	0.95			0.96	1.00	
Satd. Flow (perm)	1484			1510	1422	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	177	10	10	271	521	417
RTOR Reduction (vph)	2	0	0	0	22	0
Lane Group Flow (vph)	185	0	0	281	916	0
Confl. Peds. (#/hr)		3	18			18
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	18.8			30.3	74.6	
Effective Green, g (s)	18.8			29.3	74.6	
Actuated g/C Ratio	0.17			0.27	0.69	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	257			408	978	
v/s Ratio Prot	c0.12				c0.64	
v/s Ratio Perm				0.19		
v/c Ratio	0.72			0.69	0.94	
Uniform Delay, d1	42.3			35.5	14.8	
Progression Factor	1.00			1.00	0.39	
Incremental Delay, d2	10.2			5.2	9.1	
Delay (s)	52.5			40.7	14.9	
Level of Service	D			D	B	
Approach Delay (s)	52.5			40.7	14.9	
Approach LOS	D			D	B	

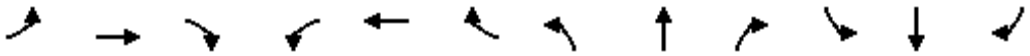
Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	160	140	120	270	80	80	770	80	70	790	220
Future Volume (vph)	50	160	140	120	270	80	80	770	80	70	790	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.97		1.00	0.98		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1669		1490	1800		1752	3444		1752	3505	1485
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1669		1490	1491		1752	3444		1752	3505	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	172	151	129	290	86	86	828	86	75	849	237
RTOR Reduction (vph)	0	28	0	0	10	0	0	5	0	0	0	133
Lane Group Flow (vph)	54	295	0	129	366	0	86	909	0	75	849	104
Confl. Peds. (#/hr)			30			34			4			8
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	15.3	29.7		16.8	31.2		8.6	47.7		8.3	47.4	47.4
Effective Green, g (s)	15.6	30.0		17.1	31.5		8.6	48.6		8.3	48.3	48.3
Actuated g/C Ratio	0.13	0.25		0.14	0.26		0.07	0.41		0.07	0.40	0.40
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	227	417		212	472		125	1394		121	1410	597
v/s Ratio Prot	0.03	0.18		c0.09	c0.20		c0.05	c0.26		0.04	0.24	
v/s Ratio Perm												0.07
v/c Ratio	0.24	0.71		0.61	0.78		0.69	0.65		0.62	0.60	0.17
Uniform Delay, d1	46.9	41.0		48.3	41.0		54.4	28.9		54.3	28.3	23.0
Progression Factor	1.00	1.00		1.00	1.00		0.96	1.17		0.70	0.94	2.30
Incremental Delay, d2	0.5	5.4		4.9	7.8		12.7	2.0		4.9	1.0	0.3
Delay (s)	47.4	46.4		53.2	48.8		65.1	35.7		43.0	27.7	53.4
Level of Service	D	D		D	D		E	D		D	C	D
Approach Delay (s)		46.6			49.9			38.2			33.9	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		

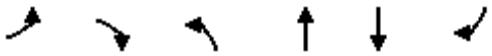
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	200	130	20	160	10	80	140	30	10	330	170
Future Volume (vph)	50	200	130	20	160	10	80	140	30	10	330	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	13	13	13	13	13	13	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.99		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1539	1509		1539	1603		1539	1569		1539	1517	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1539	1509		1539	1603		1539	1569		1539	1517	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	55	220	143	22	176	11	88	154	33	11	363	187
RTOR Reduction (vph)	0	24	0	0	2	0	0	6	0	0	16	0
Lane Group Flow (vph)	55	339	0	22	185	0	88	181	0	11	534	0
Confl. Peds. (#/hr)			3			6			7			11
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.8	23.0		2.7	20.9		8.0	39.0		0.9	31.9	
Effective Green, g (s)	5.8	24.0		3.7	21.9		9.0	40.0		1.9	32.9	
Actuated g/C Ratio	0.07	0.28		0.04	0.26		0.11	0.47		0.02	0.38	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	104	423		66	410		161	733		34	583	
v/s Ratio Prot	c0.04	c0.22		0.01	0.12		c0.06	0.12		0.01	c0.35	
v/s Ratio Perm												
v/c Ratio	0.53	0.80		0.33	0.45		0.55	0.25		0.32	0.92	
Uniform Delay, d1	38.6	28.6		39.8	26.8		36.4	13.7		41.2	25.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.8	10.4		3.0	0.8		3.8	0.2		5.5	19.1	
Delay (s)	43.4	39.0		42.7	27.6		40.1	13.9		46.7	44.2	
Level of Service	D	D		D	C		D	B		D	D	
Approach Delay (s)		39.5			29.2			22.3			44.2	
Approach LOS		D			C			C			D	

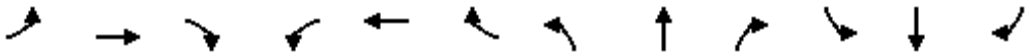
Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	85.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	80	140	90	190	410	90
Future Volume (vph)	80	140	90	190	410	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1490	1275	1490	1568	1516	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1490	1275	1490	1568	1516	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	88	154	99	209	451	99
RTOR Reduction (vph)	0	125	0	0	7	0
Lane Group Flow (vph)	88	29	99	209	543	0
Confl. Peds. (#/hr)		12	15			15
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot	Perm	Prot	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4				
Actuated Green, G (s)	10.9	10.9	8.5	44.9	32.3	
Effective Green, g (s)	12.0	12.0	9.6	46.0	33.4	
Actuated g/C Ratio	0.19	0.19	0.15	0.72	0.52	
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	279	239	223	1127	791	
v/s Ratio Prot	c0.06		c0.07	0.13	c0.36	
v/s Ratio Perm		0.02				
v/c Ratio	0.32	0.12	0.44	0.19	0.69	
Uniform Delay, d1	22.5	21.6	24.8	2.9	11.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	0.2	1.4	0.1	2.5	
Delay (s)	23.1	21.8	26.2	3.0	13.9	
Level of Service	C	C	C	A	B	
Approach Delay (s)	22.3			10.5	13.9	
Approach LOS	C			B	B	

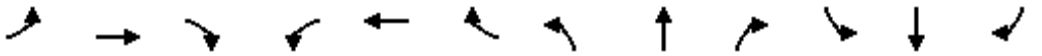
Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	50	60	50	100	50	40	130	60	60	290	70
Future Volume (vph)	50	50	60	50	100	50	40	130	60	60	290	70
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
Hourly flow rate (vph)	57	57	68	57	114	57	45	148	68	68	330	80

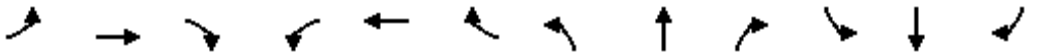
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	182	228	261	478
Volume Left (vph)	57	57	45	68
Volume Right (vph)	68	57	68	80
Hadj (s)	-0.11	-0.05	-0.07	-0.02
Departure Headway (s)	6.6	6.5	6.2	5.8
Degree Utilization, x	0.33	0.41	0.45	0.77
Capacity (veh/h)	477	482	530	602
Control Delay (s)	12.9	14.1	14.0	25.5
Approach Delay (s)	12.9	14.1	14.0	25.5
Approach LOS	B	B	B	D

Intersection Summary				
Delay	18.6			
Level of Service	C			
Intersection Capacity Utilization	49.7%	ICU Level of Service	A	
Analysis Period (min)	15			



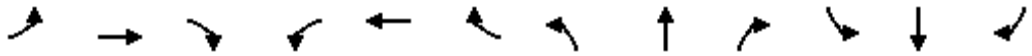
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	140	20	40	140	30	20	220	30	80	360	40
Future Volume (vph)	20	140	20	40	140	30	20	220	30	80	360	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		0.98	1.00		0.95	1.00		0.97	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1412	1531		1466	1504		1423	1528		1440	1527	
Flt Permitted	0.64	1.00		0.64	1.00		0.43	1.00		0.58	1.00	
Satd. Flow (perm)	944	1531		990	1504		639	1528		885	1527	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	23	161	23	46	161	34	23	253	34	92	414	46
RTOR Reduction (vph)	0	8	0	0	13	0	0	6	0	0	5	0
Lane Group Flow (vph)	23	176	0	46	182	0	23	281	0	92	455	0
Confl. Peds. (#/hr)	54		16	16		54	74		39	39		74
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	12.0	12.0		12.0	12.0		20.2	20.2		20.2	20.2	
Effective Green, g (s)	12.2	12.2		12.2	12.2		20.4	20.4		20.4	20.4	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	283	460		297	451		321	767		444	767	
v/s Ratio Prot		0.11			c0.12			0.18			c0.30	
v/s Ratio Perm	0.02			0.05			0.04			0.10		
v/c Ratio	0.08	0.38		0.15	0.40		0.07	0.37		0.21	0.59	
Uniform Delay, d1	10.2	11.2		10.4	11.3		5.2	6.2		5.6	7.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.1	0.2		0.1	0.3		0.2	1.2	
Delay (s)	10.2	11.4		10.5	11.5		5.3	6.5		5.8	8.4	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.3			11.3			6.4			8.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	40.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	80	90	70	100	30	60	710	40	20	850	70
Future Volume (vph)	30	80	90	70	100	30	60	710	40	20	850	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.92		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1414		1490	1500		1490	1553		1490	1544	
Flt Permitted	0.95	1.00		0.95	1.00		0.18	1.00		0.27	1.00	
Satd. Flow (perm)	1490	1414		1490	1500		274	1553		417	1544	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	31	82	92	71	102	31	61	724	41	20	867	71
RTOR Reduction (vph)	0	35	0	0	9	0	0	2	0	0	2	0
Lane Group Flow (vph)	31	139	0	71	124	0	61	763	0	20	936	0
Confl. Peds. (#/hr)			5			5	8		3	3		8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	5.6	16.8		8.4	19.6		81.6	81.6		81.6	81.6	
Effective Green, g (s)	5.6	17.4		8.4	20.2		82.2	82.2		82.2	82.2	
Actuated g/C Ratio	0.05	0.14		0.07	0.17		0.69	0.69		0.69	0.69	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	69	205		104	252		187	1063		285	1057	
v/s Ratio Prot	0.02	c0.10		c0.05	c0.08			0.49			c0.61	
v/s Ratio Perm							0.22			0.05		
v/c Ratio	0.45	0.68		0.68	0.49		0.33	0.72		0.07	0.89	
Uniform Delay, d1	55.7	48.6		54.5	45.2		7.7	11.7		6.3	15.1	
Progression Factor	1.00	1.00		1.00	1.00		0.29	0.55		2.31	2.23	
Incremental Delay, d2	4.6	8.6		16.9	1.5		3.1	2.8		0.4	9.2	
Delay (s)	60.3	57.2		71.4	46.8		5.3	9.2		14.9	43.0	
Level of Service	E	E		E	D		A	A		B	D	
Approach Delay (s)		57.7			55.3			8.9			42.4	
Approach LOS		E			E			A			D	

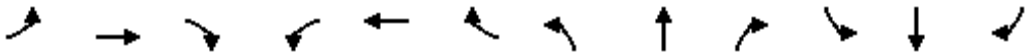
Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	10	20	20	30	760	20	10	910	80
Future Volume (Veh/h)	10	10	40	10	20	20	30	760	20	10	910	80
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	10	10	41	10	21	21	31	784	21	10	938	82
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.64	0.64	0.51	0.64	0.64	0.74	0.51			0.74		
vC, conflicting volume	1924	1891	999	1866	1922	828	1040			810		
vC1, stage 1 conf vol	1019	1019		862	862							
vC2, stage 2 conf vol	906	872		1004	1060							
vCu, unblocked vol	1248	1195	516	1155	1243	591	596			567		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	95	85	94	89	94	94			99		
cM capacity (veh/h)	187	214	279	172	184	363	488			737		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	52	31	805	10	1020
Volume Left	10	10	31	0	10	0
Volume Right	41	21	0	21	0	82
cSH	247	226	488	1700	737	1700
Volume to Capacity	0.25	0.23	0.06	0.47	0.01	0.60
Queue Length 95th (ft)	24	22	5	0	1	0
Control Delay (s)	24.3	25.6	12.9	0.0	10.0	0.0
Lane LOS	C	D	B		A	
Approach Delay (s)	24.3	25.6	0.5		0.1	
Approach LOS	C	D				

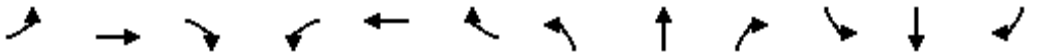
Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	69.6%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	250	110	10	370	10	40	10	10	10	10	40
Future Volume (Veh/h)	20	250	110	10	370	10	40	10	10	10	10	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	313	138	13	463	13	50	13	13	13	13	50
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.93			0.93	0.93	0.93	0.93	0.93	
vC, conflicting volume	512			459			992	978	392	985	1040	506
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	512			380			953	938	308	946	1006	506
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			72	94	98	93	94	91
cM capacity (veh/h)	1017			1083			180	227	673	192	207	548

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	476	489	76	76
Volume Left	25	13	50	13
Volume Right	138	13	13	50
cSH	1017	1083	214	343
Volume to Capacity	0.02	0.01	0.36	0.22
Queue Length 95th (ft)	2	1	38	21
Control Delay (s)	0.7	0.4	30.8	18.5
Lane LOS	A	A	D	C
Approach Delay (s)	0.7	0.4	30.8	18.5
Approach LOS			D	C

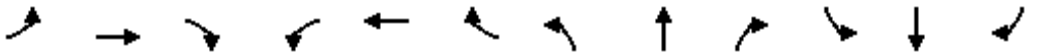
Intersection Summary				
Average Delay	3.8			
Intersection Capacity Utilization	46.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	170	50	50	180	110	50	10	90	50	40	150	270
Future Volume (vph)	170	50	50	180	110	50	10	90	50	40	150	270
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
Hourly flow rate (vph)	185	54	54	196	120	54	11	98	54	43	163	293

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	293	370	163	206	293
Volume Left (vph)	185	196	11	43	0
Volume Right (vph)	54	54	54	0	293
Hadj (s)	0.05	0.05	-0.15	0.14	-0.67
Departure Headway (s)	6.8	6.6	7.2	7.3	6.4
Degree Utilization, x	0.55	0.68	0.33	0.42	0.52
Capacity (veh/h)	485	510	425	467	520
Control Delay (s)	17.9	22.5	13.7	14.1	15.1
Approach Delay (s)	17.9	22.5	13.7	14.7	
Approach LOS	C	C	B	B	

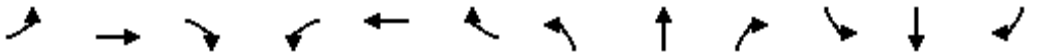
Intersection Summary				
Delay	17.5			
Level of Service	C			
Intersection Capacity Utilization	53.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	840	10	10	1110	80	10	30	10	80	10	260
Future Volume (vph)	160	840	10	10	1110	80	10	30	10	80	10	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			0.99	1.00
Frt	1.00	1.00		1.00	0.99			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (prot)	1752	3499		1752	3465			1777			1746	1568
Flt Permitted	0.95	1.00		0.95	1.00			0.94			0.80	1.00
Satd. Flow (perm)	1752	3499		1752	3465			1686			1462	1568
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.93	0.93	0.90	0.90	0.90	0.93	0.90	0.93
Adj. Flow (vph)	172	903	11	11	1194	86	11	33	11	86	11	280
RTOR Reduction (vph)	0	0	0	0	4	0	0	8	0	0	0	159
Lane Group Flow (vph)	172	914	0	11	1276	0	0	47	0	0	97	121
Confl. Peds. (#/hr)						1				13		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	13.1	51.7		1.0	39.7			11.7			11.7	11.7
Effective Green, g (s)	13.1	53.1		1.1	41.1			11.7			11.7	11.7
Actuated g/C Ratio	0.17	0.68		0.01	0.53			0.15			0.15	0.15
Clearance Time (s)	4.0	5.4		4.1	5.4			4.0			4.0	4.0
Vehicle Extension (s)	2.0	3.0		3.0	3.0			2.0			2.0	2.0
Lane Grp Cap (vph)	294	2385		24	1828			253			219	235
v/s Ratio Prot	c0.10	0.26		0.01	c0.37							
v/s Ratio Perm								0.03			0.07	c0.08
v/c Ratio	0.59	0.38		0.46	0.70			0.18			0.44	0.52
Uniform Delay, d1	29.9	5.3		38.1	13.8			28.9			30.1	30.5
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.9	0.1		13.2	1.2			0.1			0.5	0.8
Delay (s)	31.8	5.4		51.3	14.9			29.1			30.7	31.3
Level of Service	C	A		D	B			C			C	C
Approach Delay (s)		9.6			15.3			29.1			31.1	
Approach LOS		A			B			C			C	

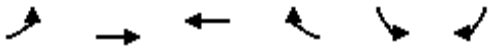
Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	77.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	620	200	350	800	110	180	160	230	50	180	220
Future Volume (vph)	110	620	200	350	800	110	180	160	230	50	180	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.7
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1541	3400	3396		1752	1845	1533	1752	1845	1490
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1541	3400	3396		1752	1845	1533	1752	1845	1490
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	133	747	241	422	964	133	217	193	277	60	217	265
RTOR Reduction (vph)	0	0	71	0	8	0	0	0	196	0	0	217
Lane Group Flow (vph)	133	747	170	422	1089	0	217	193	81	60	217	48
Confl. Peds. (#/hr)			9			24			8			31
Confl. Bikes (#/hr)			6			7			1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	13.2	28.8	47.3	22.6	42.2		18.5	32.0	32.0	7.0	20.5	20.5
Effective Green, g (s)	13.2	30.0	47.3	22.6	43.4		18.5	32.7	32.7	7.0	21.2	20.5
Actuated g/C Ratio	0.12	0.27	0.42	0.20	0.39		0.16	0.29	0.29	0.06	0.19	0.18
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	4.7
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	205	936	649	684	1312		288	537	446	109	348	271
v/s Ratio Prot	c0.08	0.21	0.04	0.12	c0.32		c0.12	0.10		0.03	c0.12	
v/s Ratio Perm			0.07						0.05			0.03
v/c Ratio	0.65	0.80	0.26	0.62	0.83		0.75	0.36	0.18	0.55	0.62	0.18
Uniform Delay, d1	47.3	38.3	21.1	40.9	31.1		44.7	31.5	29.8	51.1	41.9	38.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.2	4.8	0.1	1.2	4.6		9.5	0.2	0.1	3.4	2.5	0.1
Delay (s)	52.5	43.1	21.2	42.1	35.7		54.2	31.7	29.9	54.5	44.4	38.9
Level of Service	D	D	C	D	D		D	C	C	D	D	D
Approach Delay (s)		39.5			37.5			38.1			42.8	
Approach LOS		D			D			D			D	

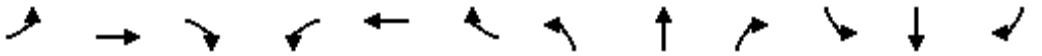
Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	112.3	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	170	730	1040	290	190	220
Future Volume (vph)	170	730	1040	290	190	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3369		1490	1333
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3369		1490	1333
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	198	849	1209	337	221	256
RTOR Reduction (vph)	0	0	20	0	0	177
Lane Group Flow (vph)	198	849	1526	0	221	79
Confl. Peds. (#/hr)	2			2	1	
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10	10
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	17.8	75.1	53.3		35.1	35.1
Effective Green, g (s)	18.8	77.0	55.2		37.0	37.0
Actuated g/C Ratio	0.16	0.64	0.46		0.31	0.31
Clearance Time (s)	4.0	4.9	4.9		4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	274	2249	1549		459	411
v/s Ratio Prot	c0.11	0.24	c0.45		c0.15	
v/s Ratio Perm						0.06
v/c Ratio	0.72	0.38	0.99		0.48	0.19
Uniform Delay, d1	48.1	10.2	32.0		33.7	30.5
Progression Factor	1.00	1.00	0.79		1.00	1.00
Incremental Delay, d2	9.1	0.5	11.9		3.6	1.0
Delay (s)	57.2	10.7	37.2		37.3	31.5
Level of Service	E	B	D		D	C
Approach Delay (s)		19.5	37.2		34.2	
Approach LOS		B	D		C	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

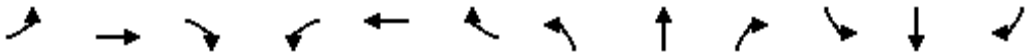
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	400	290	310	740	30	380	590	130	30	690	230
Future Volume (vph)	230	400	290	310	740	30	380	590	130	30	690	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1543	3400	3482		3400	1845	1544	1752	3104	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1543	3400	3482		3400	1845	1544	1752	3104	
Peak-hour factor, PHF	0.89	0.90	0.89	0.90	0.90	0.90	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	258	444	326	344	822	33	427	663	144	33	775	258
RTOR Reduction (vph)	0	0	190	0	2	0	0	0	69	0	27	0
Lane Group Flow (vph)	258	444	136	344	853	0	427	663	75	33	1006	0
Confl. Peds. (#/hr)			1			4			2			7
Confl. Bikes (#/hr)			2			3						1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	10.0	21.5	21.5	19.3	30.8		16.0	58.4	58.4	3.0	45.4	
Effective Green, g (s)	10.0	22.4	22.4	19.3	31.7		16.0	59.3	59.3	3.0	46.3	
Actuated g/C Ratio	0.08	0.19	0.19	0.16	0.26		0.13	0.49	0.49	0.02	0.39	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	283	654	288	546	919		453	911	762	43	1197	
v/s Ratio Prot	c0.08	0.13		0.10	c0.24		c0.13	0.36		0.02	c0.32	
v/s Ratio Perm			0.09						0.05			
v/c Ratio	0.91	0.68	0.47	0.63	0.93		0.94	0.73	0.10	0.77	0.84	
Uniform Delay, d1	54.6	45.5	43.5	47.0	43.0		51.5	24.0	16.1	58.2	33.5	
Progression Factor	0.80	0.82	0.54	1.00	1.00		1.00	1.00	1.00	1.12	0.75	
Incremental Delay, d2	29.9	2.6	1.2	2.4	15.0		28.2	5.1	0.3	41.6	5.0	
Delay (s)	73.8	40.0	24.8	49.4	58.1		79.7	29.0	16.4	106.7	30.1	
Level of Service	E	D	C	D	E		E	C	B	F	C	
Approach Delay (s)		43.7			55.6			45.1			32.5	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	44.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	10	120	10	40	10	140	410	30	10	750	250
Future Volume (vph)	140	10	120	10	40	10	140	410	30	10	750	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96		1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.98		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1524		1797		1763	1840		1766	3365	
Flt Permitted	0.72	1.00	1.00		0.97		0.16	1.00		0.37	1.00	
Satd. Flow (perm)	1337	1863	1524		1750		292	1840		690	3365	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	187	13	160	13	53	13	187	547	40	13	1000	333
RTOR Reduction (vph)	0	0	109	0	8	0	0	3	0	0	36	0
Lane Group Flow (vph)	187	13	51	0	71	0	187	584	0	13	1297	0
Confl. Peds. (#/hr)			9	9			39		7	7		39
Confl. Bikes (#/hr)			14			7			1			2
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	20.5	20.5	20.5		20.5		64.1	64.1		64.1	64.1	
Effective Green, g (s)	21.0	21.0	21.0		21.0		64.1	64.1		64.1	64.1	
Actuated g/C Ratio	0.22	0.22	0.22		0.22		0.68	0.68		0.68	0.68	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	299	417	341		391		199	1257		471	2299	
v/s Ratio Prot		0.01						0.32			0.39	
v/s Ratio Perm	c0.14		0.03		0.04		c0.64			0.02		
v/c Ratio	0.63	0.03	0.15		0.18		0.94	0.46		0.03	0.56	
Uniform Delay, d1	32.9	28.4	29.2		29.5		13.1	6.9		4.8	7.7	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.64	0.53	
Incremental Delay, d2	2.9	0.0	0.1		0.1		45.8	0.1		0.0	0.2	
Delay (s)	35.8	28.5	29.3		29.5		59.0	7.0		3.1	4.2	
Level of Service	D	C	C		C		E	A		A	A	
Approach Delay (s)		32.6			29.5			19.5			4.2	
Approach LOS		C			C			B			A	

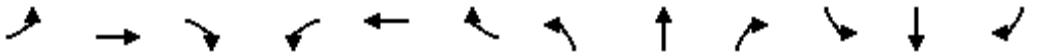
Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	93.8	Sum of lost time (s)	13.2
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	70	10	130	0	440	50	150	480	20
Future Volume (vph)	10	10	10	70	10	130	0	440	50	150	480	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	4.0		4.0			4.0	
Lane Util. Factor		1.00			1.00	1.00		1.00			1.00	
Frpb, ped/bikes		1.00			1.00	0.98		1.00			1.00	
Flpb, ped/bikes		1.00			0.99	1.00		1.00			1.00	
Frt		0.95			1.00	0.85		0.99			1.00	
Flt Protected		0.98			0.96	1.00		1.00			0.99	
Satd. Flow (prot)		1733			1756	1300		1814			1813	
Flt Permitted		0.89			0.73	1.00		1.00			0.78	
Satd. Flow (perm)		1569			1338	1300		1814			1440	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	11	11	75	11	140	0	473	54	161	516	22
RTOR Reduction (vph)	0	9	0	0	0	114	0	4	0	0	1	0
Lane Group Flow (vph)	0	24	0	0	86	26	0	523	0	0	698	0
Confl. Peds. (#/hr)				6		3	13		3	3		13
Confl. Bikes (#/hr)									5			6
Heavy Vehicles (%)	3%	3%	3%	3%	2%	3%	2%	3%	3%	3%	3%	2%
Parking (#/hr)				10		10						
Turn Type	Perm	NA		Perm	NA	Perm		NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		10.0			10.0	10.0		40.2			40.2	
Effective Green, g (s)		10.0			10.0	11.0		41.2			41.2	
Actuated g/C Ratio		0.17			0.17	0.18		0.68			0.68	
Clearance Time (s)		5.0			5.0	5.0		5.0			5.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		260			222	237		1241			985	
v/s Ratio Prot								0.29				
v/s Ratio Perm		0.02			c0.06	0.02					c0.48	
v/c Ratio		0.09			0.39	0.11		0.42			0.71	
Uniform Delay, d1		21.3			22.4	20.5		4.2			5.8	
Progression Factor		1.00			1.00	1.00		1.00			1.00	
Incremental Delay, d2		0.2			1.1	0.2		0.2			2.4	
Delay (s)		21.4			23.5	20.7		4.4			8.2	
Level of Service		C			C	C		A			A	
Approach Delay (s)		21.4			21.8			4.4			8.2	
Approach LOS		C			C			A			A	

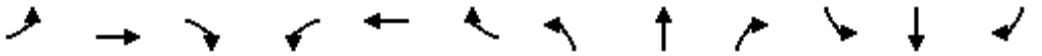
Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	60.2	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	10	20	140	10	220	20	490	130	160	760	10
Future Volume (vph)	30	10	20	140	10	220	20	490	130	160	760	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1706			1750	1568	1752	3505	1503	1752	3497	
Flt Permitted		0.81			0.75	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1423			1378	1568	1752	3505	1503	1752	3497	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	31	10	21	144	10	227	21	505	134	165	784	10
RTOR Reduction (vph)	0	17	0	0	0	119	0	0	75	0	1	0
Lane Group Flow (vph)	0	45	0	0	154	108	21	505	59	165	793	0
Confl. Peds. (#/hr)			8	8					11			9
Confl. Bikes (#/hr)												3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		14.4			14.4	38.6	10.3	36.0	36.0	19.7	45.4	
Effective Green, g (s)		14.9			14.9	39.1	10.3	36.7	36.7	19.7	46.1	
Actuated g/C Ratio		0.18			0.18	0.47	0.12	0.44	0.44	0.24	0.55	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		254			246	736	216	1544	662	414	1935	
v/s Ratio Prot						0.07	0.01	0.14		c0.09	c0.23	
v/s Ratio Perm		0.03			c0.11				0.04			
v/c Ratio		0.18			0.63	0.15	0.10	0.33	0.09	0.40	0.41	
Uniform Delay, d1		29.0			31.6	12.6	32.4	15.2	13.6	26.8	10.7	
Progression Factor		1.00			1.00	1.00	1.34	0.73	0.65	1.00	1.00	
Incremental Delay, d2		0.1			3.6	0.0	0.1	0.1	0.1	0.2	0.1	
Delay (s)		29.1			35.2	12.6	43.5	11.2	8.8	27.0	10.9	
Level of Service		C			D	B	D	B	A	C	B	
Approach Delay (s)		29.1			21.7			11.8			13.7	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	12.5
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	60	150	60	70	10	160	940	70	10	680	180
Future Volume (vph)	180	60	150	60	70	10	160	940	70	10	680	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1490	1386		1752	1810		1752	3461		1752	3505	1532
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1386		1752	1810		1752	3461		1752	3505	1532
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	184	61	153	61	71	10	163	959	71	10	694	184
RTOR Reduction (vph)	0	88	0	0	5	0	0	3	0	0	0	95
Lane Group Flow (vph)	184	126	0	61	76	0	163	1027	0	10	694	89
Confl. Peds. (#/hr)			1						3			1
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10									
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	20.1	17.0		11.7	8.6		16.4	72.4		1.0	57.0	57.0
Effective Green, g (s)	20.7	17.6		12.7	8.6		16.4	73.7		1.0	58.3	58.3
Actuated g/C Ratio	0.17	0.15		0.11	0.07		0.14	0.61		0.01	0.49	0.49
Clearance Time (s)	4.6	4.6		4.0	4.0		4.0	5.3		4.0	5.3	5.3
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	257	203		185	129		239	2125		14	1702	744
v/s Ratio Prot	c0.12	c0.09		0.03	0.04		c0.09	c0.30		0.01	0.20	
v/s Ratio Perm												0.06
v/c Ratio	0.72	0.62		0.33	0.59		0.68	0.48		0.71	0.41	0.12
Uniform Delay, d1	46.9	48.1		49.7	54.0		49.3	12.7		59.4	19.8	16.8
Progression Factor	1.00	1.00		1.00	1.00		0.94	1.96		1.00	1.00	1.00
Incremental Delay, d2	9.1	5.8		1.0	7.1		6.3	0.6		100.1	0.7	0.3
Delay (s)	56.0	53.9		50.8	61.1		52.5	25.5		159.5	20.5	17.2
Level of Service	E	D		D	E		D	C		F	C	B
Approach Delay (s)		54.9			56.7			29.2			21.4	
Approach LOS		D			E			C			C	

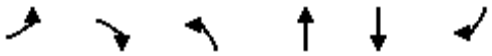
Intersection Summary			
HCM 2000 Control Delay	31.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	10	150	10	130	0	550	160	220	620	10
Future Volume (vph)	0	0	10	150	10	130	0	550	160	220	620	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor			1.00		1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes			0.98		1.00	0.95		0.99		1.00	1.00	
Flpb, ped/bikes			1.00		1.00	1.00		1.00		1.00	1.00	
Frt			0.86		1.00	0.85		0.97		1.00	1.00	
Flt Protected			1.00		0.96	1.00		1.00		0.95	1.00	
Satd. Flow (prot)			1558		1762	1266		1505		1490	1562	
Flt Permitted			1.00		0.96	1.00		1.00		0.12	1.00	
Satd. Flow (perm)			1558		1762	1266		1505		183	1562	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	10	153	10	133	0	561	163	224	633	10
RTOR Reduction (vph)	0	0	9	0	0	114	0	8	0	0	1	0
Lane Group Flow (vph)	0	0	1	0	163	19	0	716	0	224	642	0
Confl. Peds. (#/hr)	9		1			9	25		7			25
Confl. Bikes (#/hr)									2			4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)			15.1		15.1	15.1		55.4		53.1	53.1	
Effective Green, g (s)			15.1		15.1	15.1		53.4		53.1	52.1	
Actuated g/C Ratio			0.14		0.14	0.14		0.49		0.49	0.48	
Clearance Time (s)			4.0		4.0	4.0				4.0	3.0	
Vehicle Extension (s)			3.5		3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)			217		245	176		741		317	750	
v/s Ratio Prot					c0.09			c0.48		0.12	c0.41	
v/s Ratio Perm			0.00			0.01				0.22		
v/c Ratio			0.01		0.67	0.11		0.97		0.71	0.86	
Uniform Delay, d1			40.2		44.3	40.7		26.6		25.2	24.9	
Progression Factor			1.00		1.00	1.00		0.40		1.00	1.00	
Incremental Delay, d2			0.0		6.9	0.3		4.5		7.0	9.5	
Delay (s)			40.2		51.2	41.1		15.3		32.2	34.4	
Level of Service			D		D	D		B		C	C	
Approach Delay (s)		40.2			46.6			15.3			33.8	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

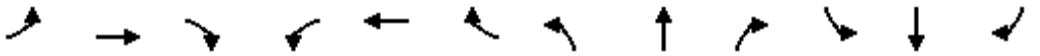


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	280	50	20	430	480	300
Future Volume (vph)	280	50	20	430	480	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	0.98			1.00	0.94	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.98			1.00	0.95	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1450			1562	1397	
Flt Permitted	0.96			0.95	1.00	
Satd. Flow (perm)	1450			1485	1397	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	53	21	453	505	316
RTOR Reduction (vph)	5	0	0	0	20	0
Lane Group Flow (vph)	343	0	0	474	801	0
Confl. Peds. (#/hr)		25	41			41
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	25.2			30.2	68.2	
Effective Green, g (s)	25.2			29.2	68.2	
Actuated g/C Ratio	0.23			0.27	0.63	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	337			400	878	
v/s Ratio Prot	c0.24				c0.57	
v/s Ratio Perm				c0.32		
v/c Ratio	1.02			1.19	0.91	
Uniform Delay, d1	41.6			39.6	17.5	
Progression Factor	1.00			1.00	0.32	
Incremental Delay, d2	53.3			105.9	10.5	
Delay (s)	94.9			145.5	16.1	
Level of Service	F			F	B	
Approach Delay (s)	94.9			145.5	16.1	
Approach LOS	F			F	B	

Intersection Summary			
HCM 2000 Control Delay	70.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	108.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

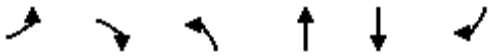
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	170	140	120	110	50	70	940	140	50	650	110
Future Volume (vph)	110	170	140	120	110	50	70	940	140	50	650	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.95		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1700		1490	1800		1752	3421		1752	3505	1524
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1700		1490	1485		1752	3421		1752	3505	1524
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	115	177	146	125	115	52	73	979	146	52	677	115
RTOR Reduction (vph)	0	25	0	0	15	0	0	8	0	0	0	60
Lane Group Flow (vph)	115	298	0	125	152	0	73	1117	0	52	677	55
Confl. Peds. (#/hr)			9			6			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	23.4	23.4		15.7	15.7		7.1	57.1		6.3	56.3	56.3
Effective Green, g (s)	23.7	23.7		16.0	16.0		7.1	58.0		6.3	57.2	57.2
Actuated g/C Ratio	0.20	0.20		0.13	0.13		0.06	0.48		0.05	0.48	0.48
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	346	335		198	240		103	1653		91	1670	726
v/s Ratio Prot	0.07	c0.18		0.08	c0.08		c0.04	c0.33		0.03	0.19	
v/s Ratio Perm												0.04
v/c Ratio	0.33	0.89		0.63	0.63		0.71	0.68		0.57	0.41	0.08
Uniform Delay, d1	41.4	46.9		49.2	49.2		55.4	23.8		55.5	20.4	17.0
Progression Factor	1.00	1.00		1.00	1.00		1.01	0.74		1.30	0.53	0.08
Incremental Delay, d2	0.6	23.7		6.4	5.4		9.6	1.0		7.8	0.7	0.2
Delay (s)	41.9	70.6		55.6	54.6		65.9	18.5		79.7	11.5	1.6
Level of Service	D	E		E	D		E	B		E	B	A
Approach Delay (s)		63.1			55.1			21.4			14.3	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	250	130	90	280	40	140	260	60	20	240	80
Future Volume (vph)	110	250	130	90	280	40	140	260	60	20	240	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	13	13	13	13	13	13	13	13	13	13	13
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.96		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1539	1481		1539	1569		1539	1553		1539	1537	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1539	1481		1539	1569		1539	1553		1539	1537	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	122	278	144	100	311	44	156	289	67	22	267	89
RTOR Reduction (vph)	0	18	0	0	5	0	0	8	0	0	12	0
Lane Group Flow (vph)	122	404	0	100	350	0	156	348	0	22	344	0
Confl. Peds. (#/hr)			45			45			26			19
Confl. Bikes (#/hr)			2			1			4			2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.6	30.1		6.7	27.2		12.2	37.1		2.2	27.1	
Effective Green, g (s)	10.6	31.1		7.7	28.2		13.2	38.1		3.2	28.1	
Actuated g/C Ratio	0.11	0.32		0.08	0.29		0.14	0.40		0.03	0.29	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	169	479		123	460		211	615		51	449	
v/s Ratio Prot	c0.08	c0.27		0.06	0.22		c0.10	0.22		0.01	c0.22	
v/s Ratio Perm												
v/c Ratio	0.72	0.84		0.81	0.76		0.74	0.57		0.43	0.77	
Uniform Delay, d1	41.3	30.2		43.5	30.9		39.8	22.6		45.6	31.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	14.1	12.7		32.1	7.3		12.7	1.2		5.8	7.6	
Delay (s)	55.4	42.9		75.6	38.2		52.5	23.8		51.3	38.6	
Level of Service	E	D		E	D		D	C		D	D	
Approach Delay (s)		45.7			46.4			32.5			39.4	
Approach LOS		D			D			C			D	

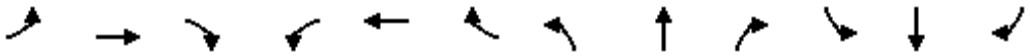
Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	96.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	110	220	210	240	340	170
Future Volume (vph)	110	220	210	240	340	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.81	1.00	1.00	0.95	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1490	1081	1490	1568	1428	
Flt Permitted	0.95	1.00	0.25	1.00	1.00	
Satd. Flow (perm)	1490	1081	394	1568	1428	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	232	221	253	358	179
RTOR Reduction (vph)	0	187	0	0	18	0
Lane Group Flow (vph)	116	45	221	253	519	0
Confl. Peds. (#/hr)	2	78	54			54
Confl. Bikes (#/hr)						3
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	12.5	12.5	49.9	49.9	31.3	
Effective Green, g (s)	13.6	13.6	51.0	51.0	32.4	
Actuated g/C Ratio	0.19	0.19	0.72	0.72	0.46	
Clearance Time (s)	4.1	4.1	4.1	4.1	4.1	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	287	208	526	1132	655	
v/s Ratio Prot	c0.08		c0.09	0.16	c0.36	
v/s Ratio Perm		0.04	0.21			
v/c Ratio	0.40	0.21	0.42	0.22	0.79	
Uniform Delay, d1	25.0	24.0	5.9	3.2	16.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.9	0.5	0.5	0.1	6.5	
Delay (s)	25.9	24.5	6.4	3.3	22.7	
Level of Service	C	C	A	A	C	
Approach Delay (s)	25.0			4.8	22.7	
Approach LOS	C			A	C	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	70.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

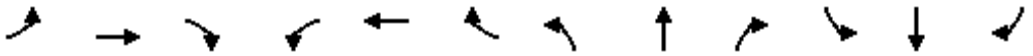
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	80	60	20	60	70	50	60	240	60	70	300	50
Future Volume (vph)	80	60	20	60	70	50	60	240	60	70	300	50
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
Hourly flow rate (vph)	91	68	23	68	80	57	68	273	68	80	341	57

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	182	205	409	478
Volume Left (vph)	91	68	68	80
Volume Right (vph)	23	57	68	57
Hadj (s)	0.08	-0.05	-0.02	0.01
Departure Headway (s)	7.5	7.3	6.4	6.3
Degree Utilization, x	0.38	0.41	0.73	0.84
Capacity (veh/h)	427	445	537	553
Control Delay (s)	14.9	15.3	24.7	33.5
Approach Delay (s)	14.9	15.3	24.7	33.5
Approach LOS	B	C	C	D

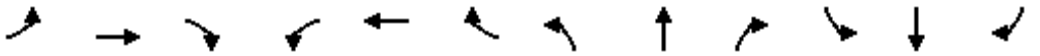
Intersection Summary				
Delay	25.1			
Level of Service	D			
Intersection Capacity Utilization	51.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	130	30	40	130	70	30	270	70	80	300	30
Future Volume (vph)	30	130	30	40	130	70	30	270	70	80	300	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		0.98	1.00		0.94	1.00		0.96	1.00	
Frt	1.00	0.97		1.00	0.95		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1440	1511		1459	1451		1404	1491		1430	1531	
Flt Permitted	0.62	1.00		0.65	1.00		0.52	1.00		0.51	1.00	
Satd. Flow (perm)	939	1511		991	1451		773	1491		769	1531	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	144	33	44	144	78	33	300	78	89	333	33
RTOR Reduction (vph)	0	14	0	0	32	0	0	13	0	0	5	0
Lane Group Flow (vph)	33	163	0	44	190	0	33	365	0	89	361	0
Confl. Peds. (#/hr)	41		24	24		41	88		63	63		88
Confl. Bikes (#/hr)						1			2			1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	10.0	10.0		10.0	10.0		17.1	17.1		17.1	17.1	
Effective Green, g (s)	10.2	10.2		10.2	10.2		17.3	17.3		17.3	17.3	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.49	0.49		0.49	0.49	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	269	434		284	416		376	726		374	746	
v/s Ratio Prot		0.11			c0.13			c0.24			0.24	
v/s Ratio Perm	0.04			0.04			0.04			0.12		
v/c Ratio	0.12	0.38		0.15	0.46		0.09	0.50		0.24	0.48	
Uniform Delay, d1	9.3	10.1		9.4	10.4		4.9	6.2		5.3	6.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.1	0.3		0.1	0.6		0.3	0.5	
Delay (s)	9.4	10.3		9.5	10.7		5.0	6.7		5.6	6.6	
Level of Service	A	B		A	B		A	A		A	A	
Approach Delay (s)		10.2			10.5			6.6			6.4	
Approach LOS		B			B			A			A	

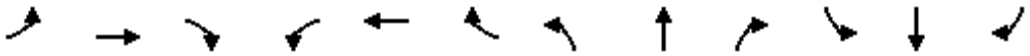
Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	35.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	80	120	60	70	40	90	890	30	10	570	90
Future Volume (vph)	110	80	120	60	70	40	90	890	30	10	570	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.91		1.00	0.95		1.00	1.00		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1427		1490	1462		1490	1559		1490	1524	
Flt Permitted	0.95	1.00		0.95	1.00		0.28	1.00		0.12	1.00	
Satd. Flow (perm)	1490	1427		1490	1462		436	1559		192	1524	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	87	130	65	76	43	98	967	33	11	620	98
RTOR Reduction (vph)	0	45	0	0	18	0	0	1	0	0	4	0
Lane Group Flow (vph)	120	172	0	65	101	0	98	999	0	11	714	0
Confl. Peds. (#/hr)						5	10		3	3		10
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	11.0	19.9		8.3	17.2		78.6	78.6		78.6	78.6	
Effective Green, g (s)	11.0	20.5		8.3	17.8		79.2	79.2		79.2	79.2	
Actuated g/C Ratio	0.09	0.17		0.07	0.15		0.66	0.66		0.66	0.66	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	243		103	216		287	1028		126	1005	
v/s Ratio Prot	c0.08	c0.12		0.04	0.07			c0.64			0.47	
v/s Ratio Perm							0.22			0.06		
v/c Ratio	0.88	0.71		0.63	0.47		0.34	0.97		0.09	0.71	
Uniform Delay, d1	53.9	46.9		54.4	46.8		9.0	19.3		7.4	13.1	
Progression Factor	1.00	1.00		1.00	1.00		0.13	0.42		0.51	0.52	
Incremental Delay, d2	43.9	9.1		11.9	1.6		1.7	14.6		1.2	3.8	
Delay (s)	97.7	56.0		66.3	48.4		2.9	22.7		5.0	10.6	
Level of Service	F	E		E	D		A	C		A	B	
Approach Delay (s)		70.9			54.7			20.9			10.5	
Approach LOS		E			D			C			B	

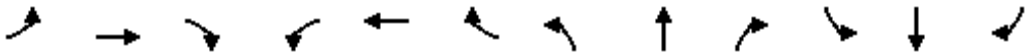
Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	60	10	10	10	40	970	30	10	680	40
Future Volume (Veh/h)	60	10	60	10	10	10	40	970	30	10	680	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	65	11	65	11	11	11	43	1043	32	11	731	43
Pedestrians		16			3						15	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		1			0						1	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.73	0.73	0.73	0.73	0.73	0.59	0.73			0.59		
vC, conflicting volume	1951	1954	768	1972	1960	1077	790			1078		
vC1, stage 1 conf vol	790	790		1148	1148							
vC2, stage 2 conf vol	1160	1164		824	812							
vCu, unblocked vol	1292	1297	501	1320	1304	785	531			787		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	54	94	84	93	94	95	94			98		
cM capacity (veh/h)	142	172	410	158	182	228	746			489		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	141	33	43	1075	11	774
Volume Left	65	11	43	0	11	0
Volume Right	65	11	0	32	0	43
cSH	207	185	746	1700	489	1700
Volume to Capacity	0.68	0.18	0.06	0.63	0.02	0.46
Queue Length 95th (ft)	106	16	5	0	2	0
Control Delay (s)	53.0	28.7	10.1	0.0	12.5	0.0
Lane LOS	F	D	B		B	
Approach Delay (s)	53.0	28.7	0.4		0.2	
Approach LOS	F	D				

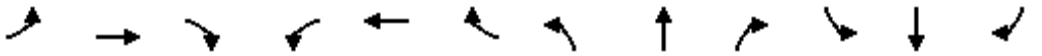
Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	70.9%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	200	130	50	240	10	80	10	60	10	10	30
Future Volume (Veh/h)	20	200	130	50	240	10	80	10	60	10	10	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	20	204	133	51	245	10	82	10	61	10	10	31
Pedestrians		2			1			36			9	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			3			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked												
vC, conflicting volume	264			373			736	712	308	738	774	261
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	264			373			736	712	308	738	774	261
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			96			71	97	91	96	97	96
cM capacity (veh/h)	1285			1145			280	323	708	273	297	768

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	357	306	153	51
Volume Left	20	51	82	10
Volume Right	133	10	61	31
cSH	1285	1145	373	461
Volume to Capacity	0.02	0.04	0.41	0.11
Queue Length 95th (ft)	1	3	49	9
Control Delay (s)	0.6	1.7	21.2	13.8
Lane LOS	A	A	C	B
Approach Delay (s)	0.6	1.7	21.2	13.8
Approach LOS			C	B

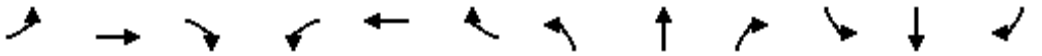
Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	52.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	210	50	10	70	40	30	10	170	110	70	90	250
Future Volume (vph)	210	50	10	70	40	30	10	170	110	70	90	250
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
Hourly flow rate (vph)	228	54	11	76	43	33	11	185	120	76	98	272

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	293	152	316	174	272
Volume Left (vph)	228	76	11	76	0
Volume Right (vph)	11	33	120	0	272
Hadj (s)	0.17	0.00	-0.19	0.25	-0.67
Departure Headway (s)	6.5	6.8	6.1	6.9	5.9
Degree Utilization, x	0.53	0.29	0.54	0.33	0.45
Capacity (veh/h)	503	455	547	497	564
Control Delay (s)	16.7	12.5	16.0	12.0	12.5
Approach Delay (s)	16.7	12.5	16.0	12.3	
Approach LOS	C	B	C	B	

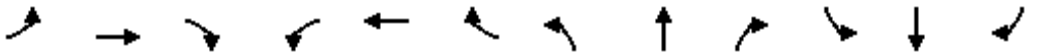
Intersection Summary				
Delay	14.4			
Level of Service	B			
Intersection Capacity Utilization	56.4%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	1270	10	10	910	40	10	10	10	70	50	340
Future Volume (vph)	250	1270	10	10	910	40	10	10	10	70	50	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			0.95	0.95
Frpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.95			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	1752	3501		1770	3480			1750			1706	1490
Flt Permitted	0.95	1.00		0.95	1.00			0.91			0.81	1.00
Satd. Flow (perm)	1752	3501		1770	3480			1619			1425	1490
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	278	1411	11	11	1011	44	11	11	11	78	56	378
RTOR Reduction (vph)	0	0	0	0	3	0	0	9	0	0	0	146
Lane Group Flow (vph)	278	1422	0	11	1052	0	0	24	0	0	134	232
Confl. Peds. (#/hr)						1				3		
Heavy Vehicles (%)	3%	3%	2%	2%	3%	3%	2%	2%	2%	3%	2%	3%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		4
Actuated Green, G (s)	19.1	55.0		1.1	37.1			17.5			17.5	17.5
Effective Green, g (s)	19.1	56.4		1.2	38.5			17.5			17.5	17.5
Actuated g/C Ratio	0.22	0.65		0.01	0.44			0.20			0.20	0.20
Clearance Time (s)	4.0	5.4		4.1	5.4			4.0			4.0	4.0
Vehicle Extension (s)	2.0	3.0		3.0	3.0			2.0			2.0	2.0
Lane Grp Cap (vph)	384	2267		24	1538			325			286	299
v/s Ratio Prot	c0.16	0.41		0.01	c0.30							
v/s Ratio Perm								0.01			0.09	c0.16
v/c Ratio	0.72	0.63		0.46	0.68			0.07			0.47	0.78
Uniform Delay, d1	31.6	9.1		42.6	19.4			28.2			30.7	32.9
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	5.6	0.5		13.2	1.3			0.0			0.4	10.9
Delay (s)	37.2	9.7		55.9	20.7			28.3			31.1	43.8
Level of Service	D	A		E	C			C			C	D
Approach Delay (s)		14.2			21.1			28.3			40.5	
Approach LOS		B			C			C			D	

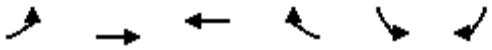
Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	1010	110	70	670	40	70	80	40	40	90	220
Future Volume (vph)	230	1010	110	70	670	40	70	80	40	40	90	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	3505	1544	3400	3470		1752	1845	1515	1752	1845	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1752	3505	1544	3400	3470		1752	1845	1515	1752	1845	1538
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	1098	120	76	728	43	76	87	43	43	98	239
RTOR Reduction (vph)	0	0	39	0	3	0	0	0	33	0	0	208
Lane Group Flow (vph)	250	1098	81	76	768	0	76	87	10	43	98	31
Confl. Peds. (#/hr)			7			3			22			5
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			4
Actuated Green, G (s)	18.2	37.1	50.3	10.7	33.6		13.2	20.4	20.4	4.5	11.7	11.7
Effective Green, g (s)	18.2	38.3	50.3	10.7	34.8		13.2	21.1	21.1	4.5	12.4	12.4
Actuated g/C Ratio	0.19	0.40	0.53	0.11	0.37		0.14	0.22	0.22	0.05	0.13	0.13
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	4.7
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	337	1419	820	384	1276		244	411	337	83	241	201
v/s Ratio Prot	c0.14	c0.31	0.01	0.02	c0.22		c0.04	0.05		0.02	c0.05	
v/s Ratio Perm			0.04						0.01			0.02
v/c Ratio	0.74	0.77	0.10	0.20	0.60		0.31	0.21	0.03	0.52	0.41	0.16
Uniform Delay, d1	36.0	24.4	10.9	38.1	24.3		36.6	30.0	28.7	44.0	37.7	36.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.5	2.7	0.0	0.1	0.8		0.3	0.1	0.0	2.3	0.4	0.1
Delay (s)	43.5	27.1	11.0	38.1	25.1		36.9	30.1	28.7	46.3	38.1	36.6
Level of Service	D	C	B	D	C		D	C	C	D	D	D
Approach Delay (s)		28.6			26.3			32.3			38.1	
Approach LOS		C			C			C			D	

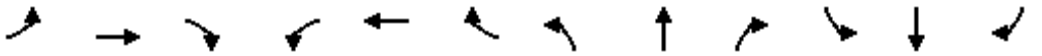
Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	94.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	230	860	600	200	200	180
Future Volume (vph)	230	860	600	200	200	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0	3.0		3.0	3.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	0.99		1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.96		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3340		1490	1308
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3340		1490	1308
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	242	905	632	211	211	189
RTOR Reduction (vph)	0	0	27	0	0	131
Lane Group Flow (vph)	242	905	816	0	211	58
Confl. Peds. (#/hr)	5			5	3	3
Confl. Bikes (#/hr)				1		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)					10	10
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	1	6	2		4	
Permitted Phases						4
Actuated Green, G (s)	19.4	75.1	51.7		35.1	35.1
Effective Green, g (s)	20.4	77.0	53.6		37.0	37.0
Actuated g/C Ratio	0.17	0.64	0.45		0.31	0.31
Clearance Time (s)	4.0	4.9	4.9		4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	297	2249	1491		459	403
v/s Ratio Prot	c0.14	0.26	c0.24		c0.14	
v/s Ratio Perm						0.04
v/c Ratio	0.81	0.40	0.55		0.46	0.14
Uniform Delay, d1	48.0	10.4	24.3		33.4	30.0
Progression Factor	1.00	1.00	0.70		1.00	1.00
Incremental Delay, d2	15.6	0.5	1.3		3.3	0.8
Delay (s)	63.6	10.9	18.3		36.7	30.8
Level of Service	E	B	B		D	C
Approach Delay (s)		22.0	18.3		33.9	
Approach LOS		C	B		C	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

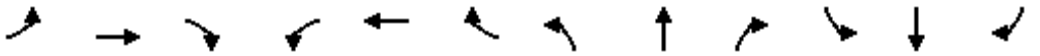
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	340	510	210	260	310	20	170	740	580	50	450	270
Future Volume (vph)	340	510	210	260	310	20	170	740	580	50	450	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1568	3400	3469		3400	1845	1541	1752	3032	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1568	3400	3469		3400	1845	1541	1752	3032	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	370	554	228	283	337	22	185	804	630	54	489	293
RTOR Reduction (vph)	0	0	181	0	5	0	0	0	224	0	65	0
Lane Group Flow (vph)	370	554	47	283	354	0	185	804	406	54	717	0
Confl. Peds. (#/hr)						4			3			9
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	14.0	24.0	24.0	15.2	25.2		10.4	56.7	56.7	6.3	52.6	
Effective Green, g (s)	14.0	24.9	24.9	15.2	26.1		10.4	57.6	57.6	6.3	53.5	
Actuated g/C Ratio	0.12	0.21	0.21	0.13	0.22		0.09	0.48	0.48	0.05	0.45	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	396	727	325	430	754		294	885	739	91	1351	
v/s Ratio Prot	c0.11	c0.16		c0.08	0.10		c0.05	c0.44		0.03	0.24	
v/s Ratio Perm			0.03						0.26			
v/c Ratio	0.93	0.76	0.15	0.66	0.47		0.63	0.91	0.55	0.59	0.53	
Uniform Delay, d1	52.5	44.8	38.9	49.9	40.9		52.9	28.8	22.0	55.6	24.1	
Progression Factor	0.87	0.79	0.27	1.00	1.00		1.00	1.00	1.00	1.08	0.85	
Incremental Delay, d2	27.7	4.4	0.2	3.6	0.5		4.2	14.8	2.9	8.1	1.2	
Delay (s)	73.5	39.9	10.5	53.5	41.4		57.1	43.6	25.0	68.3	21.7	
Level of Service	E	D	B	D	D		E	D	C	E	C	
Approach Delay (s)		44.9			46.7			37.9			24.7	
Approach LOS		D			D			D			C	

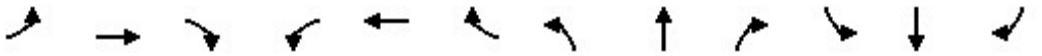
Intersection Summary			
HCM 2000 Control Delay	38.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	10	80	10	10	10	70	590	10	10	740	170
Future Volume (vph)	50	10	80	10	10	10	70	590	10	10	740	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98		1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.95		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1845	1538		1729		1750	1839		1751	3393	
Flt Permitted	0.73	1.00	1.00		0.93		0.20	1.00		0.27	1.00	
Satd. Flow (perm)	1350	1845	1538		1631		362	1839		503	3393	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	67	13	107	13	13	13	93	787	13	13	987	227
RTOR Reduction (vph)	0	0	88	0	11	0	0	1	0	0	20	0
Lane Group Flow (vph)	67	13	19	0	28	0	93	799	0	13	1194	0
Confl. Peds. (#/hr)			5	5			20		5	5		20
Confl. Bikes (#/hr)			1									4
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	14.4	14.4	14.4		14.4		59.7	59.7		59.7	59.7	
Effective Green, g (s)	14.9	14.9	14.9		14.9		59.7	59.7		59.7	59.7	
Actuated g/C Ratio	0.18	0.18	0.18		0.18		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	241	330	275		291		259	1317		360	2431	
v/s Ratio Prot		0.01						c0.43			0.35	
v/s Ratio Perm	c0.05		0.01		0.02		0.26			0.03		
v/c Ratio	0.28	0.04	0.07		0.10		0.36	0.61		0.04	0.49	
Uniform Delay, d1	29.6	28.3	28.4		28.6		4.5	5.9		3.4	5.2	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.82	0.72	
Incremental Delay, d2	0.2	0.0	0.0		0.1		0.3	0.5		0.0	0.1	
Delay (s)	29.8	28.3	28.5		28.6		4.8	6.5		2.8	3.8	
Level of Service	C	C	C		C		A	A		A	A	
Approach Delay (s)		28.9			28.6			6.3			3.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	13.2
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	3	4	159	7	410	13	407	73	164	830	10
Future Volume (vph)	6	3	4	159	7	410	13	407	73	164	830	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	0.95	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.96			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1710			1714	1568	1752	3505	1489	1752	3494	
Flt Permitted		0.88			0.72	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1532			1298	1568	1752	3505	1489	1752	3494	
Peak-hour factor, PHF	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Adj. Flow (vph)	8	4	5	206	9	532	17	529	95	213	1078	13
RTOR Reduction (vph)	0	4	0	0	0	101	0	0	56	0	1	0
Lane Group Flow (vph)	0	13	0	0	215	431	17	529	39	213	1090	0
Confl. Peds. (#/hr)	1		27	27		1			15			67
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	NA		Perm	NA	pt+ov	Prot	NA	Perm	Prot	NA	
Protected Phases		3			3	3 1	5	2		1	6	
Permitted Phases	3			3					2			
Actuated Green, G (s)		18.8			18.8	43.4	10.3	35.1	35.1	20.1	44.9	
Effective Green, g (s)		19.3			19.3	43.9	10.3	35.8	35.8	20.1	45.6	
Actuated g/C Ratio		0.22			0.22	0.50	0.12	0.41	0.41	0.23	0.52	
Clearance Time (s)		4.5			4.5		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)		2.0			2.0		2.0	3.0	3.0	2.0	3.0	
Lane Grp Cap (vph)		339			287	789	206	1438	611	403	1827	
v/s Ratio Prot						c0.27	0.01	0.15		0.12	c0.31	
v/s Ratio Perm		0.01			c0.17				0.03			
v/c Ratio		0.04			0.75	0.55	0.08	0.37	0.06	0.53	0.60	
Uniform Delay, d1		26.7			31.7	14.8	34.2	17.8	15.6	29.4	14.4	
Progression Factor		1.00			1.00	1.00	1.23	1.02	1.38	1.00	1.00	
Incremental Delay, d2		0.0			9.0	0.4	0.1	0.2	0.0	0.6	0.5	
Delay (s)		26.7			40.7	15.2	42.2	18.4	21.5	30.0	15.0	
Level of Service		C			D	B	D	B	C	C	B	
Approach Delay (s)		26.7			22.6			19.5			17.4	
Approach LOS		C			C			B			B	

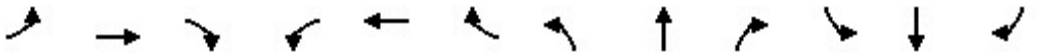
Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	87.2	Sum of lost time (s)	12.5
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	12	128	0	64	0	0	0	122	285	0	0	988
Future Volume (vph)	12	128	0	64	0	0	0	122	285	0	0	988
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0				4.0	4.0			4.0
Lane Util. Factor		0.95	0.95	1.00				1.00	0.95			0.95
Frpb, ped/bikes		1.00	1.00	0.98				1.00	1.00			1.00
Flpb, ped/bikes		1.00	1.00	1.00				1.00	1.00			1.00
Frt		1.00	1.00	0.85				1.00	1.00			1.00
Flt Protected		0.95	0.95	1.00				0.95	1.00			1.00
Satd. Flow (prot)		1415	1415	1310				1752	3505			3505
Flt Permitted		0.95	0.95	1.00				0.95	1.00			1.00
Satd. Flow (perm)		1415	1415	1310				1752	3505			3505
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	15	164	0	82	0	0	0	156	365	0	0	1267
RTOR Reduction (vph)	0	0	0	72	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	89	90	10	0	0	0	156	365	0	0	1267
Confl. Peds. (#/hr)				3						5		
Confl. Bikes (#/hr)										1		
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)		10	10	10								
Turn Type	Perm	Split	NA	Perm				Prot	NA		Prot	NA
Protected Phases		3	3		4	4		5	2		1	6
Permitted Phases	3			3								
Actuated Green, G (s)		14.7	14.7	14.7				15.3	95.4			76.1
Effective Green, g (s)		15.3	15.3	15.3				15.3	96.7			77.4
Actuated g/C Ratio		0.13	0.13	0.13				0.13	0.81			0.65
Clearance Time (s)		4.6	4.6	4.6				4.0	5.3			5.3
Vehicle Extension (s)		3.0	3.0	3.0				3.0	3.0			3.0
Lane Grp Cap (vph)		180	180	167				223	2824			2260
v/s Ratio Prot			c0.06					c0.09	0.10			c0.36
v/s Ratio Perm		0.06		0.01								
v/c Ratio		0.49	0.50	0.06				0.70	0.13			0.56
Uniform Delay, d1		48.7	48.8	46.0				50.1	2.5			11.8
Progression Factor		1.00	1.00	1.00				0.77	3.68			1.00
Incremental Delay, d2		2.1	2.2	0.2				8.8	0.1			1.0
Delay (s)		50.9	51.0	46.2				47.6	9.4			12.9
Level of Service		D	D	D				D	A			B
Approach Delay (s)			49.4			0.0			20.8			12.3
Approach LOS			D			A			C			B

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	414
Future Volume (vph)	414
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.96
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1506
Flt Permitted	1.00
Satd. Flow (perm)	1506
Peak-hour factor, PHF	0.78
Adj. Flow (vph)	531
RTOR Reduction (vph)	175
Lane Group Flow (vph)	356
Confl. Peds. (#/hr)	6
Confl. Bikes (#/hr)	2
Heavy Vehicles (%)	3%
Parking (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	76.1
Effective Green, g (s)	77.4
Actuated g/C Ratio	0.65
Clearance Time (s)	5.3
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	971
v/s Ratio Prot	
v/s Ratio Perm	0.24
v/c Ratio	0.37
Uniform Delay, d1	9.9
Progression Factor	1.00
Incremental Delay, d2	1.1
Delay (s)	11.0
Level of Service	B
Approach Delay (s)	
Approach LOS	
Intersection Summary	

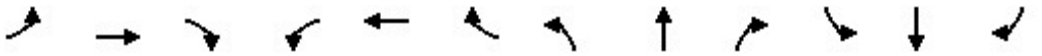


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	253	2	222	0	303	42	234	623	2
Future Volume (vph)	0	0	0	253	2	222	0	303	42	234	623	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		3.0		4.0	3.0	
Lane Util. Factor					1.00	1.00		1.00		1.00	1.00	
Frpb, ped/bikes					1.00	0.92		0.99		1.00	1.00	
Flpb, ped/bikes					1.00	1.00		1.00		1.00	1.00	
Frt					1.00	0.85		0.98		1.00	1.00	
Flt Protected					0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)					1757	1220		1532		1490	1567	
Flt Permitted					0.95	1.00		1.00		0.29	1.00	
Satd. Flow (perm)					1757	1220		1532		451	1567	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	272	2	239	0	326	45	252	670	2
RTOR Reduction (vph)	0	0	0	0	0	195	0	4	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	274	44	0	367	0	252	672	0
Confl. Peds. (#/hr)	20					20	32		11			32
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10		10		10	10	10	10	
Turn Type			Perm	Split	NA	Perm		NA		pm+pt	NA	
Protected Phases				3	3			6 4		5	2	
Permitted Phases			3			3	6 4			2		
Actuated Green, G (s)					19.5	19.5		47.8		54.0	54.0	
Effective Green, g (s)					19.5	19.5		47.8		54.0	54.0	
Actuated g/C Ratio					0.18	0.18		0.45		0.51	0.51	
Clearance Time (s)					4.0	4.0				4.0	3.0	
Vehicle Extension (s)					3.5	3.5				3.0	3.0	
Lane Grp Cap (vph)					323	224		691		422	799	
v/s Ratio Prot					c0.16			c0.24		0.11	c0.43	
v/s Ratio Perm						0.04				0.19		
v/c Ratio					0.85	0.20		0.53		0.60	0.84	
Uniform Delay, d1					41.8	36.6		21.0		17.0	22.3	
Progression Factor					1.00	1.00		0.09		1.00	1.00	
Incremental Delay, d2					18.7	0.5		0.9		2.3	8.0	
Delay (s)					60.5	37.1		2.7		19.3	30.2	
Level of Service					E	D		A		B	C	
Approach Delay (s)		0.0			49.6			2.7			27.3	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	105.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	151	8	8	194	472	404
Future Volume (vph)	151	8	8	194	472	404
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	1.00	
Frpb, ped/bikes	1.00			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.99			1.00	0.94	
Flt Protected	0.95			1.00	1.00	
Satd. Flow (prot)	1485			1564	1417	
Flt Permitted	0.95			0.97	1.00	
Satd. Flow (perm)	1485			1513	1417	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	157	8	8	202	492	421
RTOR Reduction (vph)	2	0	0	0	23	0
Lane Group Flow (vph)	163	0	0	210	890	0
Confl. Peds. (#/hr)		3	18			18
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			6	3 2	
Permitted Phases			6			
Actuated Green, G (s)	17.4			30.4	73.5	
Effective Green, g (s)	17.4			29.4	73.5	
Actuated g/C Ratio	0.16			0.28	0.69	
Clearance Time (s)	4.0			3.0		
Vehicle Extension (s)	4.0			4.0		
Lane Grp Cap (vph)	243			420	983	
v/s Ratio Prot	c0.11				c0.63	
v/s Ratio Perm				0.14		
v/c Ratio	0.67			0.50	0.91	
Uniform Delay, d1	41.6			32.1	13.3	
Progression Factor	1.00			1.00	0.34	
Incremental Delay, d2	7.8			1.3	7.6	
Delay (s)	49.3			33.4	12.1	
Level of Service	D			C	B	
Approach Delay (s)	49.3			33.4	12.1	
Approach LOS	D			C	B	

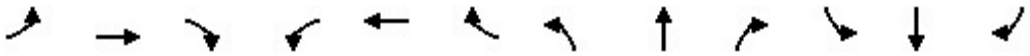
Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.9	Sum of lost time (s)	19.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	153	109	116	259	60	58	378	59	56	701	203
Future Volume (vph)	26	153	109	116	259	60	58	378	59	56	701	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	0.95
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	1688		1490	1800		1752	3418		1752	3505	1485
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1752	1688		1490	1504		1752	3418		1752	3505	1485
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	28	165	117	125	278	65	62	406	63	60	754	218
RTOR Reduction (vph)	0	22	0	0	7	0	0	10	0	0	0	125
Lane Group Flow (vph)	28	260	0	125	336	0	62	459	0	60	754	93
Confl. Peds. (#/hr)			30			34			4			8
Confl. Bikes (#/hr)						2						2
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)				10	10	10						
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases												2
Actuated Green, G (s)	21.6	21.6		23.5	23.5		7.0	50.4		7.0	50.4	50.4
Effective Green, g (s)	21.9	21.9		23.8	23.8		7.0	51.3		7.0	51.3	51.3
Actuated g/C Ratio	0.18	0.18		0.20	0.20		0.06	0.43		0.06	0.43	0.43
Clearance Time (s)	4.3	4.3		4.3	4.3		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	319	308		295	357		102	1461		102	1498	634
v/s Ratio Prot	0.02	c0.15		0.08	c0.19		c0.04	0.13		0.03	c0.22	
v/s Ratio Perm												0.06
v/c Ratio	0.09	0.84		0.42	0.94		0.61	0.31		0.59	0.50	0.15
Uniform Delay, d1	40.8	47.4		42.1	47.4		55.2	22.7		55.1	25.1	21.0
Progression Factor	1.00	1.00		1.00	1.00		0.98	1.02		1.27	0.51	0.67
Incremental Delay, d2	0.1	18.6		1.0	32.5		9.5	0.5		7.2	1.0	0.4
Delay (s)	40.9	66.0		43.1	79.9		63.4	23.8		77.3	13.9	14.5
Level of Service	D	E		D	E		E	C		E	B	B
Approach Delay (s)		63.7			70.1			28.5			17.7	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	36.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	36	137	100	17	89	7	54	112	23	5	260	137
Future Volume (vph)	36	137	100	17	89	7	54	112	23	5	260	137
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	40	151	110	19	98	8	59	123	25	5	286	151

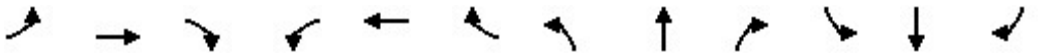
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	40	261	19	106	207	442
Volume Left (vph)	40	0	19	0	59	5
Volume Right (vph)	0	110	0	8	25	151
Hadj (s)	0.55	-0.24	0.55	0.00	0.04	-0.15
Departure Headway (s)	7.2	6.4	7.6	7.0	6.0	5.4
Degree Utilization, x	0.08	0.46	0.04	0.21	0.35	0.67
Capacity (veh/h)	464	517	418	442	539	633
Control Delay (s)	9.6	13.6	9.7	10.6	12.2	18.7
Approach Delay (s)	13.0		10.5		12.2	18.7
Approach LOS	B		B		B	C

Intersection Summary				
Delay	14.9			
Level of Service	B			
Intersection Capacity Utilization	57.8%	ICU Level of Service		B
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	78	94	36	127	407	81
Future Volume (vph)	78	94	36	127	407	81
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	86	103	40	140	447	89

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	86	103	40	140	536
Volume Left (vph)	86	0	40	0	0
Volume Right (vph)	0	103	0	0	89
Hadj (s)	0.55	-0.65	0.55	0.05	-0.05
Departure Headway (s)	6.9	5.7	6.2	5.7	5.1
Degree Utilization, x	0.16	0.16	0.07	0.22	0.76
Capacity (veh/h)	483	579	552	601	696
Control Delay (s)	10.0	8.6	8.5	9.1	22.2
Approach Delay (s)	9.2		9.0		22.2
Approach LOS	A		A		C

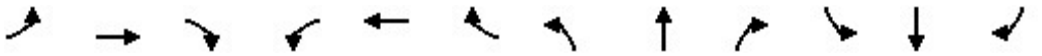
Intersection Summary			
Delay	16.8		
Level of Service	C		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	28	46	6	39	79	38	4	126	24	35	283	44
Future Volume (vph)	28	46	6	39	79	38	4	126	24	35	283	44
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
Hourly flow rate (vph)	32	52	7	44	90	43	5	143	27	40	322	50

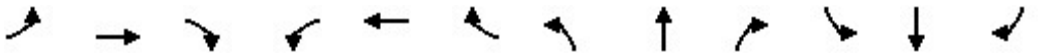
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	91	177	175	412
Volume Left (vph)	32	44	5	40
Volume Right (vph)	7	43	27	50
Hadj (s)	0.08	-0.05	-0.04	0.00
Departure Headway (s)	5.8	5.5	5.2	4.9
Degree Utilization, x	0.15	0.27	0.25	0.57
Capacity (veh/h)	541	587	637	700
Control Delay (s)	9.8	10.6	10.0	14.2
Approach Delay (s)	9.8	10.6	10.0	14.2
Approach LOS	A	B	B	B

Intersection Summary				
Delay	12.1			
Level of Service	B			
Intersection Capacity Utilization	50.4%	ICU Level of Service	A	
Analysis Period (min)	15			



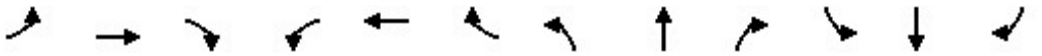
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	93	13	38	124	23	7	132	23	78	355	32
Future Volume (vph)	9	93	13	38	124	23	7	132	23	78	355	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		0.98	1.00		0.95	1.00		0.96	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1409	1532		1464	1511		1421	1518		1432	1534	
Flt Permitted	0.65	1.00		0.68	1.00		0.44	1.00		0.64	1.00	
Satd. Flow (perm)	965	1532		1046	1511		662	1518		973	1534	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	10	107	15	44	143	26	8	152	26	90	408	37
RTOR Reduction (vph)	0	8	0	0	11	0	0	8	0	0	4	0
Lane Group Flow (vph)	10	114	0	44	158	0	8	170	0	90	441	0
Confl. Peds. (#/hr)	54		16	16		54	74		39	39		74
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Actuated Green, G (s)	11.7	11.7		11.7	11.7		20.2	20.2		20.2	20.2	
Effective Green, g (s)	11.9	11.9		11.9	11.9		20.4	20.4		20.4	20.4	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.51	0.51		0.51	0.51	
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	284	452		308	446		335	768		492	776	
v/s Ratio Prot		0.07			c0.10			0.11			c0.29	
v/s Ratio Perm	0.01			0.04			0.01			0.09		
v/c Ratio	0.04	0.25		0.14	0.36		0.02	0.22		0.18	0.57	
Uniform Delay, d1	10.1	10.8		10.4	11.2		5.0	5.5		5.4	6.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1		0.1	0.2		0.0	0.1		0.2	1.0	
Delay (s)	10.1	10.9		10.5	11.4		5.0	5.7		5.6	7.9	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		10.9			11.2			5.7			7.5	
Approach LOS		B			B			A			A	

Intersection Summary				
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	49.5%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	78	63	49	97	20	10	386	33	13	830	60
Future Volume (vph)	37	78	63	49	97	20	10	386	33	13	830	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.98		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	1438		1490	1519		1490	1545		1482	1547	
Flt Permitted	0.95	1.00		0.95	1.00		0.20	1.00		0.47	1.00	
Satd. Flow (perm)	1490	1438		1490	1519		315	1545		732	1547	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	38	80	64	50	99	20	10	394	34	13	847	61
RTOR Reduction (vph)	0	25	0	0	6	0	0	2	0	0	2	0
Lane Group Flow (vph)	38	119	0	50	113	0	10	426	0	13	906	0
Confl. Peds. (#/hr)			5			5	8		3	3		8
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	10	10	10	10	10	10	10	10	10	10	10	10
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	3	8		7	4			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	5.9	15.6		7.8	17.5		83.4	83.4		83.4	83.4	
Effective Green, g (s)	5.9	16.2		7.8	18.1		84.0	84.0		84.0	84.0	
Actuated g/C Ratio	0.05	0.13		0.06	0.15		0.70	0.70		0.70	0.70	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	73	194		96	229		220	1081		512	1082	
v/s Ratio Prot	0.03	c0.08		c0.03	0.07			0.28			c0.59	
v/s Ratio Perm							0.03			0.02		
v/c Ratio	0.52	0.61		0.52	0.49		0.05	0.39		0.03	0.84	
Uniform Delay, d1	55.7	48.9		54.3	46.7		5.6	7.5		5.5	13.1	
Progression Factor	1.00	1.00		1.00	1.00		0.18	0.29		0.41	0.85	
Incremental Delay, d2	6.5	5.6		5.0	1.7		0.4	1.0		0.1	6.8	
Delay (s)	62.2	54.6		59.3	48.4		1.4	3.1		2.3	17.9	
Level of Service	E	D		E	D		A	A		A	B	
Approach Delay (s)		56.2			51.6			3.1			17.7	
Approach LOS		E			D			A			B	

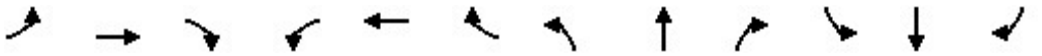
Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	3	31	7	11	15	24	406	10	5	907	30
Future Volume (Veh/h)	8	3	31	7	11	15	24	406	10	5	907	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	8	3	32	7	11	15	25	419	10	5	935	31
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.58	0.58	0.57	0.58	0.58	0.97	0.57			0.97		
vC, conflicting volume	1498	1464	970	1458	1475	457	986			434		
vC1, stage 1 conf vol	980	980		479	479							
vC2, stage 2 conf vol	518	484		978	996							
vCu, unblocked vol	1386	1329	570	1317	1347	426	598			403		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	99	89	97	95	97	95			100		
cM capacity (veh/h)	237	247	291	205	223	591	546			1113		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	43	33	25	429	5	966
Volume Left	8	7	25	0	5	0
Volume Right	32	15	0	10	0	31
cSH	276	304	546	1700	1113	1700
Volume to Capacity	0.16	0.11	0.05	0.25	0.00	0.57
Queue Length 95th (ft)	14	9	4	0	0	0
Control Delay (s)	20.5	18.3	11.9	0.0	8.2	0.0
Lane LOS	C	C	B		A	
Approach Delay (s)	20.5	18.3	0.7		0.0	
Approach LOS	C	C				

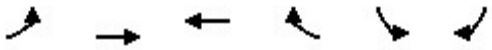
Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	65.9%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	142	9	6	270	1	3	1	5	2	2	39
Future Volume (Veh/h)	20	142	9	6	270	1	3	1	5	2	2	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	178	11	8	338	1	4	1	6	3	3	49
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.97			0.97	0.97	0.97	0.97	0.97	
vC, conflicting volume	375			197			646	632	194	632	638	374
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	375			158			621	607	155	607	612	374
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			99	100	99	99	99	92
cM capacity (veh/h)	1143			1365			336	373	856	361	370	649

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	214	347	11	55
Volume Left	25	8	4	3
Volume Right	11	1	6	49
cSH	1143	1365	509	599
Volume to Capacity	0.02	0.01	0.02	0.09
Queue Length 95th (ft)	2	0	2	8
Control Delay (s)	1.1	0.2	12.2	11.6
Lane LOS	A	A	B	B
Approach Delay (s)	1.1	0.2	12.2	11.6
Approach LOS			B	B

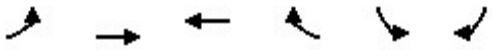
Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	29.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	119	12	43	12	31	250
Future Volume (Veh/h)	119	12	43	12	31	250
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	153	15	55	15	40	321
Pedestrians		4			21	
Lane Width (ft)		13.0			13.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		0			2	
Right turn flare (veh)						1
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1220				
pX, platoon unblocked						
vC, conflicting volume	91				404	88
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	91				404	88
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				92	66
cM capacity (veh/h)	1469				528	946

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	168	70	361
Volume Left	153	0	40
Volume Right	0	15	321
cSH	1469	1700	1064
Volume to Capacity	0.10	0.04	0.34
Queue Length 95th (ft)	9	0	38
Control Delay (s)	7.1	0.0	10.9
Lane LOS	A		B
Approach Delay (s)	7.1	0.0	10.9
Approach LOS			B

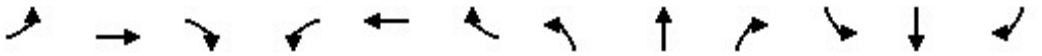
Intersection Summary			
Average Delay	8.6		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	116	553	838	42	72	226
Future Volume (vph)	116	553	838	42	72	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		0.99	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	3476		1735	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	3476		1735	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	125	595	901	45	77	243
RTOR Reduction (vph)	0	0	3	0	0	202
Lane Group Flow (vph)	125	595	943	0	77	41
Confl. Peds. (#/hr)				1	13	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	NA		Perm	Perm
Protected Phases	1	6	2			
Permitted Phases					4	4
Actuated Green, G (s)	7.4	34.4	23.0		8.9	8.9
Effective Green, g (s)	7.4	35.8	24.4		8.9	8.9
Actuated g/C Ratio	0.14	0.68	0.46		0.17	0.17
Clearance Time (s)	4.0	5.4	5.4		4.0	4.0
Vehicle Extension (s)	2.0	3.0	3.0		2.0	2.0
Lane Grp Cap (vph)	246	2381	1609		293	264
v/s Ratio Prot	c0.07	0.17	c0.27			
v/s Ratio Perm					c0.04	0.03
v/c Ratio	0.51	0.25	0.59		0.26	0.16
Uniform Delay, d1	21.0	3.3	10.4		19.0	18.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.1	0.5		0.2	0.1
Delay (s)	21.6	3.3	11.0		19.2	18.8
Level of Service	C	A	B		B	B
Approach Delay (s)		6.5	11.0		18.9	
Approach LOS		A	B		B	

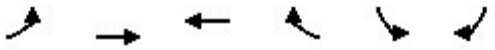
Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	338	177	344	760	15	135	135	207	36	173	115
Future Volume (vph)	40	338	177	344	760	15	135	135	207	36	173	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98	1.00	0.98	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1545	3400	3488		1752	1845	1535	1752	1702	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1752	3505	1545	3400	3488		1752	1845	1535	1752	1702	
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	48	407	213	414	916	18	163	163	249	43	208	139
RTOR Reduction (vph)	0	0	87	0	1	0	0	0	159	0	16	0
Lane Group Flow (vph)	48	407	126	414	933	0	163	163	90	43	331	0
Confl. Peds. (#/hr)			9			24			8			31
Confl. Bikes (#/hr)			6			7			1			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6	3	5 13	2		3	8		7	4	
Permitted Phases			6						8			
Actuated Green, G (s)	6.0	16.7	32.1	21.3	36.0		15.4	35.2	35.2	4.5	24.3	
Effective Green, g (s)	6.0	17.9	32.1	21.3	37.2		15.4	35.9	35.9	4.5	25.0	
Actuated g/C Ratio	0.06	0.18	0.32	0.21	0.37		0.15	0.36	0.36	0.05	0.25	
Clearance Time (s)	4.0	5.2	4.0		5.2		4.0	4.7	4.7	4.0	4.7	
Vehicle Extension (s)	2.0	3.0	2.0		3.0		2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	105	629	497	727	1302		270	665	553	79	427	
v/s Ratio Prot	0.03	0.12	0.04	c0.12	c0.27		c0.09	0.09		0.02	c0.19	
v/s Ratio Perm			0.04						0.06			
v/c Ratio	0.46	0.65	0.25	0.57	0.72		0.60	0.25	0.16	0.54	0.77	
Uniform Delay, d1	45.2	37.9	24.9	35.0	26.7		39.3	22.3	21.6	46.5	34.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.1	2.3	0.1	0.6	1.9		2.6	0.1	0.1	4.1	7.8	
Delay (s)	46.4	40.2	25.0	35.7	28.6		41.9	22.4	21.7	50.6	42.5	
Level of Service	D	D	C	D	C		D	C	C	D	D	
Approach Delay (s)		35.8			30.8			27.6			43.4	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	99.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

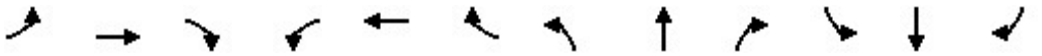


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	83	493	958	61	186	161
Future Volume (Veh/h)	83	493	958	61	186	161
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	97	573	1114	71	216	187
Pedestrians			1		2	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.80				0.84	0.80
vC, conflicting volume	1187				1633	594
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	747				1002	10
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	86				1	78
cM capacity (veh/h)	683				219	857

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	97	286	286	743	442	216	187
Volume Left	97	0	0	0	0	216	0
Volume Right	0	0	0	0	71	0	187
cSH	683	1700	1700	1700	1700	219	857
Volume to Capacity	0.14	0.17	0.17	0.44	0.26	0.99	0.22
Queue Length 95th (ft)	12	0	0	0	0	220	21
Control Delay (s)	11.1	0.0	0.0	0.0	0.0	103.7	10.4
Lane LOS	B					F	B
Approach Delay (s)	1.6			0.0		60.4	
Approach LOS						F	

Intersection Summary			
Average Delay	11.3		
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

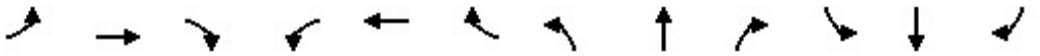
* User Entered Value



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	213	290	309	642	22	117	332	59	26	689	228
Future Volume (vph)	162	213	290	309	642	22	117	332	59	26	689	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		0.97	1.00	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3400	3505	1543	1752	3485		3400	1845	1544	1752	3105	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3400	3505	1543	1752	3485		3400	1845	1544	1752	3105	
Peak-hour factor, PHF	0.89	0.90	0.89	0.90	0.90	0.90	0.89	0.89	0.90	0.90	0.89	0.89
Adj. Flow (vph)	182	237	326	343	713	24	131	373	66	29	774	256
RTOR Reduction (vph)	0	0	154	0	2	0	0	0	35	0	24	0
Lane Group Flow (vph)	182	237	172	343	735	0	131	373	31	29	1006	0
Confl. Peds. (#/hr)			1			4			2			7
Confl. Bikes (#/hr)			2			3						1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Parking (#/hr)											10	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	11.5	18.2	18.2	23.4	30.1		9.6	55.9	55.9	4.7	51.0	
Effective Green, g (s)	11.5	19.1	19.1	23.4	31.0		9.6	56.8	56.8	4.7	51.9	
Actuated g/C Ratio	0.10	0.16	0.16	0.19	0.26		0.08	0.47	0.47	0.04	0.43	
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	325	557	245	341	900		272	873	730	68	1342	
v/s Ratio Prot	0.05	0.07		c0.20	0.21		c0.04	0.20		0.02	c0.32	
v/s Ratio Perm			c0.11						0.02			
v/c Ratio	0.56	0.43	0.70	1.01	0.82		0.48	0.43	0.04	0.43	0.75	
Uniform Delay, d1	51.8	45.5	47.8	48.3	41.8		52.8	20.9	17.0	56.3	28.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.17	0.64	
Incremental Delay, d2	2.2	0.5	8.8	50.2	5.8		1.3	1.5	0.1	3.1	2.8	
Delay (s)	54.0	46.0	56.6	98.5	47.6		54.2	22.4	17.1	69.1	21.2	
Level of Service	D	D	E	F	D		D	C	B	E	C	
Approach Delay (s)		52.6			63.8			29.1			22.5	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	43.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	3	114	8	33	4	111	378	8	2	730	261
Future Volume (vph)	111	3	114	8	33	4	111	378	8	2	730	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00		1.00	1.00		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96		1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85		0.99		1.00	1.00		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1525		1818		1762	1856		1765	3355	
Flt Permitted	0.78	1.00	1.00		0.96		0.16	1.00		0.42	1.00	
Satd. Flow (perm)	1449	1863	1525		1771		297	1856		773	3355	
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	148	4	152	11	44	5	148	504	11	3	973	348
RTOR Reduction (vph)	0	0	115	0	4	0	0	1	0	0	41	0
Lane Group Flow (vph)	148	4	37	0	56	0	148	514	0	3	1280	0
Confl. Peds. (#/hr)			9	9			39		7	7		39
Confl. Bikes (#/hr)			14			7			1			2
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		7			7			1 2 5 6			1 2 5 6	
Permitted Phases	7		7	7			1 2 5 6			1 2 5 6		
Actuated Green, G (s)	18.8	18.8	18.8		18.8		59.2	59.2		59.2	59.2	
Effective Green, g (s)	19.3	19.3	19.3		19.3		59.2	59.2		59.2	59.2	
Actuated g/C Ratio	0.22	0.22	0.22		0.22		0.68	0.68		0.68	0.68	
Clearance Time (s)	4.5	4.5	4.5		4.5							
Vehicle Extension (s)	2.0	2.0	2.0		2.0							
Lane Grp Cap (vph)	320	412	337		391		201	1260		524	2277	
v/s Ratio Prot		0.00						0.28			0.38	
v/s Ratio Perm	c0.10		0.02		0.03		c0.50			0.00		
v/c Ratio	0.46	0.01	0.11		0.14		0.74	0.41		0.01	0.56	
Uniform Delay, d1	29.5	26.5	27.1		27.3		9.0	6.2		4.5	7.3	
Progression Factor	1.00	1.00	1.00		1.00		1.00	1.00		0.67	0.53	
Incremental Delay, d2	0.4	0.0	0.1		0.1		11.4	0.1		0.0	0.2	
Delay (s)	29.8	26.5	27.1		27.4		20.4	6.3		3.0	4.0	
Level of Service	C	C	C		C		C	A		A	A	
Approach Delay (s)		28.4			27.4			9.4			4.0	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	87.2	Sum of lost time (s)	13.2
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	10	99	238	366	688

Intersection Summary

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	8	38	102	424	629

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	25	101	191	15	496	126	163	698
v/c Ratio	0.09	0.45	0.23	0.06	0.33	0.18	0.39	0.37
Control Delay	23.5	38.1	2.9	47.8	14.8	3.2	32.5	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0
Total Delay	23.5	38.1	2.9	47.8	15.0	3.5	32.5	11.5
Queue Length 50th (ft)	8	51	0	8	95	8	75	92
Queue Length 95th (ft)	29	97	33	m21	144	24	154	174
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	440	374	869	234	1909	874	468	2375
Starvation Cap Reductn	0	0	0	0	758	362	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.27	0.22	0.06	0.43	0.25	0.35	0.29

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	98	97	103	128	826	456	119
v/c Ratio	0.51	0.51	0.36	0.63	0.30	0.20	0.11
Control Delay	56.5	56.3	7.0	44.5	11.2	10.0	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.5	56.3	7.0	44.5	11.2	10.0	2.2
Queue Length 50th (ft)	75	74	0	99	164	69	0
Queue Length 95th (ft)	126	126	30	163	356	122	25
Internal Link Dist (ft)		1890			1321	389	
Turn Bay Length (ft)	200		160	200			250
Base Capacity (vph)	271	271	357	277	2798	2274	1037
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	0.36	0.36	0.29	0.46	0.30	0.20	0.11

Intersection Summary

Lane Group	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	5	112	124	586	215	518
v/c Ratio	0.01	0.53	0.48	0.72	0.68	0.67
Control Delay	0.0	54.0	14.3	5.5	33.6	25.4
Queue Delay	0.0	0.0	0.0	1.3	0.0	0.6
Total Delay	0.0	54.0	14.3	6.8	33.6	26.0
Queue Length 50th (ft)	0	72	0	0	89	249
Queue Length 95th (ft)	0	135	55	m0	184	413
Internal Link Dist (ft)		1232		59		458
Turn Bay Length (ft)					200	
Base Capacity (vph)	717	337	342	819	404	885
Starvation Cap Reductn	0	0	0	88	0	117
Spillback Cap Reductn	0	0	0	0	0	41
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.33	0.36	0.80	0.53	0.67

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	318	336	646
v/c Ratio	0.90	0.79	0.75
Control Delay	69.5	51.9	7.2
Queue Delay	0.0	0.4	0.3
Total Delay	69.5	52.3	7.4
Queue Length 50th (ft)	204	208	33
Queue Length 95th (ft)	#437	#420	31
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	352	425	859
Starvation Cap Reductn	0	0	23
Spillback Cap Reductn	0	6	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.90	0.80	0.77

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	57	287	103	145	51	1034	36	466	71
v/c Ratio	0.18	0.86	0.55	0.61	0.44	0.57	0.32	0.26	0.09
Control Delay	41.8	67.5	59.1	55.1	59.5	17.0	72.0	12.3	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	67.5	59.1	55.1	59.5	17.0	72.0	12.3	2.0
Queue Length 50th (ft)	37	196	77	99	36	265	21	112	1
Queue Length 95th (ft)	76	#331	125	154	m45	m443	58	177	10
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	350	362	298	370	131	1812	131	1777	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.79	0.35	0.39	0.39	0.57	0.27	0.26	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	91	323	54	145	440	293

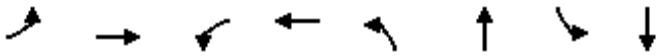
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	109	144	88	244	392

Intersection Summary

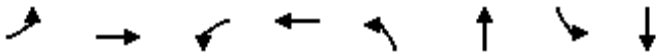
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	112	159	321	365

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	137	37	184	26	347	88	296
v/c Ratio	0.09	0.35	0.15	0.46	0.06	0.46	0.22	0.39
Control Delay	10.9	12.3	11.5	11.8	6.1	8.3	7.5	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	12.3	11.5	11.8	6.1	8.3	7.5	7.7
Queue Length 50th (ft)	3	17	5	17	2	28	7	24
Queue Length 95th (ft)	15	56	22	62	13	106	34	89
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	812	1328	870	1227	758	1404	760	1436
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.10	0.04	0.15	0.03	0.25	0.12	0.21

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	133	45	108	42	927	11	645
v/c Ratio	0.88	0.55	0.42	0.58	0.12	0.86	0.06	0.61
Control Delay	105.2	47.3	64.2	53.4	1.3	15.2	4.7	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.2	47.3	64.2	53.4	1.3	15.2	4.7	10.5
Queue Length 50th (ft)	93	80	34	68	1	416	2	146
Queue Length 95th (ft)	#208	141	73	121	m2	m#939	m5	225
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120		50		75		75	
Base Capacity (vph)	136	282	136	271	360	1079	196	1062
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.47	0.33	0.40	0.12	0.86	0.06	0.61

Intersection Summary

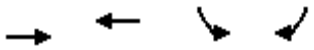
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	76	16	27	969	9	653

Intersection Summary

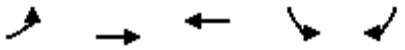
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	236	272	58	30

Intersection Summary



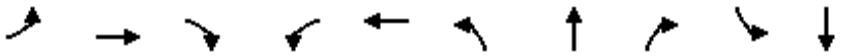
Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	262	58	30	244

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	198	1179	719	62	222
v/c Ratio	0.53	0.50	0.56	0.22	0.50
Control Delay	25.9	5.6	15.8	22.7	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	5.6	15.8	22.7	8.3
Queue Length 50th (ft)	47	54	74	15	0
Queue Length 95th (ft)	152	196	204	54	51
Internal Link Dist (ft)		435	868	856	
Turn Bay Length (ft)	375				15
Base Capacity (vph)	740	3370	2919	921	933
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	0.27	0.35	0.25	0.07	0.24

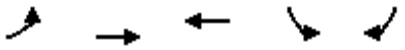
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	138	1065	110	68	592	54	68	34	33	266
v/c Ratio	0.61	0.74	0.13	0.17	0.43	0.33	0.14	0.06	0.27	0.70
Control Delay	52.1	30.1	4.0	21.3	23.1	47.7	29.2	0.2	50.5	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	30.1	4.0	21.3	23.1	47.7	29.2	0.2	50.5	36.6
Queue Length 50th (ft)	79	287	6	9	125	31	33	0	19	109
Queue Length 95th (ft)	150	#487	31	21	225	75	71	0	53	204
Internal Link Dist (ft)		868			704		262			515
Turn Bay Length (ft)	150		150	130		190		190	90	
Base Capacity (vph)	498	1443	962	1353	1975	398	514	533	398	456
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	0.28	0.74	0.11	0.05	0.30	0.14	0.13	0.06	0.08	0.58

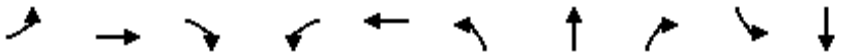
Intersection Summary

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



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	142	889	649	60	114

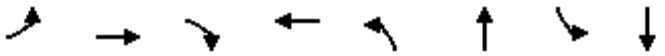
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	361	483	83	84	222	173	712	476	52	639
v/c Ratio	0.91	0.66	0.21	0.52	0.38	0.60	0.72	0.48	0.49	0.41
Control Delay	80.3	48.8	6.6	62.7	43.2	61.7	28.6	6.5	76.2	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.3	48.8	6.6	62.7	43.2	61.7	28.6	6.5	76.2	12.8
Queue Length 50th (ft)	144	185	0	63	77	67	423	42	40	135
Queue Length 95th (ft)	#232	236	32	112	107	105	#717	139	m69	112
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	794	431	306	983	311	994	1000	116	1567
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	0.91	0.61	0.19	0.27	0.23	0.56	0.72	0.48	0.45	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	133	1	81	15	79	690	1	1028
v/c Ratio	0.56	0.00	0.23	0.05	0.24	0.52	0.00	0.42
Control Delay	41.7	28.0	4.1	24.4	7.1	7.4	4.0	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1
Total Delay	41.7	28.0	4.1	24.4	7.1	7.9	4.0	3.8
Queue Length 50th (ft)	68	0	0	5	10	115	0	58
Queue Length 95th (ft)	100	4	7	17	33	223	m1	71
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	392	524	518	461	375	1497	497	2781
Starvation Cap Reductn	0	0	0	0	0	359	0	638
Spillback Cap Reductn	0	0	0	0	0	20	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.00	0.16	0.03	0.21	0.61	0.00	0.48

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	33	54	108	516	688

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	113	196	21	505	134	165	794
v/c Ratio	0.19	0.47	0.24	0.09	0.33	0.18	0.40	0.41
Control Delay	21.8	38.4	2.9	47.8	14.8	3.1	33.0	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0
Total Delay	21.8	38.4	2.9	47.8	15.1	3.4	33.0	11.8
Queue Length 50th (ft)	15	57	0	11	98	9	76	109
Queue Length 95th (ft)	45	106	34	m28	143	23	156	202
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	423	389	849	223	1824	844	447	2267
Starvation Cap Reductn	0	0	0	0	767	361	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.29	0.23	0.09	0.48	0.28	0.37	0.35

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	121	124	122	142	133	928	10	459	122
v/c Ratio	0.64	0.64	0.42	1.56	0.64	0.38	0.12	0.23	0.13
Control Delay	63.5	63.1	11.0	335.4	48.2	20.1	57.8	14.8	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.5	63.1	11.0	335.4	48.2	20.1	57.8	14.8	3.2
Queue Length 50th (ft)	94	96	0	~155	104	241	8	90	0
Queue Length 95th (ft)	153	156	47	#290	172	408	26	147	32
Internal Link Dist (ft)		1890		326		1321		389	
Turn Bay Length (ft)	200		160		200		180		250
Base Capacity (vph)	271	278	357	91	277	2420	87	1976	918
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.45	0.34	1.56	0.48	0.38	0.11	0.23	0.13

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	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	10	132	133	622	224	612
v/c Ratio	0.02	0.59	0.48	0.80	0.71	0.81
Control Delay	0.0	55.8	13.7	6.2	36.4	33.5
Queue Delay	0.0	0.1	0.0	9.5	0.0	1.4
Total Delay	0.0	55.9	13.7	15.6	36.4	34.9
Queue Length 50th (ft)	0	87	0	0	100	339
Queue Length 95th (ft)	0	156	56	m0	199	553
Internal Link Dist (ft)		1232		59		458
Turn Bay Length (ft)					200	
Base Capacity (vph)	682	332	345	777	396	854
Starvation Cap Reductn	0	0	0	130	0	100
Spillback Cap Reductn	41	6	0	0	0	82
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.40	0.39	0.96	0.57	0.81

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	337	410	769
v/c Ratio	0.97	1.01	0.88
Control Delay	84.2	89.4	13.9
Queue Delay	0.0	8.7	0.4
Total Delay	84.2	98.0	14.3
Queue Length 50th (ft)	226	~300	46
Queue Length 95th (ft)	#476	#566	94
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	346	404	873
Starvation Cap Reductn	0	0	9
Spillback Cap Reductn	0	11	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.97	1.04	0.89

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	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	63	292	125	157	52	1073	42	469	83
v/c Ratio	0.20	0.87	0.63	0.63	0.45	0.62	0.37	0.27	0.10
Control Delay	42.1	68.7	62.8	55.0	61.1	19.3	86.8	13.8	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.1	68.7	62.8	55.0	61.1	19.3	86.8	13.8	1.4
Queue Length 50th (ft)	41	201	93	106	37	292	34	53	0
Queue Length 95th (ft)	82	#339	148	166	m48	m468	m69	m75	m1
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	350	362	298	371	131	1719	131	1748	803
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.81	0.42	0.42	0.40	0.62	0.32	0.27	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	100	422	56	277	467	311

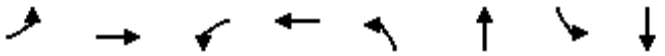
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	116	232	200	253	411

Intersection Summary

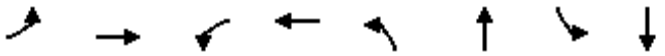
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	148	182	398	386

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	166	44	200	33	378	89	311
v/c Ratio	0.09	0.40	0.17	0.48	0.08	0.51	0.24	0.41
Control Delay	11.9	13.7	12.7	13.1	6.3	9.1	7.9	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	13.7	12.7	13.1	6.3	9.1	7.9	8.1
Queue Length 50th (ft)	3	22	6	21	3	34	7	27
Queue Length 95th (ft)	17	74	28	78	15	120	35	95
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	797	1316	844	1225	733	1360	699	1395
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.13	0.05	0.16	0.05	0.28	0.13	0.22

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	185	54	119	98	913	11	652
v/c Ratio	0.88	0.69	0.48	0.57	0.29	0.86	0.06	0.63
Control Delay	105.2	50.7	66.9	49.6	2.8	15.5	5.9	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.2	50.7	66.9	49.6	2.8	15.5	5.9	11.7
Queue Length 50th (ft)	93	108	41	71	6	426	2	147
Queue Length 95th (ft)	#208	187	83	129	m5	m#902	m6	210
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120				75		75	
Base Capacity (vph)	136	290	136	273	342	1056	188	1040
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.64	0.40	0.44	0.29	0.86	0.06	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	108	33	32	1000	11	656

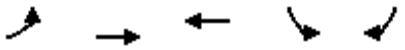
Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	347	285	132	51

Intersection Summary

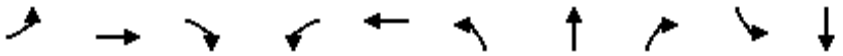
Lane Group	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	282	141	305	120	250

Intersection Summary



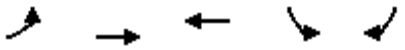
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	233	1311	811	67	278
v/c Ratio	0.59	0.54	0.60	0.25	0.58
Control Delay	28.6	5.7	16.8	25.5	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.6	5.7	16.8	25.5	9.2
Queue Length 50th (ft)	61	66	93	18	0
Queue Length 95th (ft)	185	227	241	62	59
Internal Link Dist (ft)		435	868	856	
Turn Bay Length (ft)	375				15
Base Capacity (vph)	684	3339	2733	852	907
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	0.34	0.39	0.30	0.08	0.31

Intersection Summary



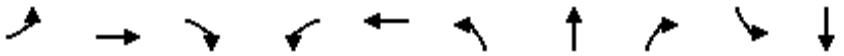
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	239	989	120	76	554	54	76	43	43	326
v/c Ratio	0.75	0.73	0.15	0.19	0.50	0.33	0.14	0.08	0.34	0.73
Control Delay	53.1	31.2	4.4	21.7	29.1	48.5	29.9	0.3	52.4	36.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	31.2	4.4	21.7	29.1	48.5	29.9	0.3	52.4	36.5
Queue Length 50th (ft)	137	266	8	10	132	32	38	0	25	137
Queue Length 95th (ft)	234	422	37	23	232	76	79	0	65	254
Internal Link Dist (ft)		868			704		262			515
Turn Bay Length (ft)	150		150	130		190		190	90	
Base Capacity (vph)	471	1365	914	1280	1864	377	551	560	377	449
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	0.51	0.72	0.13	0.06	0.30	0.14	0.14	0.08	0.11	0.73

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	147	895	706	95	116

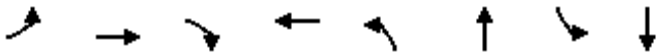
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	370	543	109	87	250	185	717	489	54	652
v/c Ratio	0.93	0.77	0.27	0.53	0.40	0.63	0.74	0.50	0.50	0.43
Control Delay	84.2	53.1	8.8	62.7	42.8	62.8	30.6	7.0	73.5	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.2	53.1	8.8	62.7	42.8	62.8	30.6	7.0	73.5	16.1
Queue Length 50th (ft)	148	207	0	65	86	72	445	47	39	164
Queue Length 95th (ft)	#241	267	47	115	119	111	#729	146	m68	208
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	788	437	306	984	311	969	987	116	1526
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	0.93	0.69	0.25	0.28	0.25	0.59	0.74	0.50	0.47	0.43

Intersection Summary

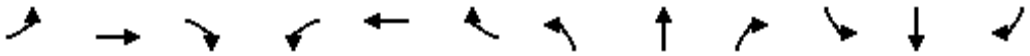
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	133	13	93	39	80	720	13	1160
v/c Ratio	0.58	0.04	0.26	0.14	0.28	0.54	0.03	0.46
Control Delay	43.2	29.2	5.9	22.9	8.2	7.7	3.7	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1
Total Delay	43.2	29.2	5.9	22.9	8.2	8.2	3.7	4.1
Queue Length 50th (ft)	68	6	0	12	11	125	1	70
Queue Length 95th (ft)	100	18	13	30	36	236	m5	85
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	367	502	501	452	312	1464	467	2734
Starvation Cap Reductn	0	0	0	0	0	346	0	483
Spillback Cap Reductn	0	0	0	0	0	19	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.03	0.19	0.09	0.26	0.64	0.03	0.52

Intersection Summary

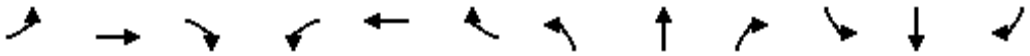
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	10	0	10	90	0	210	0	290	60	140	480	10
Future Volume (vph)	10	0	10	90	0	210	0	290	60	140	480	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	12	0	12	106	0	247	0	341	71	165	565	12

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	24	106	247	412	742
Volume Left (vph)	12	106	0	0	165
Volume Right (vph)	12	0	247	71	12
Hadj (s)	-0.15	0.25	-0.55	-0.05	0.09
Departure Headway (s)	6.8	6.8	3.2	5.2	5.0
Degree Utilization, x	0.05	0.20	0.22	0.60	1.03
Capacity (veh/h)	488	496	1122	682	709
Control Delay (s)	10.1	11.5	7.1	15.6	64.7
Approach Delay (s)	10.1	8.4		15.6	64.7
Approach LOS	B	A		C	F

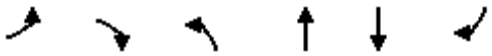
Intersection Summary				
Delay	37.6			
Level of Service	E			
Intersection Capacity Utilization	72.7%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	150	110	20	110	10	60	120	30	10	270	140
Future Volume (vph)	40	150	110	20	110	10	60	120	30	10	270	140
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	44	165	121	22	121	11	66	132	33	11	297	154

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	44	286	22	132	231	462
Volume Left (vph)	44	0	22	0	66	11
Volume Right (vph)	0	121	0	11	33	154
Hadj (s)	0.55	-0.25	0.55	-0.01	0.02	-0.14
Departure Headway (s)	7.6	6.8	8.0	7.4	6.4	5.8
Degree Utilization, x	0.09	0.54	0.05	0.27	0.41	0.75
Capacity (veh/h)	444	492	385	419	507	598
Control Delay (s)	10.1	16.1	10.2	11.9	13.9	24.0
Approach Delay (s)	15.3		11.7		13.9	24.0
Approach LOS	C		B		B	C

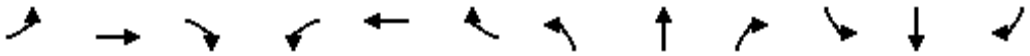
Intersection Summary				
Delay	18.0			
Level of Service	C			
Intersection Capacity Utilization	62.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	80	110	60	130	410	90
Future Volume (vph)	80	110	60	130	410	90
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	88	121	66	143	451	99

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	88	121	66	143	550
Volume Left (vph)	88	0	66	0	0
Volume Right (vph)	0	121	0	0	99
Hadj (s)	0.55	-0.65	0.55	0.05	-0.06
Departure Headway (s)	7.0	5.8	6.3	5.8	5.2
Degree Utilization, x	0.17	0.19	0.12	0.23	0.79
Capacity (veh/h)	480	573	543	590	683
Control Delay (s)	10.2	9.0	9.0	9.4	25.0
Approach Delay (s)	9.5		9.2		25.0
Approach LOS	A		A		D

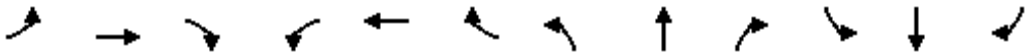
Intersection Summary			
Delay	18.3		
Level of Service	C		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	50	40	40	90	50	20	130	30	40	290	60
Future Volume (vph)	40	50	40	40	90	50	20	130	30	40	290	60
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
Hourly flow rate (vph)	45	57	45	45	102	57	23	148	34	45	330	68

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	147	204	205	443
Volume Left (vph)	45	45	23	45
Volume Right (vph)	45	57	34	68
Hadj (s)	-0.07	-0.07	-0.03	-0.02
Departure Headway (s)	6.1	5.9	5.7	5.3
Degree Utilization, x	0.25	0.34	0.32	0.65
Capacity (veh/h)	510	542	570	650
Control Delay (s)	11.0	11.9	11.4	17.8
Approach Delay (s)	11.0	11.9	11.4	17.8
Approach LOS	B	B	B	C

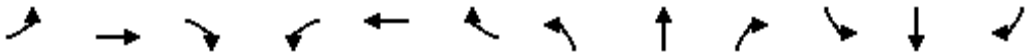
Intersection Summary				
Delay	14.3			
Level of Service	B			
Intersection Capacity Utilization	47.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	10	20	20	30	440	20	10	910	50
Future Volume (Veh/h)	10	10	40	10	20	20	30	440	20	10	910	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	10	10	41	10	21	21	31	454	21	10	938	52
Pedestrians		20			5						28	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		2			0						2	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								1264			416	
pX, platoon unblocked	0.57	0.57	0.54	0.57	0.57	0.95	0.54			0.95		
vC, conflicting volume	1580	1546	984	1536	1562	498	1010			480		
vC1, stage 1 conf vol	1004	1004		532	532							
vC2, stage 2 conf vol	576	542		1004	1030							
vCu, unblocked vol	1454	1395	553	1377	1422	448	601			430		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	96	86	94	90	96	94			99		
cM capacity (veh/h)	219	232	284	175	201	564	521			1067		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	61	52	31	475	10	990
Volume Left	10	10	31	0	10	0
Volume Right	41	21	0	21	0	52
cSH	262	261	521	1700	1067	1700
Volume to Capacity	0.23	0.20	0.06	0.28	0.01	0.58
Queue Length 95th (ft)	22	18	5	0	1	0
Control Delay (s)	22.9	22.2	12.4	0.0	8.4	0.0
Lane LOS	C	C	B		A	
Approach Delay (s)	22.9	22.2	0.8		0.1	
Approach LOS	C	C				

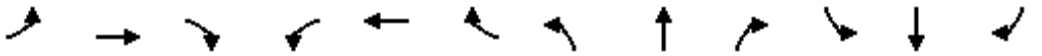
Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	67.8%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	200	130	10	290	10	60	10	10	10	10	40
Future Volume (Veh/h)	20	200	130	10	290	10	60	10	10	10	10	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	25	250	163	13	363	13	75	13	13	13	13	50
Pedestrians					2			8			36	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		595										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	412			421			842	828	342	834	902	406
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	412			350			798	783	265	790	863	406
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			68	95	98	95	95	92
cM capacity (veh/h)	1107			1121			236	283	718	250	254	624

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	438	389	101	76
Volume Left	25	13	75	13
Volume Right	163	13	13	50
cSH	1107	1121	265	415
Volume to Capacity	0.02	0.01	0.38	0.18
Queue Length 95th (ft)	2	1	43	17
Control Delay (s)	0.7	0.4	26.7	15.6
Lane LOS	A	A	D	C
Approach Delay (s)	0.7	0.4	26.7	15.6
Approach LOS			D	C

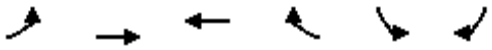
Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	45.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	150	20	50	180	50	20	10	50	50	40	130	250
Future Volume (vph)	150	20	50	180	50	20	10	50	50	40	130	250
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
Hourly flow rate (vph)	163	22	54	196	54	22	11	54	54	43	141	272

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	239	272	119	275	181
Volume Left (vph)	163	196	11	43	0
Volume Right (vph)	54	22	54	91	181
Hadj (s)	0.03	0.13	-0.22	-0.12	-0.67
Departure Headway (s)	6.0	6.0	6.1	6.1	5.6
Degree Utilization, x	0.40	0.45	0.20	0.47	0.28
Capacity (veh/h)	555	560	509	555	608
Control Delay (s)	12.9	13.9	10.7	13.2	9.6
Approach Delay (s)	12.9	13.9	10.7	11.8	
Approach LOS	B	B	B	B	

Intersection Summary				
Delay	12.4			
Level of Service	B			
Intersection Capacity Utilization	43.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	510	980	140	190	220
Future Volume (Veh/h)	140	510	980	140	190	220
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	163	593	1140	163	221	256
Pedestrians			1		2	
Lane Width (ft)			12.0		12.0	
Walking Speed (ft/s)			4.0		4.0	
Percent Blockage			0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		784	390			
pX, platoon unblocked	0.79				0.83	0.79
vC, conflicting volume	1305				1847	654
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	850				1181	24
tC, single (s)	4.2				*6.1	*6.2
tC, 2 stage (s)						
tF (s)	2.2				*3.3	3.3
p0 queue free %	73				0	69
cM capacity (veh/h)	612				146	826

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	163	296	296	760	543	221	256
Volume Left	163	0	0	0	0	221	0
Volume Right	0	0	0	0	163	0	256
cSH	612	1700	1700	1700	1700	146	826
Volume to Capacity	0.27	0.17	0.17	0.45	0.32	1.51	0.31
Queue Length 95th (ft)	27	0	0	0	0	372	33
Control Delay (s)	13.0	0.0	0.0	0.0	0.0	317.5	11.3
Lane LOS	B					F	B
Approach Delay (s)	2.8			0.0		153.2	
Approach LOS						F	

Intersection Summary			
Average Delay	29.6		
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	33	65	118	430	656

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	41	113	216	21	505	134	165	752
v/c Ratio	0.16	0.51	0.26	0.09	0.33	0.18	0.39	0.40
Control Delay	25.4	40.3	2.8	47.8	14.9	3.2	32.8	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0
Total Delay	25.4	40.3	2.8	47.8	15.2	3.4	32.8	11.7
Queue Length 50th (ft)	15	57	0	11	98	9	76	102
Queue Length 95th (ft)	42	108	35	m28	143	23	156	190
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	420	362	869	228	1857	857	456	2308
Starvation Cap Reductn	0	0	0	0	767	361	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.31	0.25	0.09	0.46	0.27	0.36	0.33

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	184	214	61	81	163	1020	10	459	122
v/c Ratio	0.72	0.74	0.30	0.53	0.68	0.45	0.14	0.27	0.15
Control Delay	62.0	39.7	51.5	61.6	57.7	25.8	59.7	21.4	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	39.7	51.5	61.6	57.7	25.8	59.7	21.4	1.9
Queue Length 50th (ft)	136	84	43	57	130	283	8	111	0
Queue Length 95th (ft)	201	159	87	108	m207	469	26	186	18
Internal Link Dist (ft)		1890		326		1321		389	
Turn Bay Length (ft)	200				200		180		250
Base Capacity (vph)	372	445	214	185	335	2245	73	1726	838
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.48	0.29	0.44	0.49	0.45	0.14	0.27	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	10	132	133	623	224	571
v/c Ratio	0.02	0.59	0.48	0.78	0.71	0.74
Control Delay	0.0	55.8	13.7	7.2	36.4	28.9
Queue Delay	0.0	0.0	0.0	2.3	0.0	1.0
Total Delay	0.0	55.8	13.7	9.5	36.4	29.9
Queue Length 50th (ft)	0	87	0	0	100	297
Queue Length 95th (ft)	0	156	56	m12	199	486
Internal Link Dist (ft)		1232		59		458
Turn Bay Length (ft)					200	
Base Capacity (vph)	697	332	345	801	396	868
Starvation Cap Reductn	0	0	0	83	0	113
Spillback Cap Reductn	16	0	0	0	0	50
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.40	0.39	0.87	0.57	0.76

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	326	369	716
v/c Ratio	0.94	0.88	0.82
Control Delay	76.9	62.7	9.9
Queue Delay	0.8	3.7	0.3
Total Delay	77.7	66.4	10.1
Queue Length 50th (ft)	217	243	37
Queue Length 95th (ft)	#455	#484	30
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	347	417	871
Starvation Cap Reductn	0	0	13
Spillback Cap Reductn	2	18	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.94	0.92	0.83

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	104	323	104	167	73	1104	52	469	83
v/c Ratio	0.30	0.90	0.53	0.66	0.59	0.66	0.49	0.28	0.11
Control Delay	43.2	70.3	56.9	55.9	63.1	20.0	82.8	14.2	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	70.3	56.9	55.9	63.1	20.0	82.8	14.2	1.5
Queue Length 50th (ft)	68	221	76	112	54	334	43	67	1
Queue Length 95th (ft)	121	#381	126	174	m59	m443	88	92	6
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	365	378	298	373	131	1685	116	1694	781
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.85	0.35	0.45	0.56	0.66	0.45	0.28	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	122	355	56	188	500	378

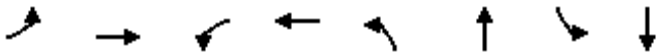
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	116	147	105	253	431

Intersection Summary

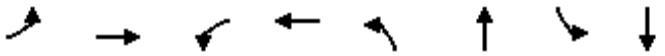
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	147	182	341	398

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	144	44	189	33	356	89	322
v/c Ratio	0.14	0.36	0.17	0.47	0.08	0.47	0.22	0.42
Control Delay	12.1	12.8	12.4	12.3	6.1	8.4	7.5	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	12.8	12.4	12.3	6.1	8.4	7.5	8.0
Queue Length 50th (ft)	4	18	6	18	2	30	7	27
Queue Length 95th (ft)	22	61	26	68	15	108	34	97
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	808	1315	863	1223	742	1393	743	1423
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.11	0.05	0.15	0.04	0.26	0.12	0.23

Intersection Summary



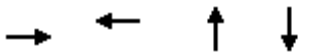
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	152	65	119	54	1011	11	663
v/c Ratio	0.88	0.61	0.56	0.59	0.16	0.95	0.08	0.63
Control Delay	105.2	50.0	70.6	51.5	2.2	24.8	5.9	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.2	50.0	70.6	51.5	2.2	24.8	5.9	10.4
Queue Length 50th (ft)	93	93	49	72	5	536	2	226
Queue Length 95th (ft)	#208	160	97	129	m6	m#1074	m6	m161
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120		50		75		75	
Base Capacity (vph)	136	283	136	273	340	1065	139	1045
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.54	0.48	0.44	0.16	0.95	0.08	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

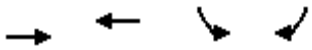
Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	33	43	1064	11	656

Intersection Summary



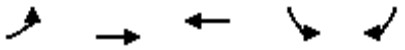
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	285	286	82	51

Intersection Summary



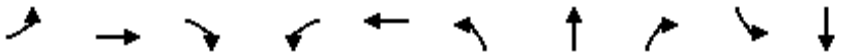
Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	319	77	33	253

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	267	1222	833	78	278
v/c Ratio	0.63	0.50	0.62	0.29	0.59
Control Delay	30.0	5.3	17.7	27.5	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	5.3	17.7	27.5	9.4
Queue Length 50th (ft)	76	64	108	24	0
Queue Length 95th (ft)	218	203	247	71	60
Internal Link Dist (ft)		435	868	856	
Turn Bay Length (ft)	375				15
Base Capacity (vph)	644	3327	2606	802	870
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	0.41	0.37	0.32	0.10	0.32

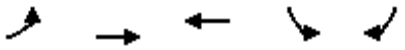
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	163	1076	120	76	706	76	76	43	43	315
v/c Ratio	0.66	0.79	0.15	0.18	0.56	0.43	0.14	0.08	0.34	0.74
Control Delay	54.4	34.2	4.5	21.7	27.7	51.0	30.1	0.3	53.6	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.4	34.2	4.5	21.7	27.7	51.0	30.1	0.3	53.6	38.1
Queue Length 50th (ft)	96	307	8	10	169	45	38	0	26	134
Queue Length 95th (ft)	179	#546	38	24	293	100	81	0	67	256
Internal Link Dist (ft)		868			704		262			515
Turn Bay Length (ft)	150		150	130		190		190	90	
Base Capacity (vph)	469	1358	918	1274	1856	375	548	558	375	444
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	0.35	0.79	0.13	0.06	0.38	0.20	0.14	0.08	0.11	0.71

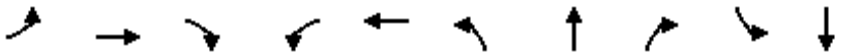
Intersection Summary

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



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	179	895	747	63	147

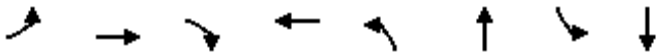
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	370	489	87	98	272	185	815	587	54	685
v/c Ratio	0.93	0.73	0.23	0.38	0.52	0.63	0.80	0.57	0.50	0.42
Control Delay	84.2	52.2	7.4	56.7	48.2	62.8	31.0	8.5	75.7	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.2	52.2	7.4	56.7	48.2	62.8	31.0	8.5	75.7	12.7
Queue Length 50th (ft)	148	187	0	38	100	72	511	82	39	130
Queue Length 95th (ft)	#241	238	35	64	136	111	#841	212	m69	177
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	788	428	595	985	311	1021	1029	116	1614
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	0.93	0.62	0.20	0.16	0.28	0.59	0.80	0.57	0.47	0.42

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	133	13	93	39	80	720	13	1093
v/c Ratio	0.58	0.04	0.26	0.14	0.26	0.54	0.03	0.44
Control Delay	42.8	29.2	5.9	22.9	7.6	7.7	3.6	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1
Total Delay	42.8	29.2	5.9	22.9	7.6	8.2	3.6	3.9
Queue Length 50th (ft)	68	6	0	12	10	125	1	63
Queue Length 95th (ft)	100	18	13	30	35	236	5	76
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	374	511	508	459	342	1473	468	2748
Starvation Cap Reductn	0	0	0	0	0	346	0	557
Spillback Cap Reductn	0	0	0	0	0	19	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.03	0.18	0.08	0.23	0.64	0.03	0.50

Intersection Summary

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	24	106	259	423	706

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	39	260	532	26	545	104	247	1091
v/c Ratio	0.10	0.87	0.61	0.14	0.38	0.15	0.65	0.60
Control Delay	21.6	62.6	13.8	48.4	20.6	5.0	43.5	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0
Total Delay	21.6	62.6	13.8	48.4	21.5	5.0	43.5	17.1
Queue Length 50th (ft)	12	151	139	15	131	7	134	211
Queue Length 95th (ft)	31	202	174	m36	158	22	190	241
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	384	310	875	190	1555	721	381	1931
Starvation Cap Reductn	0	0	0	0	691	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.84	0.61	0.14	0.63	0.14	0.65	0.56

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	179	141	244	77	205	513	13	1308	538
v/c Ratio	0.66	0.64	1.01	0.96	0.73	0.23	0.18	0.78	0.56
Control Delay	58.0	30.0	112.6	144.0	58.1	22.3	61.2	30.7	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	30.0	112.6	144.0	58.1	22.3	61.2	30.7	7.0
Queue Length 50th (ft)	130	31	189	56	160	138	10	429	40
Queue Length 95th (ft)	177	65	#408	#128	m191	m167	27	460	71
Internal Link Dist (ft)		1890		326		1321		389	
Turn Bay Length (ft)	200				200		180		250
Base Capacity (vph)	273	334	241	80	394	2223	73	1687	953
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.42	1.01	0.96	0.52	0.23	0.18	0.78	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	11	301	247	420	258	688
v/c Ratio	0.02	0.91	0.58	0.60	0.66	0.87
Control Delay	0.0	77.4	11.5	4.3	26.5	38.3
Queue Delay	0.0	25.0	0.0	0.3	0.0	4.2
Total Delay	0.0	102.3	11.5	4.6	26.5	42.5
Queue Length 50th (ft)	0	210	0	6	105	406
Queue Length 95th (ft)	0	#422	79	23	184	#714
Internal Link Dist (ft)		1232		59		458
Turn Bay Length (ft)					200	
Base Capacity (vph)	667	329	427	702	442	862
Starvation Cap Reductn	0	0	0	47	0	110
Spillback Cap Reductn	68	38	0	0	0	23
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	1.03	0.58	0.64	0.58	0.91

Intersection Summary

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

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	177	250	937
v/c Ratio	0.71	0.61	0.95
Control Delay	58.1	44.1	18.5
Queue Delay	0.0	0.0	1.8
Total Delay	58.1	44.1	20.3
Queue Length 50th (ft)	117	155	51
Queue Length 95th (ft)	197	270	m#414
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	348	408	986
Starvation Cap Reductn	0	0	15
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.51	0.61	0.96

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	323	129	366	86	560	75	763	237
v/c Ratio	0.09	0.93	0.43	0.99	0.68	0.39	0.61	0.54	0.32
Control Delay	40.1	75.3	47.3	91.6	75.5	26.1	85.3	16.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.1	75.3	47.3	91.6	75.5	26.1	85.3	16.2	1.9
Queue Length 50th (ft)	20	223	88	277	68	166	62	98	2
Queue Length 95th (ft)	49	#394	151	#477	#143	230	m80	m142	m14
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	350	360	298	369	131	1449	131	1405	737
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.90	0.43	0.99	0.66	0.39	0.57	0.54	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	55	264	22	132	253	561

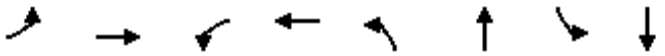
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	88	110	44	176	550

Intersection Summary

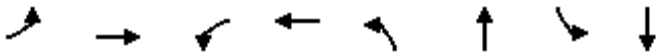
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	113	193	204	432

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	149	46	183	11	229	92	460
v/c Ratio	0.09	0.33	0.16	0.42	0.03	0.29	0.20	0.59
Control Delay	13.2	13.7	13.7	14.6	6.4	7.5	7.8	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	13.7	13.7	14.6	6.4	7.5	7.8	11.6
Queue Length 50th (ft)	3	22	7	27	1	31	13	81
Queue Length 95th (ft)	19	71	31	85	7	61	31	143
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	683	1141	754	1115	529	1266	758	1271
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.13	0.06	0.16	0.02	0.18	0.12	0.36

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	41	153	71	133	41	541	20	918
v/c Ratio	0.39	0.71	0.59	0.61	0.19	0.50	0.05	0.84
Control Delay	63.2	56.8	73.0	55.4	3.3	4.0	3.5	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	56.8	73.0	55.4	3.3	4.0	3.5	18.8
Queue Length 50th (ft)	31	91	53	88	2	19	2	423
Queue Length 95th (ft)	68	159	104	152	m3	m28	m5	m#931
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120		50		75		75	
Base Capacity (vph)	136	276	136	271	215	1091	439	1088
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.55	0.52	0.49	0.19	0.50	0.05	0.84

Intersection Summary

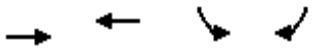
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	61	52	31	567	10	969

Intersection Summary

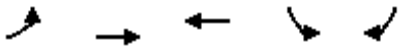
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	250	376	64	76

Intersection Summary



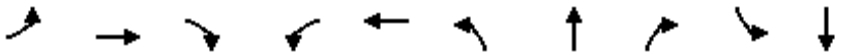
Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	231	90	51	321

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	140	667	1194	86	247
v/c Ratio	0.47	0.27	0.67	0.32	0.57
Control Delay	32.6	3.9	15.5	29.5	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	3.9	15.5	29.5	11.4
Queue Length 50th (ft)	45	30	158	28	7
Queue Length 95th (ft)	130	93	367	80	71
Internal Link Dist (ft)		435	868	856	
Turn Bay Length (ft)	375				15
Base Capacity (vph)	643	3286	2491	789	841
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	0.22	0.20	0.48	0.11	0.29

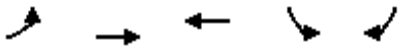
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	614	241	422	1000	205	169	265	60	362
v/c Ratio	0.45	0.74	0.36	0.62	0.69	0.79	0.28	0.39	0.45	0.90
Control Delay	64.4	45.9	8.3	26.2	30.5	68.5	33.5	6.1	64.5	66.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	45.9	8.3	26.2	30.5	68.5	33.5	6.1	64.5	66.5
Queue Length 50th (ft)	43	223	39	89	328	145	91	0	43	241
Queue Length 95th (ft)	89	284	70	111	388	#251	169	47	89	#434
Internal Link Dist (ft)		868			704		262			515
Turn Bay Length (ft)	150		150	130		190		190	90	
Base Capacity (vph)	410	1189	722	1116	1672	328	596	674	328	403
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	0.15	0.52	0.33	0.38	0.60	0.63	0.28	0.39	0.18	0.90

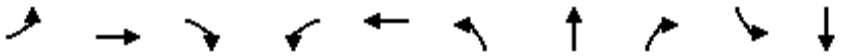
Intersection Summary

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



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	128	640	1302	221	233

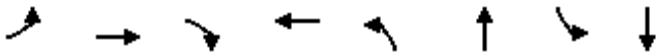
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	225	256	326	344	800	202	494	78	33	1033
v/c Ratio	0.64	0.46	0.81	0.48	0.86	0.67	0.57	0.10	0.32	0.80
Control Delay	59.9	47.1	36.6	44.7	51.6	64.7	28.7	0.5	67.5	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	47.1	36.6	44.7	51.6	64.7	28.7	0.5	67.5	25.4
Queue Length 50th (ft)	87	95	109	118	302	79	304	0	25	315
Queue Length 95th (ft)	126	127	202	177	380	118	426	3	m34	431
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	788	489	718	989	311	865	795	116	1288
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	0.57	0.32	0.67	0.48	0.81	0.65	0.57	0.10	0.28	0.80

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	13	160	79	160	547	13	1360
v/c Ratio	0.50	0.03	0.35	0.19	0.86	0.44	0.03	0.59
Control Delay	37.3	27.7	10.1	26.9	56.5	8.4	3.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1
Total Delay	37.3	27.7	10.1	26.9	56.5	9.0	3.8	5.2
Queue Length 50th (ft)	84	6	13	33	60	120	1	102
Queue Length 95th (ft)	119	18	40	58	#163	161	m3	98
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	328	454	472	435	194	1305	511	2408
Starvation Cap Reductn	0	0	0	0	0	387	0	264
Spillback Cap Reductn	0	0	0	0	0	59	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.03	0.34	0.18	0.82	0.60	0.03	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	33	65	118	527	699

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	62	113	216	21	505	134	165	794
v/c Ratio	0.24	0.48	0.26	0.09	0.33	0.18	0.40	0.41
Control Delay	24.1	39.0	2.9	47.8	14.8	3.1	33.0	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.0
Total Delay	24.1	39.0	2.9	47.8	15.1	3.4	33.0	11.8
Queue Length 50th (ft)	20	57	0	11	98	9	76	109
Queue Length 95th (ft)	53	106	35	m28	143	23	156	202
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	408	379	859	223	1824	844	447	2267
Starvation Cap Reductn	0	0	0	0	767	361	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.30	0.25	0.09	0.48	0.28	0.37	0.35

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	184	214	61	81	163	1030	10	459	122
v/c Ratio	0.72	0.74	0.30	0.53	0.68	0.46	0.14	0.27	0.15
Control Delay	62.0	39.7	51.5	61.6	56.8	26.3	59.7	21.4	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	39.7	51.5	61.6	56.8	26.3	59.7	21.4	1.9
Queue Length 50th (ft)	136	84	43	57	130	291	8	111	0
Queue Length 95th (ft)	201	159	87	108	m203	474	26	186	18
Internal Link Dist (ft)		1890		326		1321		389	
Turn Bay Length (ft)	200				200		180		250
Base Capacity (vph)	372	445	214	185	335	2245	73	1726	838
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.48	0.29	0.44	0.49	0.46	0.14	0.27	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	10	132	133	694	224	632
v/c Ratio	0.02	0.59	0.48	0.89	0.71	0.83
Control Delay	0.0	55.8	13.7	10.0	36.4	35.4
Queue Delay	0.0	0.1	0.0	22.3	0.0	1.7
Total Delay	0.0	55.9	13.7	32.2	36.4	37.1
Queue Length 50th (ft)	0	87	0	6	100	357
Queue Length 95th (ft)	0	156	56	m20	199	#602
Internal Link Dist (ft)		1232		59		458
Turn Bay Length (ft)					200	
Base Capacity (vph)	676	332	345	776	396	854
Starvation Cap Reductn	0	0	0	103	0	98
Spillback Cap Reductn	45	6	0	0	0	94
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.40	0.39	1.03	0.57	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	337	453	789
v/c Ratio	0.97	1.12	0.90
Control Delay	84.2	118.6	16.1
Queue Delay	3.8	0.6	0.5
Total Delay	87.9	119.3	16.6
Queue Length 50th (ft)	226	~360	49
Queue Length 95th (ft)	#476	#639	#242
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	346	405	873
Starvation Cap Reductn	0	0	9
Spillback Cap Reductn	6	25	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.99	1.19	0.91

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	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	94	323	125	167	73	1125	52	469	83
v/c Ratio	0.27	0.90	0.63	0.66	0.59	0.67	0.49	0.28	0.11
Control Delay	42.6	70.3	62.5	55.8	64.6	19.8	82.8	14.2	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	70.3	62.5	55.8	64.6	19.8	82.8	14.2	1.5
Queue Length 50th (ft)	61	221	93	112	54	339	43	67	1
Queue Length 95th (ft)	111	#381	148	174	m62	m454	88	92	6
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	365	378	298	373	131	1685	116	1694	781
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.85	0.42	0.45	0.56	0.67	0.45	0.28	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	122	422	56	288	512	378

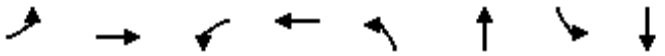
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	116	232	200	253	411

Intersection Summary

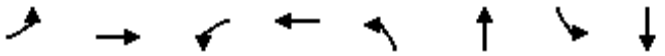
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	171	182	398	410

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	166	44	200	33	378	89	311
v/c Ratio	0.14	0.40	0.17	0.48	0.08	0.51	0.24	0.41
Control Delay	12.4	13.7	12.7	13.1	6.3	9.1	7.9	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	13.7	12.7	13.1	6.3	9.1	7.9	8.1
Queue Length 50th (ft)	4	22	6	21	3	34	7	27
Queue Length 95th (ft)	23	74	28	78	15	120	35	95
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	797	1316	844	1225	733	1360	699	1395
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.13	0.05	0.16	0.05	0.28	0.13	0.22

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	207	65	119	98	1000	11	663
v/c Ratio	0.88	0.74	0.56	0.54	0.30	0.96	0.08	0.65
Control Delay	105.2	52.2	70.6	47.4	3.9	27.1	7.2	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.2	52.2	70.6	47.4	3.9	27.1	7.2	11.5
Queue Length 50th (ft)	93	118	49	69	14	818	2	215
Queue Length 95th (ft)	#208	#219	97	129	m14	m#1060	m7	m324
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120				75		75	
Base Capacity (vph)	136	295	136	273	326	1044	131	1025
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.70	0.48	0.44	0.30	0.96	0.08	0.65

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	141	33	43	1075	11	656

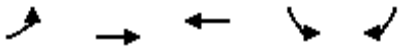
Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	347	295	132	51

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	282	141	305	120	261
v/c Ratio	0.54	0.24	0.40	0.18	0.34
Control Delay	13.9	7.7	7.7	8.7	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.9	7.7	7.7	8.7	2.9
Queue Length 50th (ft)	44	15	30	16	0
Queue Length 95th (ft)	98	40	70	39	29
Internal Link Dist (ft)	545	108	179	837	
Turn Bay Length (ft)					30
Base Capacity (vph)	518	585	757	654	776
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	0.54	0.24	0.40	0.18	0.34

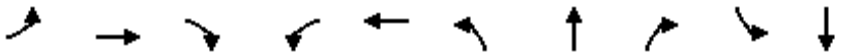
Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	278	1356	900	67	333
v/c Ratio	0.65	0.54	0.64	0.27	0.65
Control Delay	31.5	5.4	18.0	28.7	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	5.4	18.0	28.7	10.4
Queue Length 50th (ft)	85	72	123	22	0
Queue Length 95th (ft)	#254	237	271	65	67
Internal Link Dist (ft)		435	868	856	
Turn Bay Length (ft)	375				15
Base Capacity (vph)	614	3312	2525	765	874
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	0.45	0.41	0.36	0.09	0.38

Intersection Summary

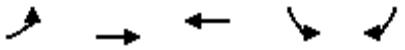
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	250	1022	120	76	608	76	76	43	43	337
v/c Ratio	0.76	0.76	0.15	0.18	0.56	0.43	0.14	0.08	0.34	0.77
Control Delay	54.2	33.3	4.5	21.7	31.2	51.2	30.2	0.2	53.8	41.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	33.3	4.5	21.7	31.2	51.2	30.2	0.2	53.8	41.8
Queue Length 50th (ft)	145	285	8	10	154	45	38	0	26	154
Queue Length 95th (ft)	258	#508	38	24	264	100	82	0	68	#289
Internal Link Dist (ft)		868			704		262			515
Turn Bay Length (ft)	150		150	130		190		190	90	
Base Capacity (vph)	462	1339	907	1255	1835	369	559	566	369	435
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	0.54	0.76	0.13	0.06	0.33	0.21	0.14	0.08	0.12	0.77

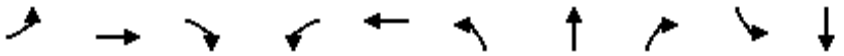
Intersection Summary

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



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	179	895	727	95	147

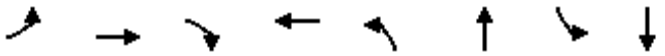
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	370	543	109	98	283	185	804	609	54	674
v/c Ratio	0.93	0.76	0.27	0.39	0.51	0.63	0.80	0.59	0.50	0.43
Control Delay	84.2	52.6	8.7	57.1	47.3	62.8	31.9	8.8	74.3	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.2	52.6	8.7	57.1	47.3	62.8	31.9	8.8	74.3	14.7
Queue Length 50th (ft)	148	207	0	38	103	72	517	87	39	156
Queue Length 95th (ft)	#241	267	47	64	142	111	#821	218	m65	191
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	788	437	595	984	311	1002	1027	116	1582
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	0.93	0.69	0.25	0.16	0.29	0.59	0.80	0.59	0.47	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	133	13	93	39	93	720	13	1160
v/c Ratio	0.58	0.04	0.26	0.14	0.33	0.54	0.03	0.46
Control Delay	43.2	29.2	5.9	22.9	9.2	7.7	3.7	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1
Total Delay	43.2	29.2	5.9	22.9	9.2	8.2	3.7	4.2
Queue Length 50th (ft)	68	6	0	12	13	125	1	70
Queue Length 95th (ft)	100	18	13	30	43	236	m5	85
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	367	502	501	452	312	1464	467	2734
Starvation Cap Reductn	0	0	0	0	0	346	0	483
Spillback Cap Reductn	0	0	0	0	0	19	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.03	0.19	0.09	0.30	0.64	0.03	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	24	106	259	447	742

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	39	247	532	26	558	104	247	1091
v/c Ratio	0.11	0.84	0.61	0.14	0.38	0.15	0.64	0.59
Control Delay	21.6	59.5	14.2	48.8	20.5	4.8	43.2	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	21.6	59.5	14.2	48.8	21.3	4.8	43.2	16.9
Queue Length 50th (ft)	12	142	143	15	134	7	134	211
Queue Length 95th (ft)	31	191	178	m36	161	21	190	241
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	387	312	869	192	1567	725	384	1946
Starvation Cap Reductn	0	0	0	0	680	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.79	0.61	0.14	0.63	0.14	0.64	0.56

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	179	141	244	77	205	538	13	1359	538
v/c Ratio	0.66	0.64	1.01	0.96	0.73	0.24	0.18	0.81	0.57
Control Delay	58.0	30.0	112.6	144.0	57.9	22.3	61.2	31.9	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	30.0	112.6	144.0	57.9	22.3	61.2	31.9	7.6
Queue Length 50th (ft)	130	31	189	56	160	145	10	456	47
Queue Length 95th (ft)	177	65	#408	#128	m190	m175	27	486	83
Internal Link Dist (ft)		1890		326		1321		389	
Turn Bay Length (ft)	200				200		180		250
Base Capacity (vph)	273	334	241	80	394	2226	73	1687	945
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.42	1.01	0.96	0.52	0.24	0.18	0.81	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	11	312	247	431	258	688
v/c Ratio	0.02	0.95	0.58	0.61	0.68	0.88
Control Delay	0.0	85.4	11.5	4.4	27.8	39.0
Queue Delay	0.0	42.4	0.0	0.3	0.0	4.5
Total Delay	0.0	127.8	11.5	4.8	27.8	43.6
Queue Length 50th (ft)	0	222	0	6	107	411
Queue Length 95th (ft)	0	#443	79	23	190	#714
Internal Link Dist (ft)		1232		59		458
Turn Bay Length (ft)					200	
Base Capacity (vph)	666	327	425	707	435	857
Starvation Cap Reductn	0	0	0	46	0	110
Spillback Cap Reductn	80	45	0	0	0	40
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	1.11	0.58	0.65	0.59	0.92

Intersection Summary

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

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	187	250	948
v/c Ratio	0.73	0.62	0.96
Control Delay	59.2	44.5	20.8
Queue Delay	0.0	0.0	2.3
Total Delay	59.2	44.5	23.1
Queue Length 50th (ft)	125	156	62
Queue Length 95th (ft)	209	270	m#417
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	346	405	983
Starvation Cap Reductn	0	0	15
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.54	0.62	0.98

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	32	323	129	376	86	580	75	806	237
v/c Ratio	0.09	0.93	0.43	1.02	0.68	0.40	0.61	0.57	0.32
Control Delay	40.1	75.3	47.3	98.8	75.4	26.2	84.7	16.6	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.1	75.3	47.3	98.8	75.4	26.2	84.7	16.6	1.9
Queue Length 50th (ft)	20	223	88	~302	68	176	62	105	1
Queue Length 95th (ft)	49	#394	151	#498	#142	240	m78	m147	m13
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	350	360	298	368	131	1446	131	1405	737
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.90	0.43	1.02	0.66	0.40	0.57	0.57	0.32

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.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	55	286	22	143	264	561

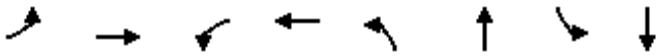
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	88	121	66	176	550

Intersection Summary

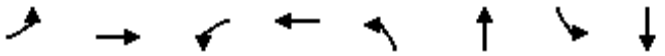
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	147	204	227	443

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	149	46	195	23	229	92	460
v/c Ratio	0.09	0.33	0.16	0.44	0.07	0.30	0.20	0.60
Control Delay	13.2	13.6	13.7	15.0	7.0	7.6	8.0	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	13.6	13.7	15.0	7.0	7.6	8.0	11.8
Queue Length 50th (ft)	3	22	7	29	3	31	13	81
Queue Length 95th (ft)	19	71	31	92	12	63	32	149
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	683	1150	760	1129	525	1261	755	1266
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.13	0.06	0.17	0.04	0.18	0.12	0.36

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	41	164	71	133	51	541	20	928
v/c Ratio	0.39	0.74	0.59	0.59	0.25	0.50	0.05	0.86
Control Delay	63.2	57.4	73.0	54.3	4.0	3.8	3.5	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	57.4	73.0	54.3	4.0	3.8	3.5	19.8
Queue Length 50th (ft)	31	96	53	88	2	18	2	432
Queue Length 95th (ft)	68	167	104	152	m3	m26	m5	m#949
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120		50		75		75	
Base Capacity (vph)	136	278	136	271	205	1087	435	1085
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.59	0.52	0.49	0.25	0.50	0.05	0.86

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	61	52	31	588	10	1000

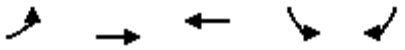
Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	451	401	101	76

Intersection Summary

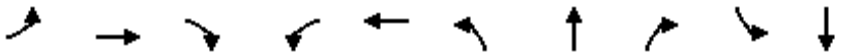
Lane Group	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	287	302	123	195	333

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	161	720	1248	86	258
v/c Ratio	0.54	0.28	0.73	0.35	0.60
Control Delay	35.0	3.8	17.5	31.9	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	3.8	17.5	31.9	12.5
Queue Length 50th (ft)	57	33	177	31	8
Queue Length 95th (ft)	146	101	405	82	74
Internal Link Dist (ft)		435	868	856	
Turn Bay Length (ft)	375				15
Base Capacity (vph)	572	3227	2348	701	778
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	0.28	0.22	0.53	0.12	0.33

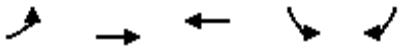
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	120	542	241	422	1108	205	193	253	60	422
v/c Ratio	0.62	0.72	0.37	0.59	0.92	0.77	0.32	0.38	0.45	1.03
Control Delay	62.6	46.0	8.7	24.9	46.6	65.6	32.2	5.9	62.5	92.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.6	46.0	8.7	24.9	46.6	65.6	32.2	5.9	62.5	92.1
Queue Length 50th (ft)	83	190	38	89	401	140	101	0	42	279
Queue Length 95th (ft)	144	247	69	112	483	#231	183	46	86	#511
Internal Link Dist (ft)		868			704		262			515
Turn Bay Length (ft)	150		150	130		190		190	90	
Base Capacity (vph)	415	1205	697	1130	1628	332	607	673	332	409
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	0.29	0.45	0.35	0.37	0.68	0.62	0.32	0.38	0.18	1.03

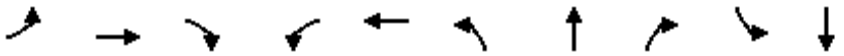
Intersection Summary

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



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	186	640	1430	221	256

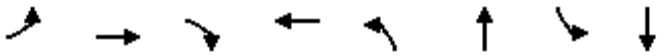
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	225	278	326	344	844	225	506	78	33	1033
v/c Ratio	0.64	0.49	0.81	0.47	0.88	0.74	0.60	0.10	0.32	0.82
Control Delay	59.9	47.6	35.9	44.1	52.7	68.4	29.8	0.5	66.8	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	47.6	35.9	44.1	52.7	68.4	29.8	0.5	66.8	26.7
Queue Length 50th (ft)	87	104	109	117	321	88	318	0	26	325
Queue Length 95th (ft)	126	137	202	177	#410	#136	440	3	m34	431
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	788	489	738	993	311	850	784	116	1259
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	0.57	0.35	0.67	0.47	0.85	0.72	0.60	0.10	0.28	0.82

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	160	13	160	79	160	560	13	1360
v/c Ratio	0.51	0.03	0.35	0.19	0.86	0.44	0.03	0.58
Control Delay	37.8	27.7	10.2	27.0	54.9	8.4	3.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1
Total Delay	37.8	27.7	10.2	27.0	54.9	9.0	3.8	5.1
Queue Length 50th (ft)	84	6	13	33	60	124	2	98
Queue Length 95th (ft)	119	18	40	58	#162	167	m3	95
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	330	457	474	437	196	1315	507	2425
Starvation Cap Reductn	0	0	0	0	0	383	0	263
Spillback Cap Reductn	0	0	0	0	0	60	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.03	0.34	0.18	0.82	0.60	0.03	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	33	76	140	452	656

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	154	216	21	505	134	165	752
v/c Ratio	0.19	0.61	0.26	0.10	0.33	0.18	0.40	0.39
Control Delay	21.6	43.6	2.8	51.4	12.4	2.7	33.6	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0
Total Delay	21.6	43.6	2.8	51.4	12.8	3.1	33.6	11.9
Queue Length 50th (ft)	15	80	0	11	95	13	77	106
Queue Length 95th (ft)	45	141	35	m25	119	23	156	190
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	406	374	854	216	1764	821	433	2193
Starvation Cap Reductn	0	0	0	0	757	361	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.41	0.25	0.10	0.50	0.29	0.38	0.34

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	184	214	61	81	163	1020	10	684	184
v/c Ratio	0.72	0.74	0.30	0.53	0.68	0.45	0.14	0.40	0.22
Control Delay	62.0	39.7	51.5	61.6	58.4	25.5	59.7	23.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	39.7	51.5	61.6	58.4	25.5	59.7	23.1	4.3
Queue Length 50th (ft)	136	84	43	57	131	278	8	178	0
Queue Length 95th (ft)	201	159	87	108	m206	471	26	287	49
Internal Link Dist (ft)		1890		326		1321		389	
Turn Bay Length (ft)	200				200		180		250
Base Capacity (vph)	372	445	214	185	335	2245	73	1726	848
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.48	0.29	0.44	0.49	0.45	0.14	0.40	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	10	163	133	653	224	581
v/c Ratio	0.02	0.67	0.46	0.83	0.71	0.76
Control Delay	0.0	59.0	12.9	6.9	37.2	30.7
Queue Delay	0.0	0.0	0.0	6.7	0.0	1.2
Total Delay	0.0	59.0	12.9	13.7	37.2	31.9
Queue Length 50th (ft)	0	110	0	0	104	318
Queue Length 95th (ft)	0	189	56	m2	199	500
Internal Link Dist (ft)		1232		59		458
Turn Bay Length (ft)					200	
Base Capacity (vph)	691	327	342	786	391	854
Starvation Cap Reductn	0	0	0	97	0	113
Spillback Cap Reductn	33	2	0	0	0	55
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.50	0.39	0.95	0.57	0.78

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	337	400	758
v/c Ratio	0.99	1.01	0.86
Control Delay	89.1	88.3	12.3
Queue Delay	4.4	20.4	0.2
Total Delay	93.4	108.7	12.5
Queue Length 50th (ft)	~235	~291	41
Queue Length 95th (ft)	#477	#548	59
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	341	398	878
Starvation Cap Reductn	0	0	6
Spillback Cap Reductn	6	24	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	1.01	1.07	0.87

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	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	125	323	104	167	73	1104	52	656	115
v/c Ratio	0.36	0.90	0.53	0.66	0.59	0.66	0.49	0.39	0.14
Control Delay	44.5	70.3	56.9	55.9	63.3	19.5	84.3	12.4	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	70.3	56.9	55.9	63.3	19.5	84.3	12.4	0.7
Queue Length 50th (ft)	83	221	76	112	53	335	43	77	1
Queue Length 95th (ft)	142	#381	126	174	m58	m436	87	100	3
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	365	378	298	373	131	1685	116	1694	796
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.85	0.35	0.45	0.56	0.66	0.45	0.39	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	122	366	100	288	500	378

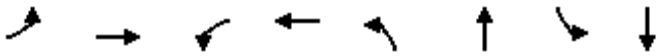
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	116	158	147	253	547
v/c Ratio	0.41	0.52	0.30	0.23	0.84
Control Delay	33.2	12.7	5.0	4.2	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	12.7	5.0	4.2	28.5
Queue Length 50th (ft)	41	0	14	25	166
Queue Length 95th (ft)	119	59	40	67	372
Internal Link Dist (ft)	330			715	353
Turn Bay Length (ft)	100		55		
Base Capacity (vph)	644	489	577	1529	1239
Starvation Cap Reductn	0	0	0	0	36
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.32	0.25	0.17	0.45

Intersection Summary

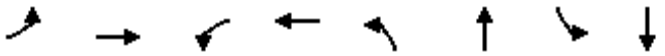
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	170	182	364	489

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	155	44	211	33	367	89	366
v/c Ratio	0.13	0.37	0.16	0.50	0.09	0.50	0.24	0.49
Control Delay	12.4	12.6	12.6	13.7	6.6	9.2	8.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	12.6	12.6	13.7	6.6	9.2	8.1	9.3
Queue Length 50th (ft)	4	18	6	23	3	34	8	35
Queue Length 95th (ft)	23	67	28	85	16	119	36	121
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	785	1283	846	1224	684	1349	704	1394
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.12	0.05	0.17	0.05	0.27	0.13	0.26

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	185	65	119	54	1011	11	718
v/c Ratio	0.88	0.69	0.56	0.56	0.18	0.96	0.08	0.70
Control Delay	105.2	50.7	70.6	48.8	1.6	23.4	5.1	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.2	50.7	70.6	48.8	1.6	23.4	5.1	10.6
Queue Length 50th (ft)	93	108	49	70	2	554	1	288
Queue Length 95th (ft)	#208	187	97	129	m1	m#1055	m4	m136
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120		50		75		75	
Base Capacity (vph)	136	290	136	273	298	1052	130	1033
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.64	0.48	0.44	0.18	0.96	0.08	0.70

Intersection Summary

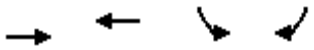
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	33	43	1064	11	742

Intersection Summary

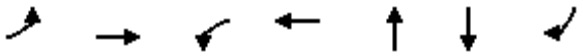
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	305	337	71	61

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	363	99	99	286

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	267	1233	11	988	33	134	378
v/c Ratio	0.68	0.54	0.08	0.71	0.09	0.44	0.82
Control Delay	42.8	10.3	45.1	24.3	21.4	34.3	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	10.3	45.1	24.3	21.4	34.3	31.5
Queue Length 50th (ft)	119	131	5	212	9	62	97
Queue Length 95th (ft)	#311	383	26	365	35	137	247
Internal Link Dist (ft)		435		868	160	856	
Turn Bay Length (ft)	375		100				15
Base Capacity (vph)	494	2624	497	2530	681	594	727
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	0.54	0.47	0.02	0.39	0.05	0.23	0.52

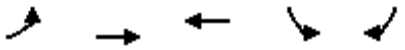
Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	174	1076	120	76	815	76	87	43	43	87	228
v/c Ratio	0.64	0.72	0.14	0.16	0.59	0.35	0.20	0.09	0.31	0.35	0.58
Control Delay	49.5	29.1	4.0	20.7	26.2	44.0	32.3	0.4	50.8	41.7	11.7
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	49.5	29.1	4.0	20.7	26.2	44.0	32.3	0.4	50.8	41.7	11.7
Queue Length 50th (ft)	87	245	6	10	164	39	43	0	22	44	0
Queue Length 95th (ft)	190	#555	38	24	353	101	92	0	67	96	62
Internal Link Dist (ft)		868			704		262			515	
Turn Bay Length (ft)	150		150	130		190		190	90		250
Base Capacity (vph)	518	1502	1016	1409	2056	432	512	532	415	475	553
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	0.72	0.12	0.05	0.40	0.18	0.17	0.08	0.10	0.18	0.41

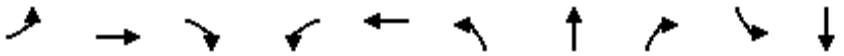
Intersection Summary

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



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	179	895	811	189	147
v/c Ratio	0.69	0.40	0.52	0.42	0.30
Control Delay	61.5	11.4	17.5	37.2	6.6
Queue Delay	0.0	0.0	0.3	0.0	0.0
Total Delay	61.5	11.4	17.8	37.2	6.6
Queue Length 50th (ft)	132	166	120	117	0
Queue Length 95th (ft)	204	207	172	188	48
Internal Link Dist (ft)		704	310	1638	
Turn Bay Length (ft)	150			60	
Base Capacity (vph)	321	2222	1569	448	496
Starvation Cap Reductn	0	0	247	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.56	0.40	0.61	0.42	0.30

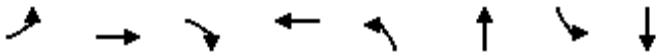
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	370	489	228	272	326	185	815	620	54	761
v/c Ratio	0.93	0.71	0.47	0.65	0.46	0.63	0.88	0.63	0.50	0.52
Control Delay	76.6	40.7	4.2	57.2	42.4	62.8	41.7	11.1	74.4	17.3
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.6	40.7	4.3	57.2	42.4	62.8	41.7	11.1	74.4	17.3
Queue Length 50th (ft)	113	142	4	105	114	72	582	106	40	191
Queue Length 95th (ft)	#231	192	14	145	148	111	#933	265	m66	232
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	788	529	595	986	311	925	981	116	1460
Starvation Cap Reductn	0	0	14	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	51	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.62	0.44	0.46	0.35	0.59	0.88	0.63	0.47	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	67	13	93	39	80	786	13	1214
v/c Ratio	0.28	0.04	0.25	0.13	0.31	0.59	0.03	0.49
Control Delay	33.8	28.9	5.8	22.7	9.2	8.8	4.2	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.1
Total Delay	33.8	28.9	5.8	22.7	9.2	9.5	4.2	4.8
Queue Length 50th (ft)	33	6	0	12	12	157	1	88
Queue Length 95th (ft)	57	18	13	30	37	269	m6	103
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	356	486	489	439	284	1440	405	2671
Starvation Cap Reductn	0	0	0	0	0	321	0	486
Spillback Cap Reductn	0	0	0	0	0	3	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.03	0.19	0.09	0.28	0.70	0.03	0.56

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	24	106	259	459	753

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	39	260	532	26	558	130	247	1091
v/c Ratio	0.10	0.87	0.61	0.14	0.38	0.19	0.65	0.60
Control Delay	21.6	62.6	14.2	47.6	21.2	5.7	43.5	17.1
Queue Delay	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0
Total Delay	21.6	62.6	14.2	47.6	22.2	6.2	43.5	17.1
Queue Length 50th (ft)	12	151	143	15	136	10	134	211
Queue Length 95th (ft)	31	202	178	m35	164	28	190	241
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	384	310	870	190	1555	731	381	1931
Starvation Cap Reductn	0	0	0	0	694	338	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.84	0.61	0.14	0.65	0.33	0.65	0.56

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	179	141	244	77	205	936	13	1372	538
v/c Ratio	0.66	0.64	1.01	0.96	0.73	0.42	0.18	0.81	0.57
Control Delay	58.0	30.0	112.6	144.0	67.9	6.2	61.2	32.3	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	30.0	112.6	144.0	67.9	6.2	61.2	32.3	7.8
Queue Length 50th (ft)	130	31	189	56	121	46	10	464	49
Queue Length 95th (ft)	177	65	#408	#128	155	52	27	493	87
Internal Link Dist (ft)		1890		326		1321		389	
Turn Bay Length (ft)	200				200		180		250
Base Capacity (vph)	273	334	241	80	394	2240	73	1687	943
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.42	1.01	0.96	0.52	0.42	0.18	0.81	0.57

Intersection Summary

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

Lane Group	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	11	312	247	451	258	688
v/c Ratio	0.02	0.95	0.58	0.67	0.69	0.90
Control Delay	0.0	85.5	11.5	5.9	29.1	41.8
Queue Delay	0.0	41.8	0.0	0.5	0.0	5.0
Total Delay	0.0	127.3	11.5	6.4	29.1	46.7
Queue Length 50th (ft)	0	222	0	8	107	420
Queue Length 95th (ft)	0	#443	79	37	197	#724
Internal Link Dist (ft)		1232		59		458
Turn Bay Length (ft)					200	
Base Capacity (vph)	663	327	425	677	428	842
Starvation Cap Reductn	0	0	0	41	0	102
Spillback Cap Reductn	72	43	0	0	0	44
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	1.10	0.58	0.71	0.60	0.93

Intersection Summary

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

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	187	270	948
v/c Ratio	0.72	0.67	0.96
Control Delay	59.1	46.6	20.5
Queue Delay	0.0	0.0	2.5
Total Delay	59.1	46.6	23.1
Queue Length 50th (ft)	125	172	62
Queue Length 95th (ft)	209	#309	m#408
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	346	406	983
Starvation Cap Reductn	0	0	16
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.54	0.67	0.98

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	323	129	376	86	903	75	828	237
v/c Ratio	0.22	0.75	0.61	0.78	0.68	0.62	0.54	0.58	0.32
Control Delay	44.6	47.2	59.3	51.7	75.4	38.3	44.8	29.9	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	47.2	59.3	51.7	75.4	38.3	44.8	29.9	12.2
Queue Length 50th (ft)	35	187	96	267	68	292	53	315	76
Queue Length 95th (ft)	73	295	152	365	m108	#463	m63	m392	m119
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	379	513	331	534	131	1450	160	1432	740
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.63	0.39	0.70	0.66	0.62	0.47	0.58	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	55	330	22	165	264	561

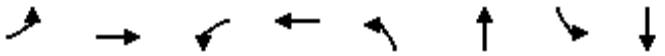
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	99	143	77	209	550
v/c Ratio	0.34	0.40	0.30	0.19	0.69
Control Delay	29.3	9.5	31.3	3.9	18.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	9.5	31.3	3.9	18.3
Queue Length 50th (ft)	30	0	24	19	140
Queue Length 95th (ft)	98	49	82	50	332
Internal Link Dist (ft)	330			715	353
Turn Bay Length (ft)	100		55		
Base Capacity (vph)	698	660	439	1552	1400
Starvation Cap Reductn	0	0	0	0	44
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.14	0.22	0.18	0.13	0.41

Intersection Summary

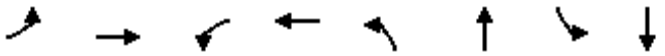
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	159	216	273	455

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	184	46	183	23	275	92	460
v/c Ratio	0.09	0.41	0.16	0.41	0.07	0.36	0.21	0.60
Control Delay	13.2	14.8	13.8	14.5	6.9	8.2	8.1	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	14.8	13.8	14.5	6.9	8.2	8.1	11.9
Queue Length 50th (ft)	3	28	7	27	3	40	13	81
Queue Length 95th (ft)	19	88	31	85	11	75	32	143
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	707	1186	757	1154	526	1273	732	1271
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.16	0.06	0.16	0.04	0.22	0.13	0.36

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	41	164	71	133	51	765	20	928
v/c Ratio	0.39	0.74	0.59	0.59	0.25	0.70	0.07	0.86
Control Delay	63.2	57.4	73.0	54.3	3.2	6.5	19.4	43.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	57.4	73.0	54.3	3.2	6.5	19.4	43.0
Queue Length 50th (ft)	31	96	53	88	1	66	8	645
Queue Length 95th (ft)	68	167	104	152	m2	751	m21	#909
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120		50		75		75	
Base Capacity (vph)	136	278	136	271	205	1090	298	1085
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.59	0.52	0.49	0.25	0.70	0.07	0.86

Intersection Summary

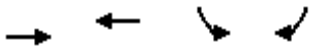
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	61	52	31	805	10	1000

Intersection Summary

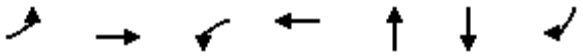
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	263	526	51	76

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	244	205	51	397

Intersection Summary



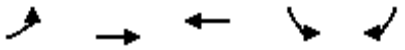
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	161	850	11	1215	55	97	269
v/c Ratio	0.54	0.35	0.07	0.72	0.20	0.42	0.67
Control Delay	38.2	5.7	40.6	17.9	27.9	37.0	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	5.7	40.6	17.9	27.9	37.0	21.4
Queue Length 50th (ft)	62	51	4	193	16	37	34
Queue Length 95th (ft)	168	182	26	397	61	108	140
Internal Link Dist (ft)		435		868	141	856	
Turn Bay Length (ft)	375		100				15
Base Capacity (vph)	560	2904	560	2795	800	689	834
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	0.29	0.02	0.43	0.07	0.14	0.32

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	60	735	241	422	1024	217	169	289	60	217	157
v/c Ratio	0.45	0.79	0.34	0.62	0.65	0.80	0.31	0.44	0.45	0.62	0.39
Control Delay	66.4	46.3	7.9	26.3	28.5	70.4	36.3	6.5	66.4	51.8	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.4	46.3	7.9	26.3	28.5	70.4	36.3	6.5	66.4	51.8	8.6
Queue Length 50th (ft)	47	287	39	92	350	167	101	0	47	152	0
Queue Length 95th (ft)	89	346	70	111	400	#276	170	48	89	233	38
Internal Link Dist (ft)		868			704		262			515	
Turn Bay Length (ft)	150		150	130		190		190	90		250
Base Capacity (vph)	410	1188	765	1115	1705	328	540	652	328	418	455
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	0.15	0.62	0.32	0.38	0.60	0.66	0.31	0.44	0.18	0.52	0.35

Intersection Summary

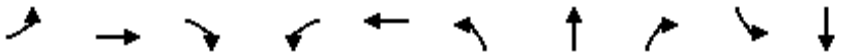
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	128	651	1488	221	233
v/c Ratio	0.58	0.29	0.88	0.48	0.41
Control Delay	59.7	9.9	27.4	38.0	6.2
Queue Delay	0.0	0.0	0.6	0.0	0.0
Total Delay	59.7	9.9	28.0	38.0	6.2
Queue Length 50th (ft)	95	108	293	139	0
Queue Length 95th (ft)	145	131	m291	205	49
Internal Link Dist (ft)		704	310	1638	
Turn Bay Length (ft)	150			60	
Base Capacity (vph)	321	2249	1683	459	572
Starvation Cap Reductn	0	0	40	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.29	0.91	0.48	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



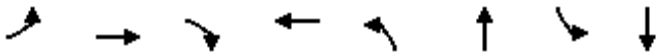
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	258	278	326	344	822	393	674	144	33	1033
v/c Ratio	0.70	0.49	0.81	0.46	0.87	1.26	0.79	0.18	0.32	0.83
Control Delay	52.4	39.9	28.9	44.0	52.2	185.9	38.1	5.1	64.0	29.0
Queue Delay	0.0	0.0	0.2	0.0	1.8	0.0	0.0	0.0	0.0	0.5
Total Delay	52.4	39.9	29.1	44.0	54.0	185.9	38.1	5.1	64.0	29.5
Queue Length 50th (ft)	103	108	120	117	313	~196	485	4	24	384
Queue Length 95th (ft)	146	146	215	177	393	#293	#708	45	m34	433
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	788	489	740	988	311	849	783	116	1252
Starvation Cap Reductn	0	0	9	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	65	0	0	0	0	40
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.35	0.68	0.46	0.89	1.26	0.79	0.18	0.28	0.85

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.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	187	13	160	79	160	560	13	1360
v/c Ratio	0.59	0.03	0.35	0.19	0.86	0.45	0.03	0.59
Control Delay	40.3	27.7	10.1	26.9	56.5	8.5	3.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1
Total Delay	40.3	27.7	10.1	26.9	56.5	9.1	3.8	5.2
Queue Length 50th (ft)	101	6	13	33	60	124	1	102
Queue Length 95th (ft)	137	18	40	58	#163	167	m3	98
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	328	454	472	435	194	1305	500	2408
Starvation Cap Reductn	0	0	0	0	0	383	0	264
Spillback Cap Reductn	0	0	0	0	0	63	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.03	0.34	0.18	0.82	0.61	0.03	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	33	86	140	527	699

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	62	154	227	21	505	134	165	794
v/c Ratio	0.23	0.63	0.27	0.10	0.33	0.18	0.40	0.41
Control Delay	23.8	44.6	2.9	51.9	12.3	2.6	33.8	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0
Total Delay	23.8	44.6	2.9	51.9	12.7	3.0	33.8	12.2
Queue Length 50th (ft)	20	80	1	11	95	13	78	115
Queue Length 95th (ft)	53	142	36	m25	117	22	156	202
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	388	361	857	215	1753	816	430	2179
Starvation Cap Reductn	0	0	0	0	761	362	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.43	0.26	0.10	0.51	0.30	0.38	0.36

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	184	214	61	81	163	1030	10	694	184
v/c Ratio	0.72	0.74	0.30	0.53	0.68	0.46	0.14	0.40	0.22
Control Delay	62.0	39.7	51.5	61.6	57.4	26.0	59.7	23.2	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	39.7	51.5	61.6	57.4	26.0	59.7	23.2	4.3
Queue Length 50th (ft)	136	84	43	57	130	287	8	181	0
Queue Length 95th (ft)	201	159	87	108	m204	475	26	291	49
Internal Link Dist (ft)		1890		326		1321		389	
Turn Bay Length (ft)	200				200		180		250
Base Capacity (vph)	372	445	214	185	335	2245	73	1726	848
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.48	0.29	0.44	0.49	0.46	0.14	0.40	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	10	163	133	724	224	643
v/c Ratio	0.02	0.67	0.46	0.95	0.71	0.86
Control Delay	0.0	59.0	12.9	13.6	37.2	38.2
Queue Delay	0.0	0.0	0.0	40.0	0.0	2.3
Total Delay	0.0	59.0	12.9	53.6	37.2	40.6
Queue Length 50th (ft)	0	110	0	64	104	383
Queue Length 95th (ft)	0	189	56	m19	199	#646
Internal Link Dist (ft)		1232		59		458
Turn Bay Length (ft)					200	
Base Capacity (vph)	670	327	342	762	391	841
Starvation Cap Reductn	0	0	0	99	0	98
Spillback Cap Reductn	32	0	0	0	0	86
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.50	0.39	1.09	0.57	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	348	474	821
v/c Ratio	1.02	1.19	0.93
Control Delay	96.8	144.3	18.9
Queue Delay	9.7	1.1	0.4
Total Delay	106.4	145.4	19.3
Queue Length 50th (ft)	~259	~406	50
Queue Length 95th (ft)	#495	#676	#78
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	341	399	881
Starvation Cap Reductn	0	0	4
Spillback Cap Reductn	10	40	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	1.05	1.32	0.94

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	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	115	323	125	167	73	1125	52	677	115
v/c Ratio	0.33	0.90	0.63	0.66	0.59	0.67	0.49	0.40	0.14
Control Delay	43.9	70.3	62.5	55.8	64.5	19.6	84.6	12.4	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	70.3	62.5	55.8	64.5	19.6	84.6	12.4	0.7
Queue Length 50th (ft)	76	221	93	112	54	332	43	79	1
Queue Length 95th (ft)	133	#381	148	174	m61	m451	88	102	2
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	365	378	298	373	131	1685	116	1694	796
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.85	0.42	0.45	0.56	0.67	0.45	0.40	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	122	422	100	355	512	378

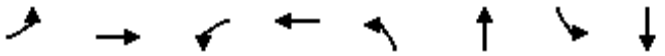
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	116	232	221	253	537
v/c Ratio	0.41	0.64	0.42	0.23	0.84
Control Delay	34.2	13.7	6.3	4.3	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	13.7	6.3	4.3	29.1
Queue Length 50th (ft)	44	0	22	25	180
Queue Length 95th (ft)	122	77	67	76	379
Internal Link Dist (ft)	330			715	353
Turn Bay Length (ft)	100		55		
Base Capacity (vph)	616	518	567	1510	1236
Starvation Cap Reductn	0	0	0	0	45
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.45	0.39	0.17	0.45

Intersection Summary

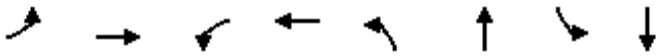
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	182	205	409	478

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	177	44	222	33	378	89	366
v/c Ratio	0.13	0.41	0.16	0.51	0.09	0.53	0.25	0.50
Control Delay	12.5	13.4	12.7	14.1	6.8	9.8	8.5	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	13.4	12.7	14.1	6.8	9.8	8.5	9.7
Queue Length 50th (ft)	4	22	6	26	3	37	8	37
Queue Length 95th (ft)	24	80	29	94	17	129	38	126
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	767	1271	818	1210	669	1334	677	1376
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.14	0.05	0.18	0.05	0.28	0.13	0.27

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	217	65	119	98	1000	11	718
v/c Ratio	0.88	0.75	0.56	0.53	0.34	0.96	0.09	0.70
Control Delay	105.2	52.9	70.6	46.8	3.0	23.9	5.9	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.2	52.9	70.6	46.8	3.0	23.9	5.9	10.9
Queue Length 50th (ft)	93	122	49	69	5	~823	1	279
Queue Length 95th (ft)	#208	#234	97	129	m3	m#1017	m4	m144
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120				75		75	
Base Capacity (vph)	136	298	136	273	291	1041	127	1021
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.73	0.48	0.44	0.34	0.96	0.09	0.70

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.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	141	33	43	1075	11	774

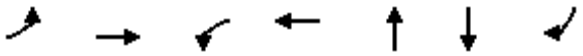
Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	357	306	153	51

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	293	152	316	174	272

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	278	1422	11	1055	33	134	378
v/c Ratio	0.70	0.61	0.08	0.73	0.10	0.45	0.83
Control Delay	45.2	11.2	47.2	25.1	22.7	36.6	33.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	11.2	47.2	25.1	22.7	36.6	33.8
Queue Length 50th (ft)	134	170	6	244	10	66	107
Queue Length 95th (ft)	#350	476	27	396	37	144	258
Internal Link Dist (ft)		435		868	160	856	
Turn Bay Length (ft)	375		100				15
Base Capacity (vph)	467	2606	472	2442	645	560	698
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	0.60	0.55	0.02	0.43	0.05	0.24	0.54

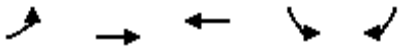
Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	250	1098	120	76	771	76	87	43	43	98	239
v/c Ratio	0.72	0.74	0.14	0.15	0.62	0.36	0.20	0.09	0.32	0.39	0.57
Control Delay	49.2	31.4	4.5	20.1	29.5	46.2	33.7	0.4	52.7	43.7	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	31.4	4.5	20.1	29.5	46.2	33.7	0.4	52.7	43.7	11.1
Queue Length 50th (ft)	123	259	6	10	177	40	43	0	23	50	0
Queue Length 95th (ft)	270	#603	41	24	346	105	96	0	70	109	64
Internal Link Dist (ft)		868			704		262			515	
Turn Bay Length (ft)	150		150	130		190		190	90		250
Base Capacity (vph)	509	1474	995	1382	2027	421	502	524	407	465	566
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	0.49	0.74	0.12	0.05	0.38	0.18	0.17	0.08	0.11	0.21	0.42

Intersection Summary

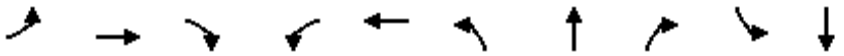
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	242	905	843	211	189
v/c Ratio	0.81	0.40	0.56	0.46	0.35
Control Delay	69.1	11.0	17.7	37.4	6.3
Queue Delay	0.0	0.0	0.3	0.0	0.0
Total Delay	69.1	11.0	18.0	37.4	6.3
Queue Length 50th (ft)	180	165	117	131	0
Queue Length 95th (ft)	#296	204	163	208	54
Internal Link Dist (ft)		704	310	1638	
Turn Bay Length (ft)	150			60	
Base Capacity (vph)	321	2249	1517	459	534
Starvation Cap Reductn	0	0	203	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.75	0.40	0.64	0.46	0.35

Intersection Summary

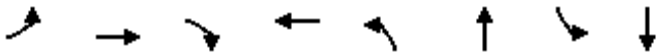
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	370	554	228	283	359	185	804	630	54	782
v/c Ratio	0.93	0.76	0.45	0.66	0.47	0.63	0.90	0.65	0.50	0.55
Control Delay	76.6	42.4	4.0	57.1	41.5	62.8	44.5	11.4	71.9	19.7
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.6	42.8	4.1	57.1	41.5	62.8	44.5	11.4	71.9	19.7
Queue Length 50th (ft)	117	179	4	109	123	72	592	110	40	227
Queue Length 95th (ft)	#232	242	16	150	163	111	#920	267	m63	253
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	788	529	595	987	311	897	970	116	1416
Starvation Cap Reductn	0	36	10	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	49	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.74	0.44	0.48	0.38	0.59	0.90	0.65	0.47	0.55

Intersection Summary

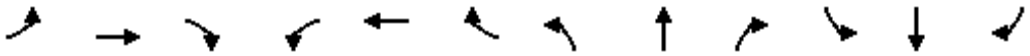
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	67	13	107	39	93	800	13	1214
v/c Ratio	0.28	0.04	0.29	0.13	0.35	0.60	0.04	0.49
Control Delay	33.7	28.9	7.6	22.7	10.5	9.0	4.2	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.1
Total Delay	33.7	28.9	7.6	22.7	10.5	9.8	4.2	4.7
Queue Length 50th (ft)	33	6	0	12	15	164	1	85
Queue Length 95th (ft)	57	18	21	30	45	277	m6	98
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	354	483	487	437	282	1434	392	2660
Starvation Cap Reductn	0	0	0	0	0	316	0	434
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.03	0.22	0.09	0.33	0.72	0.03	0.55

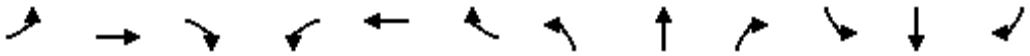
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		30			27			25			41	
Link Distance (ft)		299			3261			3025			536	
Travel Time (s)		6.8			82.3			82.5			8.9	
Lane Group Flow (vph)	0	24	0	0	106	259	0	494	0	0	776	0

Intersection Summary	
Area Type:	Other

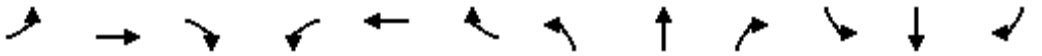


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		50	50		135	300		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			25			35	
Link Distance (ft)		297			1970			232			517	
Travel Time (s)		5.8			44.8			6.3			10.1	
Lane Group Flow (vph)	0	39	0	0	234	532	26	571	130	247	1091	0
v/c Ratio		0.11			0.82	0.63	0.14	0.38	0.18	0.66	0.58	
Control Delay		21.7			58.0	15.2	47.9	20.7	5.3	44.5	16.4	
Queue Delay		0.0			0.0	0.0	0.0	1.1	0.6	0.0	0.0	
Total Delay		21.7			58.0	15.2	47.9	21.8	5.9	44.5	16.4	
Queue Length 50th (ft)		12			133	147	15	140	10	134	211	
Queue Length 95th (ft)		31			180	181	m33	167	26	190	241	
Internal Link Dist (ft)		217			1890			152			437	
Turn Bay Length (ft)						50	50		135	300		
Base Capacity (vph)		378			304	835	186	1522	718	373	1890	
Starvation Cap Reductn		0			0	0	0	683	337	0	0	
Spillback Cap Reductn		0			0	0	0	0	0	0	0	
Storage Cap Reductn		0			0	0	0	0	0	0	0	
Reduced v/c Ratio		0.10			0.77	0.64	0.14	0.68	0.34	0.66	0.58	

Intersection Summary

Area Type: Other

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		160	0		0	200		0	180		250
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			15			35			40	
Link Distance (ft)		1970			406			1401			469	
Travel Time (s)		44.8			18.5			27.3			8.0	
Lane Group Flow (vph)	179	141	0	244	77	0	205	936	0	13	1397	538
v/c Ratio	0.66	0.64		1.01	0.96		0.73	0.42		0.18	0.83	0.57
Control Delay	58.0	30.0		112.6	144.0		68.0	6.2		61.2	33.0	8.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	58.0	30.0		112.6	144.0		68.0	6.2		61.2	33.0	8.1
Queue Length 50th (ft)	130	31		189	56		122	46		10	478	53
Queue Length 95th (ft)	177	65		#408	#128		155	52		27	507	93
Internal Link Dist (ft)		1890			326			1321			389	
Turn Bay Length (ft)	200						200			180		250
Base Capacity (vph)	273	334		241	80		394	2240		73	1687	939
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.66	0.42		1.01	0.96		0.52	0.42		0.18	0.83	0.57

Intersection Summary

Area Type: Other

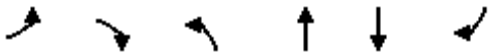
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	200		0
Storage Lanes	0		1	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			25			30			25	
Link Distance (ft)		261			1312			139			538	
Travel Time (s)		5.1			35.8			3.2			14.7	
Lane Group Flow (vph)	0	0	11	0	312	247	0	462	0	258	688	0
v/c Ratio			0.02		0.95	0.58		0.68		0.70	0.90	
Control Delay			0.0		85.5	11.5		5.8		30.3	41.8	
Queue Delay			0.0		36.1	0.0		0.5		0.0	5.0	
Total Delay			0.0		121.6	11.5		6.3		30.3	46.8	
Queue Length 50th (ft)			0		222	0		7		107	421	
Queue Length 95th (ft)			0		#443	79		34		203	#724	
Internal Link Dist (ft)		181			1232			59			458	
Turn Bay Length (ft)										200		
Base Capacity (vph)			662		327	425		678		423	842	
Starvation Cap Reductn			0		0	0		40		0	102	
Spillback Cap Reductn			63		39	0		0		0	23	
Storage Cap Reductn			0		0	0		0		0	0	
Reduced v/c Ratio			0.02		1.08	0.58		0.72		0.61	0.93	

Intersection Summary

Area Type: Other

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



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	0	0	0			0
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	25			25	25	
Link Distance (ft)	206			433	139	
Travel Time (s)	5.6			11.8	3.8	
Lane Group Flow (vph)	187	0	0	281	938	0
v/c Ratio	0.72			0.69	0.95	
Control Delay	59.0			47.9	18.7	
Queue Delay	0.0			0.0	1.7	
Total Delay	59.0			47.9	20.4	
Queue Length 50th (ft)	125			180	59	
Queue Length 95th (ft)	209			#329	m#395	
Internal Link Dist (ft)	126			353	59	
Turn Bay Length (ft)						
Base Capacity (vph)	346			406	984	
Starvation Cap Reductn	0			0	14	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.54			0.69	0.97	

Intersection Summary	
Area Type:	Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	225		0	130		0	140		160	130		225
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			35	
Link Distance (ft)		1312			465			320			1401	
Travel Time (s)		35.8			12.7			8.7			27.3	
Lane Group Flow (vph)	54	323	0	129	376	0	86	914	0	75	849	237
v/c Ratio	0.22	0.75		0.61	0.78		0.68	0.63		0.54	0.59	0.32
Control Delay	44.6	47.2		59.3	51.7		75.9	38.6		44.9	30.1	12.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	44.6	47.2		59.3	51.7		75.9	38.6		44.9	30.1	12.4
Queue Length 50th (ft)	35	187		96	267		68	293		52	324	78
Queue Length 95th (ft)	73	295		152	365		m108	#472		m61	m402	m119
Internal Link Dist (ft)		1232			385			240			1321	
Turn Bay Length (ft)	225			130			140			130		225
Base Capacity (vph)	379	513		331	534		131	1447		160	1432	737
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.14	0.63		0.39	0.70		0.66	0.63		0.47	0.59	0.32

Intersection Summary

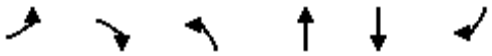
Area Type: Other

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	13	13	13	13	13	13	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		100	100		100	0		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		3025			410			762			220	
Travel Time (s)		82.5			11.2			20.8			6.0	
Lane Group Flow (vph)	55	363	0	22	187	0	0	275	0	0	561	0

Intersection Summary	
Area Type:	Other

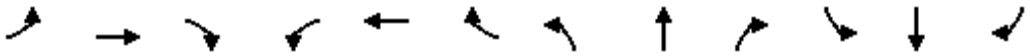


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	100	0	55			0
Storage Lanes	1	1	1			0
Taper Length (ft)	25		25			
Right Turn on Red		Yes				Yes
Link Speed (mph)	25			25	30	
Link Distance (ft)	410			795	433	
Travel Time (s)	11.2			21.7	9.8	
Lane Group Flow (vph)	88	154	99	209	550	0
v/c Ratio	0.31	0.43	0.36	0.19	0.69	
Control Delay	29.8	9.9	31.6	3.7	18.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	29.8	9.9	31.6	3.7	18.8	
Queue Length 50th (ft)	28	0	31	18	144	
Queue Length 95th (ft)	89	52	98	48	340	
Internal Link Dist (ft)	330			715	353	
Turn Bay Length (ft)	100		55			
Base Capacity (vph)	685	657	431	1553	1390	
Starvation Cap Reductn	0	0	0	0	41	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.13	0.23	0.23	0.13	0.41	

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	13	13	13	13	13	13	13	13	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		428			404			917			762	
Travel Time (s)		11.7			11.0			25.0			20.8	
Lane Group Flow (vph)	0	182	0	0	228	0	0	261	0	0	478	0

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	100		0	90		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		404			692			1718			795	
Travel Time (s)		11.0			18.9			46.9			21.7	
Lane Group Flow (vph)	23	184	0	46	195	0	23	287	0	92	460	0
v/c Ratio	0.09	0.40		0.16	0.43		0.07	0.38		0.21	0.61	
Control Delay	13.4	14.9		14.0	15.1		7.0	8.4		8.2	12.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.4	14.9		14.0	15.1		7.0	8.4		8.2	12.0	
Queue Length 50th (ft)	3	28		7	29		3	42		13	81	
Queue Length 95th (ft)	19	90		32	94		11	81		33	148	
Internal Link Dist (ft)		324			612			1638			715	
Turn Bay Length (ft)	85			100			90			90		
Base Capacity (vph)	697	1179		753	1152		521	1267		720	1263	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.16		0.06	0.17		0.04	0.23		0.13	0.36	

Intersection Summary

Area Type: Other

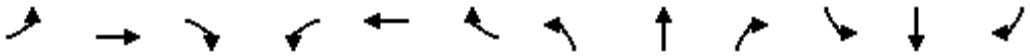
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	120		0	0		0	75		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			30			25			25	
Link Distance (ft)		692			552			416			1356	
Travel Time (s)		18.9			12.5			11.3			37.0	
Lane Group Flow (vph)	31	174	0	71	133	0	61	765	0	20	938	0
v/c Ratio	0.31	0.76		0.59	0.51		0.32	0.70		0.07	0.87	
Control Delay	60.8	57.8		73.0	48.3		4.4	6.8		19.8	44.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	60.8	57.8		73.0	48.3		4.4	6.8		19.8	44.0	
Queue Length 50th (ft)	23	100		53	86		2	67		8	652	
Queue Length 95th (ft)	55	175		104	152		m3	m747		m20	#928	
Internal Link Dist (ft)		612			472			336			1276	
Turn Bay Length (ft)	120						75			75		
Base Capacity (vph)	136	281		136	290		191	1086		291	1081	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.23	0.62		0.52	0.46		0.32	0.70		0.07	0.87	

Intersection Summary

Area Type: Other

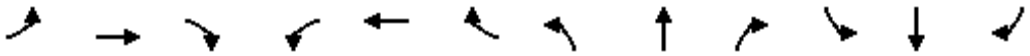
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	50		0	50		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		278			833			954			416	
Travel Time (s)		7.6			22.7			26.0			11.3	
Lane Group Flow (vph)	0	61	0	0	52	0	31	805	0	10	1020	0

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		25			25			35			35	
Link Distance (ft)		595			625			187			215	
Travel Time (s)		16.2			17.0			3.6			4.2	
Lane Group Flow (vph)	0	476	0	0	489	0	0	76	0	0	76	0

Intersection Summary	
Area Type:	Other

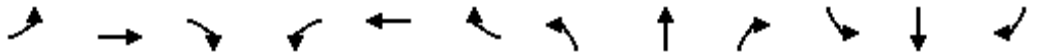
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	150		150	150		150	150		30
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		625			188			288			917	
Travel Time (s)		14.2			4.3			6.5			20.8	
Lane Group Flow (vph)	0	293	0	0	370	0	0	163	0	0	206	293

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	375		0	100		0	0		0	0		15
Storage Lanes	1		0	1		0	0		0	0		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			35			35			30	
Link Distance (ft)		515			948			221			936	
Travel Time (s)		7.8			18.5			4.3			21.3	
Lane Group Flow (vph)	172	914	0	11	1280	0	0	55	0	0	97	280
v/c Ratio	0.56	0.37		0.07	0.74			0.20			0.43	0.70
Control Delay	40.2	5.8		43.1	19.0			29.5			39.2	22.7
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Total Delay	40.2	5.8		43.1	19.0			29.5			39.2	22.7
Queue Length 50th (ft)	70	57		5	218			18			40	38
Queue Length 95th (ft)	183	202		26	443			63			111	148
Internal Link Dist (ft)		435			868			141			856	
Turn Bay Length (ft)	375			100								15
Base Capacity (vph)	533	2857		533	2682			763			652	807
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	0.32	0.32		0.02	0.48			0.07			0.15	0.35

Intersection Summary

Area Type: Other

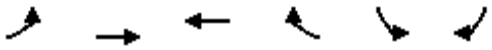


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		150	130		0	190		190	90		250
Storage Lanes	1		1	2		0	1		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		948			784			342			595	
Travel Time (s)		18.5			15.3			9.3			16.2	
Lane Group Flow (vph)	133	747	241	422	1097	0	217	193	277	60	217	265
v/c Ratio	0.65	0.79	0.33	0.62	0.83		0.80	0.36	0.43	0.45	0.62	0.54
Control Delay	65.7	46.7	7.8	26.3	38.7		70.9	37.1	6.6	66.5	52.0	9.7
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	65.7	46.7	7.8	26.3	38.7		70.9	37.1	6.6	66.5	52.0	9.7
Queue Length 50th (ft)	104	294	39	92	417		168	117	0	47	153	0
Queue Length 95th (ft)	162	353	70	111	485		#276	193	48	89	233	51
Internal Link Dist (ft)		868			704			262			515	
Turn Bay Length (ft)	150		150	130			190		190	90		250
Base Capacity (vph)	409	1185	767	1111	1596		327	539	643	327	416	531
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	0.33	0.63	0.31	0.38	0.69		0.66	0.36	0.43	0.18	0.52	0.50

Intersection Summary

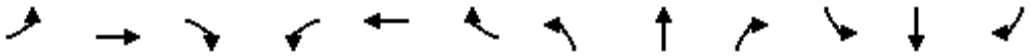
Area Type: Other

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	150			0	60	0
Storage Lanes	1			0	1	0
Taper Length (ft)	25				25	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		784	390		1718	
Travel Time (s)		15.3	7.6		46.9	
Lane Group Flow (vph)	198	849	1546	0	221	256
v/c Ratio	0.72	0.38	0.99		0.48	0.44
Control Delay	63.1	10.8	37.4		38.0	6.2
Queue Delay	0.0	0.0	5.2		0.0	0.0
Total Delay	63.1	10.8	42.6		38.0	6.2
Queue Length 50th (ft)	146	151	~305		139	0
Queue Length 95th (ft)	213	177	m#398		205	50
Internal Link Dist (ft)		704	310		1638	
Turn Bay Length (ft)	150				60	
Base Capacity (vph)	321	2249	1569		459	588
Starvation Cap Reductn	0	0	36		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.62	0.38	1.01		0.48	0.44

Intersection Summary	
Area Type:	Other
~	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.
m	Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		250	175		175	290		0	170		195
Storage Lanes	2		1	2		1	2		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			25	
Link Distance (ft)		390			300			690			310	
Travel Time (s)		7.6			5.8			13.4			8.5	
Lane Group Flow (vph)	258	444	326	344	855	0	427	663	144	33	1033	0
v/c Ratio	0.70	0.68	0.75	0.51	0.89		1.37	0.79	0.19	0.32	0.83	
Control Delay	51.5	42.2	22.7	46.5	53.9		227.7	37.9	5.1	63.4	29.4	
Queue Delay	0.0	0.0	0.2	0.0	35.9		0.0	0.0	0.0	0.0	0.9	
Total Delay	51.5	42.2	22.8	46.5	89.7		227.7	37.9	5.1	63.4	30.3	
Queue Length 50th (ft)	94	175	116	121	330		~225	473	4	24	385	
Queue Length 95th (ft)	134	224	213	177	#433		#324	#690	45	m33	433	
Internal Link Dist (ft)		310			220			610			230	
Turn Bay Length (ft)	160		250	175			290			170		
Base Capacity (vph)	396	788	489	671	988		311	841	777	116	1239	
Starvation Cap Reductn	0	0	9	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	188		0	0	0	0	56	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.65	0.56	0.68	0.51	1.07		1.37	0.79	0.19	0.28	0.87	

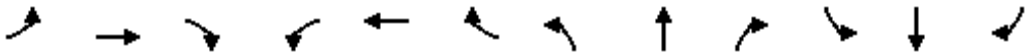
Intersection Summary

Area Type: Other

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	160		150	0		0	100		0	50		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		3261			264			538			232	
Travel Time (s)		88.9			7.2			14.7			6.3	
Lane Group Flow (vph)	187	13	160	0	79	0	187	587	0	13	1333	0
v/c Ratio	0.63	0.03	0.35		0.20		0.93	0.46		0.03	0.56	
Control Delay	42.6	27.8	9.3		26.7		68.0	8.5		3.7	4.7	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.7		0.0	0.2	
Total Delay	42.6	27.8	9.3		26.7		68.0	9.2		3.7	4.8	
Queue Length 50th (ft)	101	6	9		33		82	132		2	92	
Queue Length 95th (ft)	137	18	36		58		#191	176		m3	86	
Internal Link Dist (ft)		3181			184			458			152	
Turn Bay Length (ft)	160		150				100			50		
Base Capacity (vph)	319	445	471		426		201	1274		476	2360	
Starvation Cap Reductn	0	0	0		0		0	371		0	264	
Spillback Cap Reductn	0	0	0		0		0	62		0	0	
Storage Cap Reductn	0	0	0		0		0	0		0	0	
Reduced v/c Ratio	0.59	0.03	0.34		0.19		0.93	0.65		0.03	0.64	

Intersection Summary

Area Type: Other

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	17	215	532	17	529	95	213	1091
v/c Ratio	0.05	0.75	0.60	0.08	0.37	0.14	0.53	0.60
Control Delay	22.9	50.1	13.2	49.7	19.6	4.4	38.3	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	22.9	50.1	13.2	49.7	20.1	4.4	38.3	16.6
Queue Length 50th (ft)	6	119	134	9	124	6	113	211
Queue Length 95th (ft)	19	164	168	m28	151	18	164	241
Internal Link Dist (ft)	217	1890			152			437
Turn Bay Length (ft)			50	50		135	300	
Base Capacity (vph)	403	338	889	205	1675	768	411	2080
Starvation Cap Reductn	0	0	0	0	693	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.64	0.60	0.08	0.54	0.12	0.52	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	89	90	82	156	365	1267	531
v/c Ratio	0.49	0.50	0.29	0.70	0.13	0.56	0.46
Control Delay	56.7	56.9	4.2	54.2	10.9	14.4	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	56.9	4.2	54.2	10.9	14.4	3.0
Queue Length 50th (ft)	68	69	0	121	86	270	10
Queue Length 95th (ft)	101	102	0	m167	m111	331	29
Internal Link Dist (ft)		1890			1321	389	
Turn Bay Length (ft)	200		160	200			250
Base Capacity (vph)	271	271	356	277	2823	2259	1145
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	0.33	0.33	0.23	0.56	0.13	0.56	0.46

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	274	239	371	252	672
v/c Ratio	0.85	0.57	0.52	0.60	0.84
Control Delay	67.6	11.5	3.4	23.5	34.8
Queue Delay	4.0	0.0	0.2	0.0	2.5
Total Delay	71.6	11.5	3.6	23.5	37.3
Queue Length 50th (ft)	184	0	5	100	380
Queue Length 95th (ft)	#374	78	7	179	#683
Internal Link Dist (ft)	1232		59		458
Turn Bay Length (ft)				200	
Base Capacity (vph)	335	423	707	473	881
Starvation Cap Reductn	0	0	47	0	110
Spillback Cap Reductn	24	0	0	0	23
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.88	0.57	0.56	0.53	0.87

Intersection Summary

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

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	165	210	913
v/c Ratio	0.68	0.50	0.92
Control Delay	56.3	39.9	15.5
Queue Delay	0.0	0.0	1.3
Total Delay	56.3	39.9	16.7
Queue Length 50th (ft)	107	123	26
Queue Length 95th (ft)	185	225	#400
Internal Link Dist (ft)	126	353	59
Turn Bay Length (ft)			
Base Capacity (vph)	355	418	990
Starvation Cap Reductn	0	0	18
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.46	0.50	0.94

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	28	282	125	343	62	469	60	754	218
v/c Ratio	0.09	0.86	0.42	0.94	0.52	0.31	0.50	0.50	0.28
Control Delay	40.2	66.7	47.2	81.6	67.6	24.0	81.2	14.4	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	66.7	47.2	81.6	67.6	24.0	81.2	14.4	2.9
Queue Length 50th (ft)	18	190	85	258	49	125	37	235	44
Queue Length 95th (ft)	44	#322	147	#440	97	175	m81	164	16
Internal Link Dist (ft)		1232		385		240		1321	
Turn Bay Length (ft)	225		130		140		130		225
Base Capacity (vph)	350	359	298	367	131	1496	131	1523	768
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.79	0.42	0.93	0.47	0.31	0.46	0.50	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	40	261	19	106	207	442

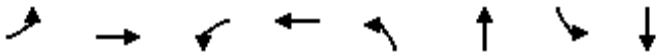
Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	86	103	40	140	536

Intersection Summary

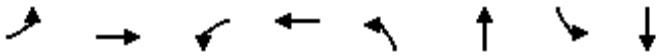
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	91	177	175	412

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	10	122	44	169	8	178	90	445
v/c Ratio	0.04	0.27	0.15	0.38	0.02	0.23	0.19	0.58
Control Delay	11.8	12.1	12.6	13.3	6.4	7.1	7.9	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.8	12.1	12.6	13.3	6.4	7.1	7.9	11.6
Queue Length 50th (ft)	1	16	6	23	1	23	13	77
Queue Length 95th (ft)	10	56	28	75	5	47	30	136
Internal Link Dist (ft)		324		612		1638		715
Turn Bay Length (ft)	85		100		90		90	
Base Capacity (vph)	693	1153	776	1131	546	1276	794	1288
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.11	0.06	0.15	0.01	0.14	0.11	0.35

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	38	144	50	119	10	428	13	908
v/c Ratio	0.37	0.69	0.45	0.51	0.04	0.39	0.02	0.82
Control Delay	62.5	56.1	65.6	51.2	1.8	3.4	3.2	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.5	56.1	65.6	51.2	1.8	3.4	3.2	19.7
Queue Length 50th (ft)	29	86	38	82	0	12	1	361
Queue Length 95th (ft)	64	150	79	139	m1	20	m3	#923
Internal Link Dist (ft)		612		472		336		1276
Turn Bay Length (ft)	120		50		75		75	
Base Capacity (vph)	136	275	136	280	224	1104	522	1105
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.52	0.37	0.42	0.04	0.39	0.02	0.82

Intersection Summary

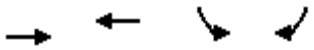
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	33	25	429	5	966

Intersection Summary

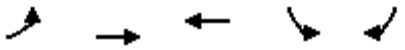
Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	214	347	11	55

Intersection Summary



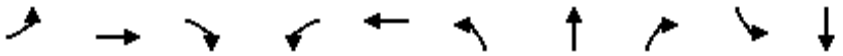
Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	168	70	40	321

Intersection Summary



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	125	595	946	77	243
v/c Ratio	0.41	0.26	0.59	0.27	0.52
Control Delay	28.0	4.1	14.0	24.6	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	4.1	14.0	24.6	8.4
Queue Length 50th (ft)	33	23	102	20	0
Queue Length 95th (ft)	112	82	262	68	55
Internal Link Dist (ft)		435	868	856	
Turn Bay Length (ft)	375				15
Base Capacity (vph)	737	3345	2804	905	940
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	0.17	0.18	0.34	0.09	0.26

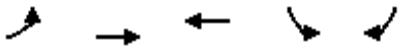
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	48	407	213	414	934	163	163	249	43	347
v/c Ratio	0.37	0.63	0.36	0.59	0.70	0.67	0.24	0.34	0.34	0.77
Control Delay	55.6	42.6	7.8	23.5	30.3	56.3	25.9	5.1	55.2	45.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.6	42.6	7.8	23.5	30.3	56.3	25.9	5.1	55.2	45.8
Queue Length 50th (ft)	30	127	26	79	272	100	74	0	27	187
Queue Length 95th (ft)	69	184	54	111	352	172	138	42	64	#339
Internal Link Dist (ft)		868			704		262			515
Turn Bay Length (ft)	150		150	130		190		190	90	
Base Capacity (vph)	463	1342	690	1259	1852	370	682	723	370	453
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	0.10	0.30	0.31	0.33	0.50	0.44	0.24	0.34	0.12	0.77

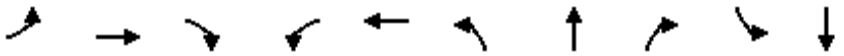
Intersection Summary

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



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	97	573	1185	216	187

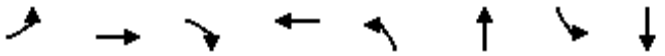
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	182	237	326	343	737	131	373	66	29	1030
v/c Ratio	0.56	0.42	0.81	1.01	0.82	0.48	0.42	0.08	0.28	0.75
Control Delay	58.3	46.5	36.8	99.2	49.7	58.7	24.2	0.2	68.2	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.3	46.5	36.8	99.2	49.7	58.7	24.2	0.2	68.2	21.9
Queue Length 50th (ft)	70	87	109	266	278	51	199	0	23	257
Queue Length 95th (ft)	105	118	202	#493	345	81	304	0	m30	424
Internal Link Dist (ft)		310			220		610			230
Turn Bay Length (ft)	160		250	175		290			170	
Base Capacity (vph)	396	788	489	340	991	311	898	821	116	1368
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	0.46	0.30	0.67	1.01	0.74	0.42	0.42	0.08	0.25	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	148	4	152	60	148	515	3	1321
v/c Ratio	0.46	0.01	0.34	0.15	0.73	0.40	0.01	0.56
Control Delay	35.7	27.3	7.7	27.5	35.7	7.7	4.0	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1
Total Delay	35.7	27.3	7.7	27.5	35.7	8.1	4.0	4.6
Queue Length 50th (ft)	76	2	2	26	46	111	0	85
Queue Length 95th (ft)	109	8	28	48	#136	151	m1	80
Internal Link Dist (ft)		3181		184		458		152
Turn Bay Length (ft)	160		150		100		50	
Base Capacity (vph)	378	486	507	466	224	1403	584	2565
Starvation Cap Reductn	0	0	0	0	0	404	0	261
Spillback Cap Reductn	0	0	0	0	0	57	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.01	0.30	0.13	0.66	0.52	0.01	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

`	Intersection	Movement	Storage Length (ft)	Existing AM		Existing PM		Existing PP AM		Existing PP PM		Near Term AM		Near Term PM		Near Term PP AM		Near Term PP PM		Cumulative AM		Cumulative PM		Cumulative PP AM	
				Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)	Average Queue (ft)	95th Percentile Queue (ft)
2	Main St/Santa Rita Rd & Stanley Blvd	EBT	225	25	25	25	50	25	50	25	50	25	50	25	50	25	50	25	75	25	50	25	50	25	50
		WBT	1900	125	175	75	100	125	175	75	125	175	225	75	125	150	200	75	125	175	225	100	150	150	200
		WBR	75	150	**175**	25	50	150	**200**	25	50	150	**175**	25	50	150	**200**	25	50	150	**200**	25	50	150	**200**
		NBL	75	25	50	25	25	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
		NBT	175	125	175	100	150	150	175	100	150	150	175	100	150	150	175	100	150	150	175	100	125	150	175
		NBR	150	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	50	25	25	25	50
		SBL	325	125	175	100	175	125	175	100	175	150	200	100	175	150	200	100	175	150	200	100	175	150	200
		SBT	450	225	250	100	175	225	250	125	225	225	250	125	200	225	250	125	225	225	250	125	200	225	250
3	First St & Stanley Blvd	EBL	225	75	125	100	150	100	125	100	175	150	200	150	225	150	200	150	225	150	200	150	225	150	200
		EBT	1900	75	125	75	150	100	125	100	175	50	75	100	175	50	75	100	175	50	75	100	175	50	75
		EBR	175	25	25	25	50	25	25	25	50														
		WBL	350									200	**425**	50	100	200	**425**	50	100	200	**425**	50	100	200	**425**
		WBT	350					475	**550**	175	300	75	150	75	125	75	150	75	125	75	150	75	125	75	150
		NBL	225	125	175	100	175	150	175	125	175	175	200	150	225	175	200	150	225	125	175	150	225	125	175
		NBT	1325	100	125	175	375	125	150	250	425	150	175	300	475	150	200	300	475	50	75	300	475	50	75
		SBL	400					25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
		SBT	400	275	350	75	125	400	**450**	100	150	450	**475**	125	200	475	**500**	125	200	475	**500**	200	300	500	**525**
4	Main St & Ray St	EBR	200			25	25			25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
		WBT	1250	200	375	75	150	225	425	100	175	225	425	100	175	225	450	100	175	225	450	125	200	225	450
		WBR	1250	25	100	25	75	25	100	25	75	25	100	25	75	25	100	25	75	25	100	25	75	25	100
		NBT	75	25	25	25	25	25	50	25	25	25	25	25	25	25	25	25	25	25	50	25	25	25	50
		SBL	225	125	200	100	200	125	200	125	200	125	200	125	200	125	200	125	200	125	200	125	200	125	225
		SBT	475	400	**700**	250	425	425	**725**	350	**575**	425	**725**	300	**500**	425	**725**	375	**625**	425	**725**	325	**525**	425	**725**
5	Main St & St John St	EBL	150	125	**200**	225	**450**	125	**200**	250	**500**	125	**200**	225	**475**	150	**225**	250	**500**	150	**225**	250	**500**	150	**225**
		NBT	375	125	250	225	**425**	175	275	325	**575**	175	275	250	**500**	175	275	375	**650**	175	325	300	**550**	200	350
		SBT	75	50	**425**	50	50	75	**425**	50	**100**	75	**425**	50	50	75	**425**	50	**250**	75	**425**	50	75	75	**400**
6	First St & Ray St/Vineyard Ave	EBL	250	25	50	50	100	25	50	50	100	25	50	75	125	25	50	75	125	50	75	100	150	50	75
		EBT	1250	200	325	200	350	225	375	225	350	225	400	225	400	225	400	225	400	200	300	225	400	200	300
		WBL	150	100	150	100	150	100	**175**	100	150	100	**175**	100	150	100	**175**	100	150	100	**175**	100	150	100	**175**
		WBT	400	275	**450**	100	175	300	**500**	125	175	300	**500**	125	175	325	**500**	125	175	275	375	125	175	275	375
		NBL	150	50	100	50	50	75	100	50	50	75	150	75	75	75	150	75	75	75	125	75	75	75	125
		NBT	250	150	200	275	**450**	150	200	300	**475**	175	250	350	**450**	200	250	350	**475**	300	**475**	350	**450**	300	**475**
		SBL	150	50	100	25	75	50	75	50	75	75	100	50	100	75	100	50	100	75	75	50	100	75	75
		SBT	1325	250	175	125	200	225	150	75	100	100	150	75	100	125	150	75	100	325	400	100	125	325	425
10	Main St & Rose Ave/Neal St	EBL	100	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
		EBT	325	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75	50	100	25	75	50	100
		WBL	125	25	50	25	25	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
		WBT	625	25	100	25	75	50	100	25	100	50	100	25	75	50	100	25	100	50	100	25	100	50	100
		NBL	100	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
		NBT	1650	25	50	50	125	50	75	50	125	50	75	50	125	50	75	50	125	50	100	50	125	50	100
		SBL	100	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50	25	50
		SBT	725	100	150	25	100	100	150	50	100	100	150	50	100	100	150	50	100	100	150	50	125	100	150
11	First St & Neal St	EBL	125	50	75	100	**225**	50	75	100	**225**	50	75	100	**225**	50	75	100	**225**	50	75	100	**225**	25	75
		EBT	625	100	175	100	150	100	175	125	200	100	175	100	175	100	175	125	225	100	175	125	200	125	200
		WBL	75	50	**100**	50	75	50	**100**	50	**100**	75	**125**	50	**100**	75	**125**	50	**100**	75	**125**	50	**100**	75	**125**
		WBT	475	100	150	75	125	100	150	75	150	100	175	75	150	100	175	75	150	100	175	75	150	100	175
		NBL	100	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
		NBT	350	25	25	425	**950**	25	50	450	**925**	25	50	550	**1,075**	25	50	825	**1075**	75	**775**	575	**1075**	75	**750**
		SBL	100	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
		SBT	1300	375	925	150	250	375	975	150	225	425	950	250	175	450	950	225	325	650	925	300	150	675	950
15	Bernal Ave & Pleasanton Ave	EBL	400	50	125	50	175	50	150	75	200	50	150	100	225	75	150	100	275	75	175	125	325	75	200
		EBT	450	25	100	75	200	50	100	75	250	50	100	75	225	50	125	75	250	75	200	150	400	75	225
		WBL	875																	25	50	25	50	25	50
		WBT	875	125	275	75	225	150	350	100	250	175	375	125	250	200	425	125	275	200	400	225	375	225	450
		NBT	25																	25	**75**	25	**50**	25	**75**
		SBL	875	25	75	25	75	50	100	25	75	50	100	25	75	50	100	25	75						
		SBT	25																	50	**125**	75	**150**	50	**125**
16	Case Ave/Old Bernal Ave & Bernal Ave	EBL	175	50	75	100	175	100	150	150	**250**	50	100	100	**200**	100	150	150	**275**	50	100	100	**200**	125	175
		EBT	875	150	200	300	500	175	225	275	425	225	300	325	550	200	250	300	525	300	350	250	575	300	375
		EBR	175	50	75	25	50	50	75	25	50	50	75	25	50	50	75	25	50	50	75	25	50	50	75
		WBL	150	100	125	25	25	100	125	25	25	100	125	25	25	100	125	25	25	100	125	25	25	100	125
		WBT	725	275	375	150	250	350	450	150	250	350	400	175	300	425	500	175	275	375	425	175	375	425	500
		NBL	200	125	175	50	100	125	200	50	100	150	**275**	50	125	150	**250**	50	125	175	**300**	50	125	175	**300**
		NBT	275	75	150	50	75	100	175	50	100	100	175	50	100	125	200	50	100	125	175	50	100	125	200
		NBR	200	25	50	25	25	25	50	25	25	25	50	25	25	25	50	25	25	25	50	25	25	25	50
		SBL	100	50	75	25	75	50	75	50	75	50	100	50	75	50	100	50	75	50	100	25	75	50	100
		SBT	525	200	350	125	225	275	500	150	275	250	450	150	275	300	525	175	300	175	250	50	100	175	250
18	Sunol Blvd/First St & Bernal Ave	EBL	175	75	125	150	**250**	100	125	150	**250**	100	150	150	**250**	100	150	150	**250**	125	150	125	**250**	100	150
		EBT	325	100	125	200	250	100	125	225	275	100	150	200	250	125	150	225	275	125	150	150	200	200	225
		EBR	275	125	225	25	50	125	225	25	50	125	225	25	50	125	225	25	50	125	225	25	25	125	225
		WBL	200	275	**500**	75	125	275	**500**	75	125	125	200	50	75	125	200	50	75	125	200	125	150	125	200
		WBT	225	300	**350**	100	125	300	**375**	100	125	325	**400**	125	150	325	**425**	125	150	325	**400**	125	150	350	**450**
		NBL	300	75	100	75	125	75	100	75	125	100	125	75	125	100	150	75	125	200	300	75	125	250	**325**
		NBT	625	200	325	425	**725**	225	325	450	**750**	325	450	525	**850**	325	450	525	**825**	500	**725**	600	**950**	475	**700**
		NBR	625	25	25	50	150	25	25	50	150	25	25	100	225	25	25	100	225	25	50	125	275	25	50
		SBL	175	25	50	50	75	50	50	50	75	50	50	50	75	50	50	50	75	25	50	50	75	25	50
		SBT	250	275	**425**	150	125	325	**450**	175	225	325	**450**	150	200	350	**450**	175	200	400	**450**	200	250	400	**450**
79	Main St & Del Valle Pkwy	EBL	175	100	125	75	125	100	125	75	125	100	125	75	125	100	125	75	125	125	150	50	75	125	150
		EBT	3200	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
		EBR	175	25	50	25	25	25	50	25	25	25	50	25	25	25	50	25	25	25	50	25	25	25	50
		WBT	200	50	50	25	25	50	75	25	50	50	75	25	50	50	75	25	50	50	75	25	50	50	75
		NBL	125	50	**150**	25	50	75	**200**	25	50	75	**175**	25	50	75	**175**	25	50	75	**175**	25	50	100	**200**
		NBT	475	125	175	125	225	150	175	150	250	125	175	150	250	125	175	150	250	125	175	175	275	150	200
		SBL	75	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
		SBT	175	100	100	75	75	100	100	75	100	125	100	75	100	100	100	75	100	125	100	100	125	100	100

Appendix F

WATER SUPPLY ASSESSMENT

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Pleasanton Downtown Specific Plan
Water Supply Assessment

Prepared for

City of Pleasanton

October 2018

WEST YOST ASSOCIATES
Consulting Engineers

295-12-18-07

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WEST YOST ASSOCIATES
consulting engineers

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Pleasanton Downtown Specific Plan

Water Supply Assessment

Prepared for

City of Pleasanton

Project No. 295-12-18-07

Project Manager: Elizabeth Drayer	10-18-18 Date
QA/QC Review: James P. Connell	10-18-18 Date

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EXECUTIVE SUMMARY

Overview

This Water Supply Assessment (WSA) has been prepared for the City of Pleasanton (City/Pleasanton) by West Yost Associates (West Yost) in accordance with Water Code sections 10910 through 10915 in connection with the proposed Pleasanton Downtown Specific Plan Update (Proposed Project). The Proposed Project is located in the City of Pleasanton, California, and establishes revised planning and development guidelines for an area of approximately 319 acres within the existing City limits. The Proposed Project is bounded by the Alameda County Fairgrounds to the west; the Arroyo del Valle and Altamont Corridor Express tracks to the north; a generally straight-line projection of Second and Third Streets to the east; and Bernal Avenue to the south.

The City's first Downtown Specific Plan (DSP) was adopted in 1989 and was comprehensively updated in 2002. The 1989 DSP and the 2002 update helped create an active commercial core along Main Street and aimed to preserve historic residential neighborhoods. Based on feedback from the community and elected officials, the City initiated an update to the 2002 DSP in late 2016 to better respond to current market conditions, promote multi-modal mobility, and incorporate other planning efforts recently undertaken by the City.

The DSP area is envisioned as a mixed-use destination in Pleasanton that promotes economic activity while preserving the historic characteristics of the downtown area. Elements of the plan improve transportation and public facilities while promoting efficient urban design and economic growth. The land use plan identified in the Proposed Project currently consists of a mix of medium and high density residential neighborhoods and commercial areas, a redesigned civic center, a mixed-use town square district, and parks and public recreation areas.

A key component of the Proposed Project is consideration of alternative land uses for approximately 13-acres of City-owned properties that are the current site of City offices, the Pleasanton Public Library, the Police Station, and other municipal uses. Approval of the proposed relocation of the Civic Center and library is subject to a vote of the people of Pleasanton and is therefore not yet final.

Potable Water Demands

The projected potable water demands for buildout of the Proposed Project have been calculated for the Proposed Project's land uses. The calculated total potable water demand for buildout of the Proposed Project is 941 acre-feet per year (AFA) if the Civic Center is redeveloped, and 837 AFA if the Civic Center is not redeveloped. Because projected demands are greater if the Civic Center is redeveloped, for the purposes of this WSA and to be conservative, it was assumed that the Proposed Project will include the Civic Center redevelopment.

The potable water demand calculated for the Proposed Project, based on the proposed land uses, is higher than the potable water demand calculated for the Proposed Project area based on the 2002 DSP land uses (842 AFA). Because the 2002 DSP was adopted well before the 2015 Urban Water Management Plan (UWMP) was written, it was assumed that projected water demands in the 2015 UWMP accounted for the additional planned development and future water demands

associated with the land use in the 2002 DSP. Therefore, it is projected that the total potable water demands for the Proposed Project will be 99 AFA greater than those included in the 2015 UWMP.

A summary of the availability and reliability of potable water supplies to serve the projected water demands for the Proposed Project is presented below.

Potable Water Supply Availability and Reliability

The City currently has two sources of potable water supplies: purchases from the Zone 7 Water Agency (Zone 7) and groundwater pumped from City wells. Zone 7 is a State Water Project contractor that wholesales treated water to four retail water agencies including the Dublin San Ramon Services District (DSRSD), City of Pleasanton, City of Livermore, and California Water Service (Cal Water) Livermore District. The City also has a groundwater pumping quota (GPQ) of 3,500 AFA in the Livermore Valley Main Groundwater Basin (Main Basin), which the City extracts via its groundwater supply wells.

As discussed above, the projected potable water demands for the Proposed Project are greater than those accounted for in the City's 2015 UWMP for the Proposed Project area. Because of this, water demand within the City's water service area is expected to exceed the City's water supplies, as projected in the City's 2015 UWMP, by 99 AFA during Normal, Single Dry, and Multiple Dry water years between 2020 and 2040. This amount represents less than one percent (< 1%) of the available water supplies projected in the City's 2015 UWMP for each of these hydrologic conditions. Although the City's projected demands through 2040, including the demands from the Proposed Project, are expected to slightly exceed the water supplies projected in the City's 2015 UWMP, the City's available water supplies are projected to be sufficient to meet the projected water demands for the Proposed Project for the following reasons:

- Long-term water supply planning, especially for a 20-year forecast, is a highly variable process, and the projected increase in demands due to the Proposed Project of less than one percent of total City supplies is well within the margin of error for projecting future water demands and available water supplies.
- The City plans to continue to manage potable water demands within its water service area through conservation efforts and its recycled water program. However, in the event that actual future demands slightly exceed projected demands, it is anticipated that the City will have sufficient potable water supplies to meet these demands.
- Future supply projections in the 2015 UWMP assumed that the City would pump groundwater at the maximum permitted rate of 3,500 AFA and that any remaining potable water demand would be met by supplies purchased from Zone 7. Zone 7 is aggressively planning for water supply programs and projects to meet the water demands of its customers through buildout of adopted general plans. According to Zone 7's 2015 UWMP, Zone 7 does not anticipate any water supply shortage during Normal, Single Dry, and Multiple Dry water years through 2035 and, based on the 2015 UWMP analysis, shows that excess supplies are available under normal and dry conditions through 2035. The additional demand projected for the Proposed Project could likely be served by these planned excess supplies. Therefore, it is assumed that

Zone 7 has sufficient supplies to accommodate the slight increase in the City's total demands due to the Proposed Project.

Therefore, pursuant to Water Code section 10910(c)(4), and based on the technical analyses described in this WSA and the City's 2015 UWMP, the City finds that the projected potable water demands for the Proposed Project can be met by the City during Normal, Single Dry, and Multiple Dry water years for a 20-year projection.

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1.0 INTRODUCTION

The City of Pleasanton (City) is currently preparing an update to the Downtown Specific Plan (DSP/Proposed Project), which establishes revised planning and development guidelines for an area of approximately 319 acres within the existing City limits. A Project Environmental Impact Report (EIR) is being prepared by Dyett & Bhatia to support the Proposed Project. Information from this Water Supply Assessment (WSA) will be incorporated into the EIR.

The legal requirement for a WSA is discussed below.

1.1 Legal Requirement for Water Supply Assessment

California Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 were companion measures which sought to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet existing demands, anticipated demands from approved projects and tentative maps, and the demands of Proposed Projects.

SB 610 amended California Water Code sections 10910 through 10915 (inclusive) to require land use lead agencies to:

- Identify any public water purveyor that may supply water for a proposed development project
- Request a WSA from the identified water purveyor

The purpose of the WSA is to demonstrate the sufficiency of the purveyor's water supplies to satisfy the water demands of the Proposed Project, while still meeting the water purveyor's existing and planned future uses. Water Code sections 10910 through 10915 delineate the specific information that must be included in the WSA.

SB 221 amended State law (California Government Code section 66473.7) to require that approval by a city or county of certain residential subdivisions[1] requires an affirmative written verification of sufficient water supply. SB 221 was intended as a fail-safe mechanism to ensure that collaboration on finding the needed water supplies to serve a new large residential subdivision occurs before construction begins.

[1] Per Government Code Section 66473.7(a)(1) subdivision means a proposed residential development of more than 500 dwelling units.

1.2 Need for and Purpose of Water Supply Assessment

The purpose of this WSA is to support the EIR being prepared for the Proposed Project. It is not to reserve water or to function as a "will serve" letter or any other form of commitment to supply water (see Water Code section 10914). The provision of water service will continue to be undertaken in a manner consistent with applicable policies and procedures, consistent with existing law.

This WSA for the Proposed Project has been prepared by West Yost Associates (West Yost), as requested by the City, the responsible water purveyor for the Proposed Project.

1.3 Water Supply Assessment Preparation, Format and Organization

The format of this WSA is intended to follow Water Code sections 10910 through 10915 to clearly delineate compliance with the specific requirements for a WSA. This WSA includes the following sections:

- Section 1: Introduction
- Section 2: Description of Proposed Project
- Section 3: Required SB 610 Determinations
- Section 4: City of Pleasanton Water Demands
- Section 5: City of Pleasanton Water Supplies
- Section 6: Water Supply Reliability
- Section 7: Determination of Water Supply Sufficiency Based on the Requirements of SB 610
- Section 8: Water Supply Assessment and Verification Approval Process
- Section 9: References

Relevant citations of Water Code sections 10910 through 10915 are included throughout this WSA in *italics* to demonstrate compliance with the specific requirements of SB 610.

1.4 Acronyms and Abbreviations

The following acronyms and abbreviations have been used throughout this WSA.

ACE	Altamont Corridor Express
ACWD	Alameda County Water District
AF	Acre-feet
AFA	Acre-feet per year
BBID	Byron Bethany Irrigation District
Cal Water	California Water Service
CEQA	California Environmental Quality Act
CIP	Capital Improvement Program
City	City of Pleasanton

COLs	Chain of Lakes
DBPs	Disinfection byproducts
Delta	Sacramento San Joaquin Delta
DERWA	DSRSD-EBMUD Recycled Water Authority
DSP	Downtown Specific Plan
DSRSD	Dublin San Ramon Services District
du	Dwelling Unit(s)
DWR	Department of Water Resources
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
GMP	Groundwater Management Plan
gpd	Gallons per day
GPQ	Groundwater Pumping Quota
LWRP	City of Livermore Water Reclamation Plant
M&I	Municipal and industrial
Main Basin	Livermore Valley Main Groundwater Basin
mgd	Million gallons per day
Proposed Project	Pleasanton Downtown Specific Plan Update
Regional Board	Regional Water Quality Control Board
RWTF	Recycled Water Treatment Facilities
SB 221	California State Senate Bill 221
SB 610	California State Senate Bill 610
SBA	South Bay Aqueduct
Semitropic	Semitropic Water Storage District
sf	Square feet
SFPUC	San Francisco Public Utilities Commission
SMP	Salt Management Plan
SWP	State Water Project
T&O	Taste and odor
TDS	Total Dissolved Solids
TOC/DOC	Total and Dissolved Organic Carbon
UWMP	Urban Water Management Plan
West Yost	West Yost Associates
WSA	Water Supply Assessment
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant
Yuba Accord	Lower Yuba River Accord
Zone 7	Zone 7 of the Alameda County Flood Control and Water Conservation District (also referred to as the Zone 7 Water Agency)

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2.0 DESCRIPTION OF PROPOSED PROJECT

A description of the Proposed Project, including the project location, background, land uses, and projected demands is provided below. Descriptions of the project location, background, and land uses were taken, for the most part, from the Draft EIR for the Proposed Project.

2.1 Proposed Project Location

The City of Pleasanton is located in Alameda County, one of the nine counties in the San Francisco Bay Area. The Proposed Project is generally located in the center of the City and encompasses approximately 319 acres within the City's water service area. As shown on Figure 2-1, the Proposed Project is bounded by the Alameda County Fairgrounds to the west; the Arroyo del Valle and Altamont Corridor Express (ACE) tracks to the north; a generally straight-line projection of Second and Third Streets to the east; and Bernal Avenue to the south.

2.2 Proposed Project Background

Pleasanton's first DSP was adopted in 1989 and was comprehensively updated in 2002. The 1989 DSP and the 2002 update helped create an active commercial core along Main Street and aimed to preserve historic residential neighborhoods. Based on feedback from the community and elected officials, the City initiated an update to the 2002 DSP in late 2016 to better respond to current market conditions, promote multi-modal mobility, and incorporate other planning efforts recently undertaken by the City. Though many of the policies in the 2002 DSP remain relevant and have been retained, the Proposed Project will allow the City to address recent changes and opportunities within the planning area.

2.3 Proposed Project Land Uses

The DSP area is envisioned as a mixed-use destination in Pleasanton that promotes economic activity while preserving the historic characteristics of the downtown area. Elements of the plan improve transportation and public facilities while promoting efficient urban design and economic growth. As shown on Figure 2-2, the land use plan identified in the Proposed Project currently consists of a mix of medium and high density residential neighborhoods, commercial areas, a redesigned civic center, a mixed-use town square district, and parks and public recreation areas.

A key component of the Proposed Project is consideration of alternative land uses for approximately 13-acres of City-owned properties that are the current site of City offices, the Pleasanton Public Library, the Police Station, and other municipal uses. In late 2016, the City Council accepted the Pleasanton Civic Center/Library Master Plan, which envisions the civic center and library at a new location across Bernal Avenue to the southwest, at Bernal Community Park. Approval of the proposed relocation of the civic center and library is subject to a vote of the people of Pleasanton and is therefore not yet final. In the event that relocation is approved, the Proposed Plan will provide a vision and a conceptual land use plan for the redevelopment of the approximately 9-acre existing civic center property and an adjacent 4-acre vacant City-owned property, developed with input from the community. The site would develop with a combination of residential, retail, office, live/work, and hotel uses, as well as a new approximately one-acre city park, known as the "Town Square."

Other features of the Proposed Project include:

- Transportation improvements in the Town Square District, focused on improving access for pedestrians and cyclists
- A shared parking structure for the Town Square District
- A net increase of 260,702 square feet (sf) of non-residential development over existing land uses
- An additional 369 new residential dwelling units (du)

Tables 2-1 and 2-2 present a summary of the assumed land use and dwelling units for the Proposed Project, respectively, both with and without redevelopment of the Civic Center.

Table 2-1. Comparison of Land Use Assumptions for Proposed Project Area, sf[(a)]

Land Use Category	Existing Land Use	Current Downtown Specific Plan (No Project)	Proposed Project with Civic Center Redevelopment	Proposed Project without Civic Center Redevelopment
Downtown Commercial	767,233	880,131	873,898	873,898
Downtown Mixed Use	91,498	-	255,986	-
High Density Residential	2,712	1,030	2,712	2,712
Medium Density Residential	1,470	1,470	1,470	1,470
Mixed Use Transitional	91,062	-	77,442	77,442
Office	-	102,218	26,603	26,603
Park	1,094	-	-	-
Proposed Street	4,284	-	-	-
Public	18,056	114,932	-	98,876
Totals	977,409	1,099,781	1,238,111	1,079,001

(a) Based on land use assumptions from Dyett & Bhatia on 10/12/18.

Table 2-2. Comparison of Dwelling Unit Assumptions for Proposed Project Area[(a)]

Land Use Category	Existing Land Use	Current Downtown Specific Plan (No Project)	Proposed Project with Civic Center Redevelopment	Proposed Project without Civic Center Redevelopment
Downtown Commercial	111	234	209	209
Downtown Mixed Use	-	-	124	-
High Density Residential	806	925	936	936
Medium Density Residential	331	333	334	334
Mixed Use Transitional	24	-	38	38
Office	-	33	-	-
Park	1	1	1	1
Totals	1,273	1,526	1,642	1,518

(a) Based on dwelling unit assumptions from Dyett & Bhatia on 10/12/18.

2.4 Comparison with Previous Land Use Descriptions in Other Planning Documents

Table 2-1 and 2-2 provide a comparison of existing land use, planned land use from the 2002 DSP, and proposed land use for the Proposed Project area. Overall, the Proposed Project retains the existing land use framework of the 2002 DSP (see Figure 2-3), with some targeted changes to promote economic activity and thoughtful development at scales compatible with the existing historic downtown. Key changes from the 2002 DSP are discussed below:

- The Proposed Project would create two new mixed use designations:
  - — The Mixed Use-Downtown land use designation is intended to foster attractive mixed-use development and a Town Square that links the ACE train station to the Main Street commercial core. The Proposed Plan would change the land use designation of the 13-acre existing Civic Center and San Francisco Public Utilities Commission (SFPUC) sites from Public to the new Mixed Use-Downtown land use designation. Collectively, the new mixed-use destination proposed for the Civic Center and SFPUC sites would be referred to as the Town Square District.
  - — The Mixed Use-Transitional land use designation is intended to encourage more foot traffic and a greater range of commercial services, including take-out and personal service establishments, along Peters Avenue. Some areas with the Office DSP land use designation would be redesignated as Mixed Use-Transitional.
- The Active Use Ground Floor Overlay would be applied to tenant spaces with a storefront fronting Main Street and certain streets within portions of the Mixed Use-Downtown area. The Active Use Ground Floor Overlay would require active ground floor uses with exceptions granted on a case-by-case basis.
- The Proposed Plan would also change DSP land use designations in places where DSP existing land use designations are inconsistent with the Zoning Ordinance and/or General Plan land use designations.

2.5 Projected Water Demand

Projected water demands for the Proposed Project are discussed below. It was assumed that all water demands for the Proposed Project will be met using potable water supplies, and that no recycled water supply is available for irrigation or other water uses within the Proposed Project area.

2.5.1 Calculation of Water Demands

Currently, the City does not have adopted standard potable water use factors. In the absence of City-specific water use factors, potable water demand factors based on water use factors for adjacent water agencies were used by BKF Engineers to calculate the water demands for the Proposed Project. The unit potable water demand factors used to calculate the Proposed Project demands are shown in Table 2-3.

Table 2-3. Potable Water Demand Factors by Land Use Type

Land Use Designation	Units	Unit Water Use Factor[(a)]
High Density Residential	gpd/du	366
Medium Density Residential	gpd/du	400
Hotel	gpd/room	120
Downtown Commercial/Residential	gpd/du	400
Commercial	gpd/sf	0.14
Downtown Mixed Use	gpd/du	366
Mixed Use Transitional	gpd/du	400
Public Use	gpd/sf	0.05
Park Residential Unit	gpd/du	400
Park (Irrigation)	gpd/sf	0.08

(a) Based on demand factor assumptions from 2018.10.16_Pleasanton_DTSP_Water_Demand.xlsx received from BKF Engineers on 10/16/2018.

The projected buildout potable water demands for the Proposed Project were calculated using the unit water demand factors discussed above. As shown in Table 2-4, the total projected potable water demand at buildout for the Proposed Project is 941 acre-feet per year (AFA) if the Civic Center is redeveloped, and 837 AFA if the Civic Center is not redeveloped. Because projected demands are greater if the Civic Center is redeveloped, for the purposes of this WSA, and to be conservative, it was assumed that the Proposed Project will include the Civic Center redevelopment.

2.5.2 Comparison with Water Demand Calculations in Other Planning Documents

Potable water demands for the Project Area are not specifically designated in the City's 2015 Urban Water Management Plan (UWMP), but the water demands from the existing land uses in the Project Area were captured in the existing measured potable water use. The 2002 DSP was adopted well before the 2015 UWMP was written. It was therefore assumed that projected water demands in the 2015 UWMP accounted for the additional planned development and future water demands associated with the land use in the 2002 DSP.

Projected water demands for the Proposed Project area will differ from those projected in the 2015 UWMP if the Proposed Project is adopted by the City. The potable water demand projected for the Proposed Project (941 AFA) is higher than the potable water demand projected for the No Project alternative (842 AFA), which assumes that the Project area will be developed in accordance with the 2002 DSP.

Table 2-4. Projected Potable Water Demands for Proposed Project Area, AFA[(a)]

Land Use Category	Current Downtown Specific Plan (No Project)	Proposed Project with Civic Center Redevelopment	Proposed Project without Civic Center Redevelopment
High Density Residential	379.2	383.7	383.7
Medium Density Residential	149.2	149.7	149.7
Hotel	5.1	15.9	5.1
Downtown Commercial Residential	104.8	93.6	93.6
Commercial	154.1	194.2	154.0
Downtown Mixed Use Residential	0.0	50.8	0.0
Mixed Use Transitional Residential	14.8	17.0	17.0
Public Facility	6.4	0.0	5.4
Park Residential Unit (Existing)	0.4	0.4	0.4
Irrigation (10% Allowance)	16.6	21.1	16.5
Parks/Turf (Irrigation)	11.4	14.3	11.4
Total	842	941	837

(a) Based on water demand calculations received from BKF on 10/16/18 (2018.10.16_Pleasanton_DTSP_Water_Demand).

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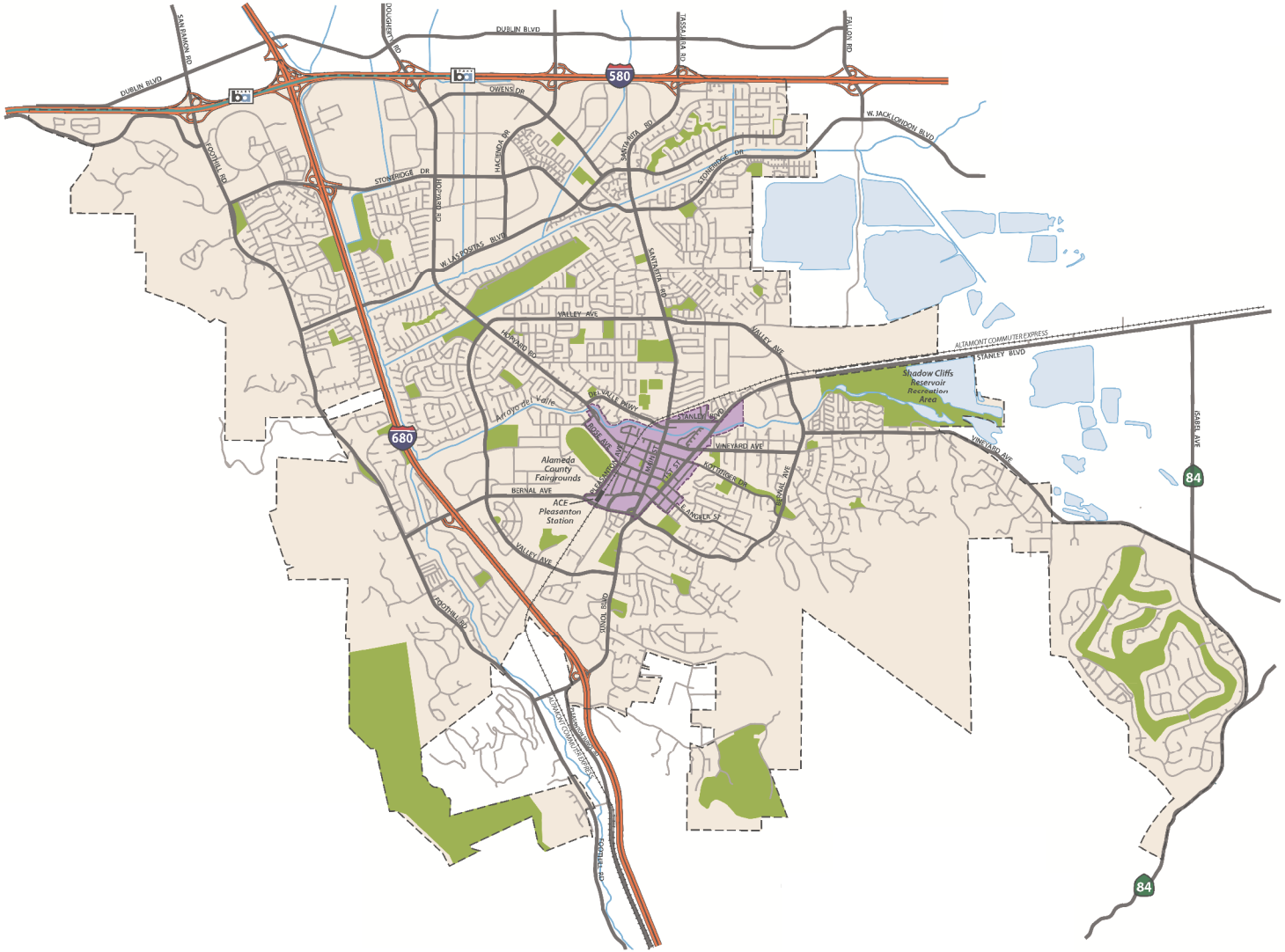

0 4,000 8,000

Feet

Symbology

- Downtown Specific Plan
- Pleasanton City Limits

Notes:
1. Adapted from *Figure 2: Downtown Specific Plan Locations* recieved from City of Pleasanton on 03/09/2018.

THE CITY OF PLEASANTON

WEST YOST ASSOCIATES

Figure 2-1

Proposed Project Location

City of Pleasanton
Pleasanton Downtown Specific Plan Water Supply Assessment

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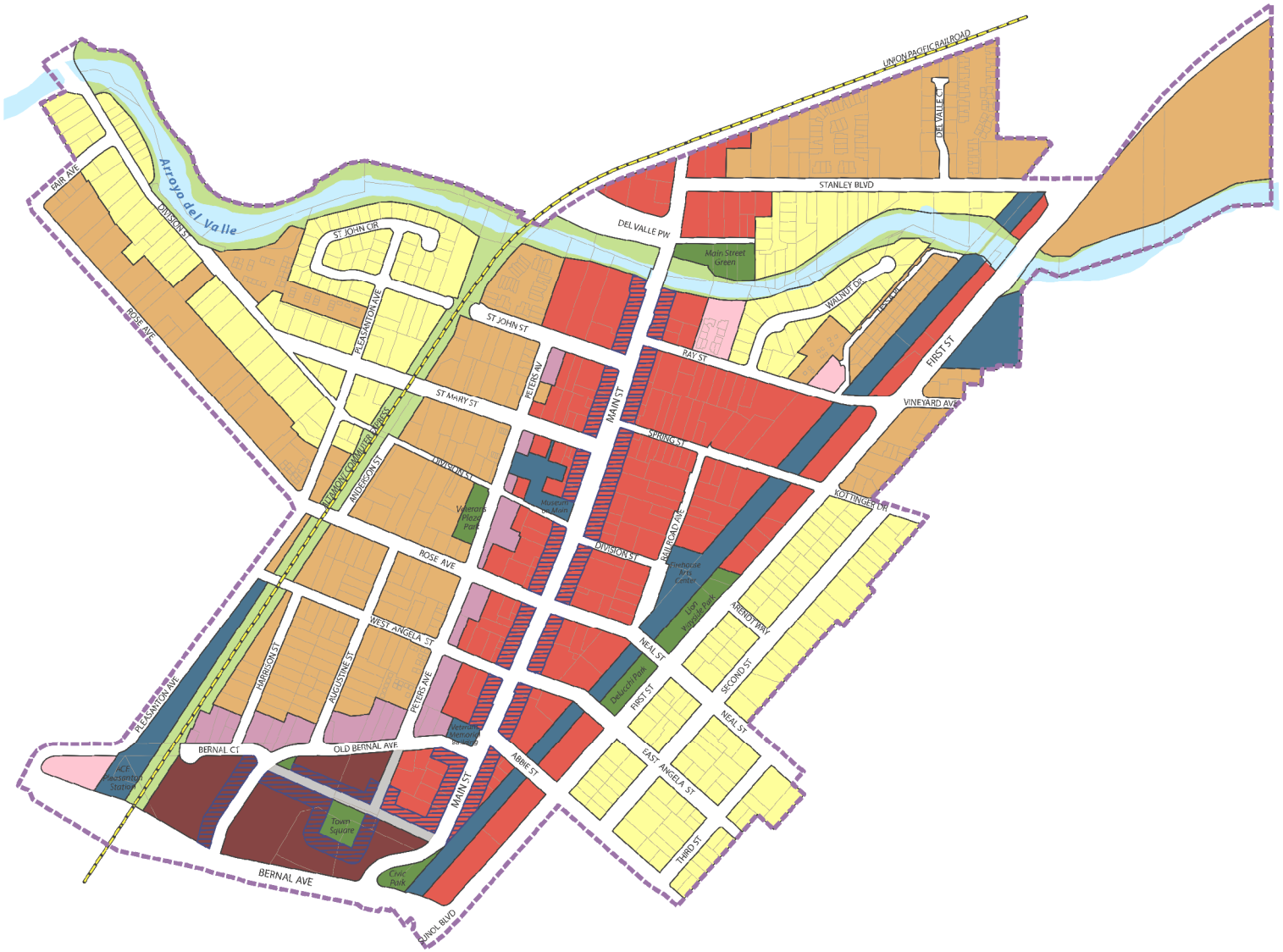

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Feet

Symbology

Land Uses

- Medium Density Residential
- High Density Residential
- Mixed Use - Downtown
- Downtown Commercial
- Mixed Use - Transitional
- Office
- Public
- Park
- Open Space
- Active Ground Floor Use Overlay
- Proposed Street
- Arroyo
- Downtown Specific Plan

Notes:
1. Adapted from *Figure 4-1: Downtown Specific Plan Land Use Designations* recieved from BKF Engineers on 08/14/2018.

THE CITY OF PLEASANTON

WEST YOST ASSOCIATES

Figure 2-2

Proposed Project Land Use

City of Pleasanton
Pleasanton Downtown Specific Plan Water Supply Assessment

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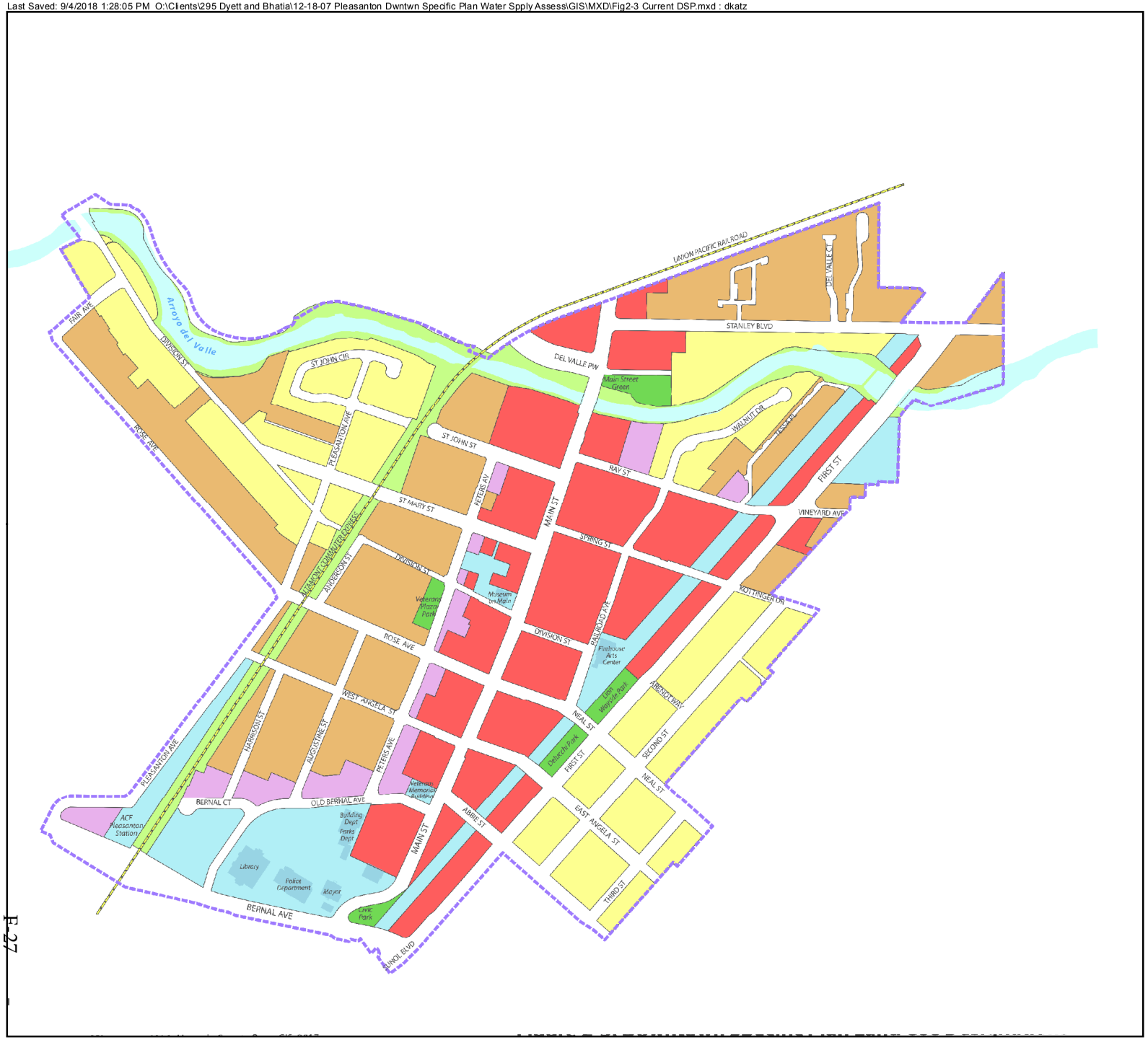

N

0 500 1,000

Feet

Symbology

Land Use

- Medium Density Residential
- High Density Residential
- Downtown Commercial
- Office
- Public
- Park
- Open Space
- Downtown Specific Plan
- Arroyo

Notes:

1. Adapted from *Figure 2-3: Downtown Specific Plan Use Designations* recieved from BKF Engineers on 08/21/2018.

THE CITY OF PLEASANTON

WEST YOST ASSOCIATES

Figure 2-3

2002 Downtown Specific Plan Land Use

City of Pleasanton
Pleasanton Downtown Specific Plan Water Supply Assessment

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3.0 REQUIRED SB 610 DETERMINATIONS

This section describes the required determinations for a WSA.

3.1 Does SB 610 Apply to the Proposed Project?

10910 (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

10912 (a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

As shown in Table 3-1, the Proposed Project does meet the definition of a "Project" as specified in Water Code section 10912(a)(6). The Proposed Project has not been the subject of a previously adopted WSA and has not been included in an adopted WSA for a larger project. Therefore, according to Water Code section 10910(a), a WSA is required for the Proposed Project.

The City has also determined that the Proposed Project is subject to the California Environmental Quality Act (CEQA) and that an EIR is required.

3.2 Does SB 221 Apply to the Proposed Project?

In 2001, SB 221 amended State law to require that approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. Per California Government Code section 66473.7(a)(1), a subdivision means a proposed residential development of more than 500 dwelling units.

The Proposed Project, with up to 369 new residential dwelling units in the City's water service area, does not meet the definition of a subdivision and is therefore not subject to the requirements of SB 221.

Table 3-1. Does the Proposed Project Meet the SB 610 Definition of a "Project"?

SB 610 Project Definition Components	Proposed Project Quantity[a,b]	Meets the SB 610 Definition of a "Project"?
Residential > 500 du	Up to 369 du	NO
Retail > 1,000 employees or > 500,000 sf	Up to 320,430 sf	NO
Commercial Office Building > 1,000 employees or > 250,000 sf	[c]	NO
Hotel/Motel > 500 rooms	Up to 80 rooms	NO
Industrial Plant/Park > 1,000 employees or > 40 acres or > 650,000 sf	N/A	NO
Mixed Use Project that includes one or more of the above	--	NO
A Project that would demand the amount of water required by a 500-dwelling unit project	--	YES
SB 610 Required?	--	YES

(a) Proposed Project quantities represent the increase in development over the existing land use if the Proposed Project with Civic Center Redevelopment is constructed. See Tables 2-1 and 2-2 for land use assumptions.
(b) Based on land use assumptions from Dyett & Bhatia on 10/12/18.
(c) The Proposed Project would result in a decrease of office space of 101,728 sf.

3.3 Who is the Identified Public Water System?

> *10910(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined by Section 10912, that may supply water for the project*
>
> *10912 (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections…*

The Proposed Project is located within the City's water service area. The City provides water service to all areas within the City Limits and maintains the potable water facilities in the streets adjacent to and within the Proposed Project area. Therefore, the City is the identified public water system for the Proposed Project.

3.4 Does the City have an adopted Urban Water Management Plan (UWMP) and does the UWMP Include the projected water demand for the Proposed Project?

> *10910(c)(1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a Proposed Project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).*

The City's 2015 UWMP was adopted by the City in June 2016. The City's 2015 UWMP includes existing and projected water demands for existing and projected future land uses to be developed within the City's service area through 2040. The water demand projections in the City's 2015 UWMP include existing City water demands, future water demands for proposed developments within the existing City limits, and future water demands for future service areas outside the existing City limits.

Potable water demands for the Proposed Project area are not specifically designated in the City's 2015 UWMP, but the water demands from the existing land uses in the Proposed Project area were captured in the existing measured potable water use. The 2002 DSP was adopted well before the 2015 UWMP was written. It was therefore assumed that projected water demands in the 2015 UWMP accounted for the additional planned development and future water demands associated with the land use in the 2002 DSP.

However, due to the changes in future land use associated with the Proposed Project, the potable water demands calculated for the Proposed Project are greater than the projected potable water demands included in the City's 2015 UWMP for the Proposed Project area. Table 2-4 provided a summary of the projected potable water demands for the Proposed Project as compared to those included in the City's 2015 UWMP.

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4.0 CITY OF PLEASANTON WATER DEMANDS

10910(c)(2) If the projected water demand associated with the Proposed Project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).

The descriptions provided below for the City's water demands have been taken, for the most part, from the City's 2015 UWMP (adopted in June 2016).

4.1 Historical and Existing Water Demands

According to the City's 2015 UWMP, the City's water service area has experienced steady population growth over the last decade. From 2010 through 2015, the City's water service area population had grown by 3.6 percent; however, the total volume of potable water sold decreased by 29.6 percent. This decrease in total potable water consumption, despite growth in population served, was due to water use limitations imposed by the City and the State during the recent statewide drought. Table 4-1 summarizes the City's historical potable water demand (based on water production) and recycled water demand for 2005 through 2015.

Table 4-1. Historical Potable and Recycled Water Demands

	2005[a]	2010[a]	2015[b]
Total Potable Water Demand[c], AFA	18,060	16,131	11,355
Total Recycled Water Demand, AFA	0	0	104
Total Water Demand, AFA	18,060	16,131	11,459

(a) Source: City of Pleasanton 2015 UWMP (June 2016), Table 4-1.
(b) Source: City of Pleasanton 2015 UWMP (June 2016), Table 4-4.
(c) Includes the annual water purchased from Zone 7 and groundwater pumped from City wells.

4.2 Future Water Demands

Table 4-2 presents the City's projected normal year potable and recycled water demands through 2040. These projections are based on Association of Bay Area Governments population projections within the City's Sphere of Influence and the SB X7-7 water use targets for the City. It should be noted that the updated demands from the Proposed Project are not included in the demands shown in Table 4-2 (demands are as included in the City's 2015 UWMP).

Table 4-2. Projected Potable and Recycled Water Demands - Normal Years

	2020	2025	2030	2035	2040
Potable Water Demand[a], AFA	15,942	16,700	17,505	18,367	19,264
Recycled Water Demand[a], AFA	1,800	1,800	1,800	1,800	1,800
Total Water Demand, AFA	17,742	18,500	19,305	20,167	21,064

(a) Source: City of Pleasanton 2015 UWMP (June 2016), Table 4-4.

As described in the City's 2015 UWMP, the potable water and recycled water demand projections have been established based on the City's continued strong commitment to the implementation of water conservation measures and use of recycled water to offset potable water demands. The City plans to maintain the current level of conservation as the foundation of a comprehensive water conservation program and investigate and implement, as appropriate, permanent demand reduction programs that are shown to be effective and affordable. Where feasible, the City also plans to continue to connect future, planned development projects to recycled water to serve non-potable demands.

4.3 Dry Year Water Demands

Under dry water year conditions, the City anticipates implementing demand reduction measures as appropriate, to reduce potable water demands to match the reduction in the supply provided by Zone 7. The demand reduction assumptions as included in the City's 2015 UWMP are listed below.

- During Single Dry Years, the potable water demands are assumed to be 80 percent of Normal Year demands (20 percent reduction in water use). The City's recycled water demands are assumed to be the same as Normal Year demands.
- During Multiple Dry Years, the potable water demands are assumed to be 88 percent of Normal Year demands (12 percent reduction in water use). Recycled water demands are assumed to be the same as Normal Year demands.

Tables 4-3 and 4-4 present the projected single dry year and multiple dry year potable water demands and recycled water demands through 2040 as presented in the City's 2015 UWMP.

Table 4-3. Projected Potable and Recycled Water Demands – Single Dry Year

	2020	2025	2030	2035	2040
Potable Water Demand[(a)], AFA	12,832	13,400	14,004	14,650	15,323
Recycled Water Demand[(a)], AFA	1,800	1,800	1,800	1,800	1,800
Total Water Demand, AFA	14,632	15,200	15,804	16,450	17,123

(a) Source: City of Pleasanton 2015 UWMP (June 2016), Table 7-6.

Table 4-4. Projected Potable and Recycled Water Demands – Multiple Dry Years

	2020	2025	2030	2035	2040
Potable Water Demand[(a)], AFA	14,076	14,720	15,404	16,137	16,899
Recycled Water Demand[(a)], AFA	1,800	1,800	1,800	1,800	1,800
Total Water Demand, AFA	15,876	16,520	17,204	17,937	18,699

(a) Source: City of Pleasanton 2015 UWMP (June 2016), Table 7-9.

5.0 CITY OF PLEASANTON WATER SUPPLIES

10910(c)(2) If the projected water demand associated with the Proposed Project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).

10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the Proposed Project, and a description of the quantities of water received in prior years by the public water system…under the existing water supply entitlements, water rights, or water service contracts.

10910(e) If no water has been received in prior years by the public water system…under the existing water supply entitlements, water rights, or water service contracts, the public water system…shall also include in its water supply assessment…an identification of the other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system.

10910(f) If a water supply for a Proposed Project includes groundwater, the following additional information shall be included in the water supply assessment.

(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the Proposed Project.

(2) A description of any groundwater basin or basins from which the Proposed Project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most recent bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the Proposed Project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the Proposed Project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

(5) An analysis of the sufficiency of the groundwater from the basin or basins from which the Proposed Project will be supplied to meet the projected water demand associated with the Proposed Project. A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

The descriptions provided below for the City's water supplies have been taken, for the most part, from the City's 2015 UWMP (adopted in June 2016) and Zone 7's 2015 UWMP (adopted in March 2016).

5.1 Water Supply Overview

The City currently has two sources of potable water supplies, purchases from Zone 7 and groundwater pumped from City wells.

Zone 7 is a multi-purpose agency that oversees water-related issues in the Livermore-Amador Valley. Zone 7 is a State Water Project contractor that wholesales treated water to four retail water agencies including DSRSD, City of Pleasanton, City of Livermore, and Cal Water Livermore District. In addition, Zone 7 retails non-potable water supplies for irrigated agricultural use, retails treated water to several direct customers, provides and maintains flood control facilities, and manages groundwater and surface water supplies in its service area. Zone 7's water supplies are discussed in detail in Section 5.2.

The City also has a groundwater pumping quota (GPQ) of 3,500 AFA in the Main Basin, which the City extracts via its groundwater supply wells. This groundwater supply is discussed briefly in Section 5.2.4.2 and in detail in Section 5.3.

The City's water supply is augmented with recycled water from DSRSD's Recycled Water Treatment Facilities (RWTF) and the City of Livermore's Water Reclamation Plant (LWRP). The City's recycled water sources are discussed in Section 5.4.

5.2 Potable Water Supplies from Zone 7

Zone 7 uses a combination of water supplies and water storage facilities to meet the municipal and industrial (M&I) demands of its four retailers (DSRSD, City of Pleasanton, City of Livermore, and Cal Water Livermore District). These water supplies and water storage facilities include the following:

- Imported surface water from the State Water Project (SWP)
- Imported surface water transferred from the Byron Bethany Irrigation District (BBID)
- Local surface water runoff captured in Del Valle Reservoir
- Local groundwater extracted from the Livermore Valley Main Groundwater Basin
- Non-local groundwater storage in the Semitropic Water Storage District (Semitropic) and Cawelo Water District
- Future local storage in the Chain-of-Lakes

Each of these supplies is described further below.

5.2.1 State Water Project (SWP)

In November 1961, Zone 7 entered into a 75-year agreement with the Department of Water Resources (DWR) to receive water from the SWP. The SWP is the nation's largest publicly-built water storage and conveyance system, and currently serves over 25 million people throughout California. SWP water originates within the Feather River watershed, is captured in and released from Lake Oroville, and flows through the Sacramento-San Joaquin Delta (Delta) before it is conveyed by the South Bay Aqueduct (SBA) to Zone 7, or by the California Aqueduct to other south-of-Delta SWP contractors.

The SBA also delivers water to other water suppliers, namely Santa Clara Valley Water District and Alameda County Water District. Lake Del Valle is part of the SBA system and is used for storage of SWP water, as well as local runoff. At Zone 7, SWP water is used to meet treated water demands from municipal and industrial customers (both wholesale and retail) and untreated water demands from agricultural customers. It is also used to artificially recharge the local groundwater basin or to fill non-local storage.

Negotiations on extending the SWP contracts took place between DWR and the contractors during 2013 and 2014. The following terms were agreed to and are currently the subject of analysis under the requirements of the CEQA (Notice of Preparation dated September 12, 2014) (Draft EIR released on August 17, 2016):

- Extend the term of the 29 Water Supply Contracts to December 31, 2085
- Provide for increased SWP financial operating reserves during the extended term of the SWP contracts
- Provide additional funding mechanisms and accounts to address SWP needs
- Develop a revised payment methodology with a corresponding billing system that better matches the timing of future SWP revenues to future expenditures

It is anticipated that the term of the SWP contracts will be extended to December 31, 2085 and the data and information contained in Zone 7's 2015 UWMP reflect that assumption.

5.2.1.1 Table A Allocation

Each SWP contractor is limited to a maximum annual contract amount as specified in Article 6(c) and Table A of the SWP Contract; this amount is therefore commonly referred to as "Table A." As noted above, Zone 7 first entered into the SWP Contract in November 1961; as the SWP was expanded and as Zone 7 demands increased over the years, Zone 7's Table A amount was increased, reaching the amount of 46,000 AFA in 1997. Since then, Zone 7 has increased its supply from the SWP through a series of five permanent transfers. In December 1999, Zone 7 secured Table A SWP allocations from Lost Hills Water District of 15,000 AFA and Berrenda Mesa Water District of 7,000 AFA. In December 2000, 10,000 AFA of SWP allocation from Belridge Water Storage District was acquired. An additional 2,219 AFA was obtained from the same source in October 2003. Finally, 400 AFA of water was acquired from the Tulare Lake Basin Water Storage District in 2003. Together, these transfers have raised Zone 7's current Table A allocation to 80,619 AFA.

In practice, the actual amount of SWP water available to Zone 7 under the Table A allocation process varies from year to year due to hydrologic conditions, water demands of other contractors, existing SWP stored water, SWP facility capacity, and environmental/regulatory requirements.

In July 2015, DWR issued the "State Water Project Final Delivery Capability Report 2015" (2015 Delivery Capability Report). Since 2002, DWR has been publishing 'Delivery Reliability Reports' to provide contractors and other local agencies a single source of the most current data available on SWP delivery reliability that can be used for the development of local plans such as UWMPs; there were notable changes in 2015. First, DWR renamed the report 'Delivery Capability Report'; secondly, and more importantly, DWR provided multiple alternatives for the reliability of the SWP under future conditions. Under the 'Early Long-Term' alternative in the 2015 Delivery Capability Report, the SWP's projected long-term average yield is 62 percent of Table A, equivalent to approximately 50,000 AFA for Zone 7.

As a SWP contractor, Zone 7 has the option to store unused Table A water from one year to the next in SWP surface storage facilities (specifically San Luis Reservoir in the case of Zone 7) when there is storage capacity available. This "carryover" water is also called Article 12e or 56c water, in reference to the relevant contract terms. Article 12e water must be taken by March 31 of the following year, but Article 56c water may remain as carryover as long as San Luis Reservoir storage is available. Zone 7 typically maintains between 10,000 to 15,000 acre-feet (AF) of carryover water. The analysis provided in Zone 7's 2015 UWMP assumes Zone 7 carries over 10,000 AF of water each year.

5.2.1.2 Article 21 Water (Interruptible or Surplus Water)

Under Article 21 of Zone 7's contract with DWR, Zone 7 also has access to excess water supply from the SWP that is available only if: (1) it does not interfere with SWP operations or Table A allocations; (2) excess water is available in the Delta; and (3) it will not be stored in the SWP system. Per the 2015 Delivery Capability Report, the projected yield from Article 21 is very low and does not represent a significant water supply for Zone 7.

5.2.1.3 Article 56d Water (Turnback Pool Water)

Article 56d is a contract provision that allows SWP contractors with unused Table A water to sell that water to other SWP contractors via a "turnback pool" administered by DWR on an annual basis. Historically, only a few SWP contractors have been in a position to make turnback pool water available for purchase, particularly in normal or dry years. Over 2013 and 2014, DWR began pilot-testing a Multi-Year Pool Demonstration Program ("Water Pool Program") to evaluate the feasibility of a multi-year water purchase program. The Water Pool Program could conceivably provide an alternative to the turnback pool, providing more incentive to prospective sellers and therefore, increasing the amount of water available. In 2015, the Water Pool Program was re-introduced through the end of 2016 at a price more in line with the current market. The program remains on pilot status.

While Zone 7 received 2,500 AF of water from the Water Pool Program in 2013, Zone 7 currently does not anticipate a significant amount of water supply to be reliably available under Article 56d (or its alternative) until there is a resolution to the current Delta crisis.

5.2.1.4 Lower Yuba River Accord (Yuba Accord)

In 2007, Zone 7 entered into a contract with DWR to purchase additional water under the Yuba Accord. The original contract expires in 2025, and a number of amendments have been made to the original agreement over the years, including a new pricing agreement executed in 2014.

There are four different types ("Components") of Yuba water available. Zone 7 has the option to purchase Components 2 and 3 water during drought conditions and Component 4 water when the Yuba County Water Agency has determined that it has water supply available to sell.

Under the Yuba Accord, water is primarily available during dry years and the amount is relatively small: 400 AF in 2014 and approximately 300 AF in 2015. For planning purposes, Zone 7 currently assumes a long-term average yield under the Yuba Accord of 145 AF annually; in the future, this amount may increase given the new terms as renegotiated in 2014 and any such increase will be reflected in future planning efforts.

5.2.2 Byron Bethany Irrigation District (BBID)

The BBID diverts water from the Delta pursuant to a "Notice of Appropriation of Water" dated May 18, 1914. Zone 7 entered into a short-term water transfer demonstration project in 1994 with BBID, which provided a minimum supplemental water supply of 2,000 AFA. This was a five-year agreement with a potential to purchase up to 5,000 AFA. In 1998, Zone 7 and BBID agreed to convert the agreement into a long-term 15-year contract, renewable every five years up to a total of 30 years. The current contract was recently extended through 2030 with an option to extend through 2039. However, in the last few years, BBID, Zone 7, and DWR have been reviewing the potential yield available for Zone 7 and discussing the long-term future of the contract. Furthermore, Zone 7 now expects the available supply under this contract to diminish as BBID's own water demands increase. Until discussions among BBID, DWR, and Zone 7 reach a conclusion, 2,000 AFA of water is assumed to be available under this contract at this time; this amount is similar to the latest BBID transfer approved in 2013 of 2,200 AF.

5.2.3 Local Surface Water Runoff

Zone 7, along with Alameda County Water District (ACWD), has water right permits to divert flows from Arroyo del Valle. Runoff from the Arroyo del Valle watershed above Lake Del Valle is stored in the lake, which is managed by DWR. As noted above, Lake Del Valle is also used to store imported surface water deliveries from the SWP. In late summer/early fall, DWR typically lowers lake levels in anticipation of runoff from winter storm events, and to provide flood control capacity. Water supply in Lake Del Valle is made available to Zone 7 via the SBA through operating agreements with DWR. Inflows to Lake Del Valle, after accounting for permit conditions, are equally divided between ACWD and Zone 7. Zone 7 can store up to about 7,500 AF of its share of Arroyo Valle runoff in the lake; runoff collected in any given year is required to be delivered to Zone 7 by the end of the following year.

5.2.4 Local Storage

Zone 7 has three options for local storage: storage in Lake Del Valle, storage in the local groundwater basin, and, in the future, surface storage in the Chain of Lakes (COLs). Each of these is described below.

5.2.4.1 Lake Del Valle

As described above, Lake Del Valle is used to store runoff from the Arroyo del Valle watershed above the lake and also to store imported surface water deliveries from the SWP.

5.2.4.2 Livermore Valley Groundwater Basin

Zone 7 overlies the Main Basin. The Main Basin is the portion of the Livermore Valley Groundwater Basin that contains high-yielding aquifers and good quality groundwater. It has an estimated storage capacity of about 254,000 AF. DWR has not identified the Main Basin (DWR Basin No. 2-10) as either a basin in overdraft or a basin expected to be in overdraft. Detailed descriptions of the Main Basin are available in Zone 7's Groundwater Management Plan (GMP)[2] and the Zone 7 2015 UWMP.

It should be noted that, for Zone 7, the Basin is considered a storage facility and not a long-term water supply because Zone 7 does not have a groundwater-pumping quota, and only pumps groundwater it has previously artificially recharged using its surface water supplies.

Zone 7 administers oversight of the Main Basin as part of its GMP. As part of its conjunctive use program, Zone 7's policy is to maintain groundwater levels above historic lows in the Main Basin through artificial recharge of SWP water or locally-stored runoff from Arroyo del Valle. Currently, this is accomplished by releasing water to the arroyos for subsequent percolation and replenishment of the aquifers. Zone 7 established historic lows based on the lowest measured groundwater elevations in various wells in the Main Basin; historic lows correspond to a groundwater storage volume of about 128,000 AF. In general, the difference between water surface elevations when the Main Basin is full and water surface elevations when the Main Basin is at historic lows defines Zone 7's operational storage. Operational storage is about 126,000 AF based on Zone 7's experience operating the Main Basin.

Section 5.3 (DSRSD Groundwater Supply) further describes the Livermore Valley Groundwater Basin and Zone 7's Groundwater Management Plan that is used to manage the basin.

[2] Groundwater Management Plan for Livermore-Amador Valley Groundwater Basin, prepared for Zone 7 Water Agency, prepared by Jones & Stokes, September 2005. (http://www.water.ca.gov/urbanwatermanagement/2005uwmps/AlamedaZone7/GMP%202005%20Submittal%20-%20Complete.pdf)

5.2.4.3 Chain of Lakes (COLs) – Lake I and Cope Lake

The COLs refers to a series of former or active gravel quarry pits that have been, or will be, transferred to Zone 7 for water resources applications. These might include surface storage of stormwater or other local runoff, surface storage of water from the SWP, and/or use as groundwater recharge basins once mining and subsequent reclamation has completed. The COLs will ultimately consist of ten lakes named Cope Lake and Lakes A through I.

The COLs will ultimately cover approximately 1,500 acres and have 150,000 AF of total storage volume; 31,000 AF is estimated to be available for operational storage. Zone 7 currently only owns Cope Lake and Lake I. Zone 7 expects to take ownership of Lakes A and H sometime within the next five years, however, the availability of Lakes B through G may extend well beyond 2030, and may be as late as 2060.

5.2.5 Non-Local Storage

In addition to local storage, Zone 7 also participates in the two non-local (also called "out of basin") groundwater banking programs described below; both banks are located in Kern County. Note that while these banking programs provide a water source during drought years, they represent water previously stored from Zone 7's surface water supplies during wet years. Therefore, they do not have a net contribution to Zone 7's water supply over the long term, and in fact, result in some operational losses as described below. Furthermore, this banked water supply is only available when the SBA is operational.

5.2.5.1 Semitropic Water Storage District

Zone 7 originally acquired a storage capacity of 65,000 AF in the Semitropic groundwater banking program in 1998. Subsequently, Zone 7 agreed to participate in Semitropic's Stored Water Recovery Unit, which increased pumpback capacity and allowed Zone 7 to contractually store an additional 13,000 AF. Zone 7 currently has a total of 78,000 AF of groundwater banking storage available to augment water supplies during drought conditions. During non-drought periods, Zone 7 can store up to 5,883 AFA into the Semitropic groundwater bank. Note that a 10 percent loss is associated with water put into Semitropic. During a drought year, Zone 7 has the ability to request up to 9,100 AF of pumpback and any amount between 0 to 8,645 AF of exchange water; the availability of exchange water depends on projected SWP allocation. Pumpback is water that is pumped out of the Semitropic aquifer and into the SWP system. Exchange water is water that is transferred between Zone 7 and Semitropic by adjusting the amounts of Table A water allocated between Zone 7 and Semitropic. During the recent drought, Zone 7 was able to recover 9,900 AF in 2014 and about 12,500 AF in 2015. The agreement is in effect through December 31, 2035.

5.2.5.2 Cawelo Water District

Similar to the arrangements with Semitropic, Zone 7 has 120,000 AF of groundwater banking storage available with the Cawelo Water District, as executed in an agreement in 2006. During non-drought periods, Zone 7 can store up to 5,000 AFA in the bank. During droughts, Zone 7 has the ability to request up to 10,000 AFA of pumpback (or exchange water) from Cawelo. During the recent drought, Zone 7 was able to recover 9,700 AF, delivered evenly over 2014 and 2015;

most of this water was used directly, while the rest was stored in San Luis Reservoir for future use. The agreement is in effect through December 31, 2035.

5.3 Groundwater Supply

This section describes the Livermore Valley Groundwater Basin and Zone 7's GMP that is used to manage the basin. Each year, Zone 7 prepares an Annual Report for the Groundwater Management Program. The City owns and operates three active groundwater wells in the Main Basin, which is a portion of the Livermore Valley Groundwater Basin. Groundwater extraction from the City's wells is limited by the groundwater pumping quotas established in the GMP.

The City's groundwater resource is described below.

5.3.1 City of Pleasanton Groundwater Pumping Quota

DSRSD, the City of Pleasanton, the City of Livermore, and Cal Water Livermore District, through agreements with Zone 7, have mutually agreed to limit their extraction from the Main Basin to a combined quantity of approximately 7,200 AFA, about 54 percent of the long-term sustainable yield of the Main Basin. This agreement, along with Zone 7's other groundwater management activities, keeps the groundwater budget essentially in balance under average hydrologic conditions. Each of these retailers has a "Groundwater Pumping Quota" (known as their GPQ), which was formerly referred to as the "Independent Quota" in the original Municipal and Industrial water supply contract between Zone 7 and each retailer. The City's GPQ is 3,500 AFA. In accordance with its agreement with Zone 7, averages are maintained by allowance of "carryover" (limited to 20 percent of the GPQ; 700 AFA for the City) when less than the GPQ is used in a given year. The City may obtain groundwater in excess of its GPQ and any carryover if it pays a recharge fee to Zone 7.

5.3.2 Historical and Projected Future Pumpage

As described above, the City has a GPQ of 3,500 AFA (and an annual carryover allowance of 700 AFA) in the Main Basin. Historical groundwater pumpage from 2013 through 2017 is shown in Table 5-1. Historically, the City has been at or near its 3,500 AFA GPQ. In 2017, the City maximized the use of the carryover allowance and therefore was only subject to a recharge fee for about 300 AFA.

Table 5-1. City of Pleasanton Historical Groundwater Pumped

	2013[a]	2014[a]	2015[a]	2016[b]	2017[b]
Groundwater Pumped, AFA	3,516	3,381	3,629	3,426	4,541

(a) Source: City of Pleasanton 2015 UWMP (June 2016), Table 6-3.
(b) Source: Email correspondence from the City's Utilities Planning Manager, received on 8/27/18.

Future groundwater pumping is projected to continue at a rate of approximately 3,500 AFA for the foreseeable future.

5.3.3 Groundwater Basin Description

As defined in DWR Bulletin 118 Update 2003 (California's Groundwater), the Livermore Valley Groundwater Basin (DWR Basin 2-10) extends from the Pleasanton Ridge east to the Altamont Hills and from the Livermore Uplands north to the Tassajara Uplands. Surface drainage features include Arroyo del Valle, Arroyo Mocho, and Arroyo Las Positas as principal streams, with Alamo Creek, South San Ramon Creek, and Tassajara Creek as minor streams. All streams converge on the west side of the basin to form Arroyo de la Laguna, flowing south and joining Alameda Creek in Sunol Valley, and ultimately draining to the San Francisco Bay. Some geologic structures restrict the lateral movement of groundwater, but the general groundwater gradient is from east to west, towards Arroyo de la Laguna, and from north to south along South San Ramon Creek and Arroyo de la Laguna.

The entire floor of the Livermore Valley and portions of the upland areas on all sides of the valley overlie groundwater-bearing materials. The materials are mostly continental deposits from alluvial fans, outwash plains, and lakes. They include valley-fill materials, the Livermore Formation, and the Tassajara Formation. Under most conditions, the valley-fill and Livermore Formation yield adequate to large quantities of groundwater to all types of wells, with the larger supply wells being located in the Main Basin. The Main Basin is composed of the Castle, Bernal, Amador, and Mocho 2 sub-basins.

5.3.4 Groundwater Quantity

Zone 7 routinely monitors groundwater levels within the Main Basin. Two independent methods are used to estimate groundwater storage: (1) Hydrologic Inventory and (2) Nodal Groundwater Elevation. The Main Basin is estimated to have a total storage capacity of 254,000 AF, of which approximately 126,000 AF are available for Zone 7 operational storage. Zone 7's goal is to maintain 128,000 AF of groundwater in storage at all times, as discussed below.

5.3.4.1 Artificial Recharge

Before the construction of the SWP in the early 1960s, groundwater was the sole water source for the Livermore-Amador Valley. This resource has gone through several periods of extended withdrawal and subsequent recovery. In the 1960s, when approximately 110,000 AF of groundwater was extracted, the Main Basin reached its historic low of 128,000 AF. The Main Basin was allowed to recover from 1962 to 1983. It was during this era that Zone 7 first conducted a program of groundwater replenishment by recharging imported surface water via its streams ("in-stream recharge") for storage in the Main Basin and began supplying treated surface water to customers to augment groundwater supplies, regulating municipal pumping by contractually establishing GPQ as discussed further below.

Zone 7's operational policy is to maintain the balance between the combination of natural and artificial recharge and withdrawal. This ensures that groundwater levels do not drop below the historic level of 128,000 AF.

5.3.4.2 Current Sustainable Yield and Groundwater Pumping Quotas

Long-term natural sustainable yield is contractually defined as the average amount of groundwater annually replenished by natural recharge in the Main Basin (through percolation of rainfall, natural stream flow, irrigation waters, and inflow of subsurface waters) and which can therefore be pumped without lowering the long-term average groundwater volume in storage. In contrast, "artificial recharge" is the aquifer replenishment that occurs from artificially induced or enhanced stream flow, as described in the previous section. With artificial recharge, more groundwater can be sustainably extracted from the Main Basin each year.

The natural sustainable yield of the Main Basin has been determined to be about 13,400 AFA, which is about 11 percent of the operational storage. This long-term natural sustainable yield is based on over a century of hydrologic records and projections of future recharge conditions. Based on this sustainable yield value, DSRSD, the City of Pleasanton, the City of Livermore, and Cal Water Livermore District (collectively referred to as the Retailers) are permitted to pump 7,245 AFA. Each retailer has an established "GPQ", formerly referred to as the "Independent Quota" in the original Municipal and Industrial water supply contract between Zone 7 and each retailer. The City and Cal Water Livermore District pump their own GPQ; they are also permitted to pump groundwater in excess of their GPQ under a recharge fee paid to Zone 7. This fee covers the cost of importing and recharging additional water into the Main Basin. Zone 7 pumps DSRSD's GPQ. The City of Livermore has not had any groundwater pumping capability for the last five to six years, and has therefore, not pumped their GPQ over this time period.

Zone 7's groundwater extraction for its treated water system does not use the natural sustainable yield from the Main Basin; instead, Zone 7 pumps only water that has been previously recharged as part of its artificial recharge program using its surface water supplies. During high demands, groundwater is used to supplement surface water supply delivered via the SBA and treated at one of the Zone 7's two surface water treatment facilities. Groundwater is also used when the SBA is out of service due to maintenance and improvements, or when Zone 7's surface water treatment plants are operating under reduced capacity due to construction, repairs, etc. Finally, Zone 7 uses its stored groundwater (both local and non-local) under emergency or drought conditions when there may be insufficient surface water supply available. Zone 7 also pumps groundwater out of the Main Basin during normal water years to help reduce the salt loading in the Main Basin. To achieve additional salt removal, a demineralization facility has been in operation since 2009. Zone 7 plans to recharge 9,200 AFA on average, which means that Zone 7 can pump an equivalent 9,200 AFA on average from the Main Basin.

5.3.5 Groundwater Quality

In general, the Main Basin is characterized by relatively good quality groundwater that meets all state and federal drinking water standards. The pumped groundwater is chloraminated simply to match the disinfectant residual in the distribution system. However, there has been a slow degradation of groundwater quality as evidenced by rising Total Dissolved Solids (TDS) and hardness levels over the last few decades. To address this problem, Zone 7 developed a Salt Management Plan (SMP), which was approved by the Regional Water Quality Control Board (Regional Board) in 2004 as a condition of the Master Waste Reuse Permit and incorporated into Zone 7's GMP in 2005.

Zone 7 implements a wastewater and recycled water monitoring program as part of the GMP. In 2014, about 27 percent of the recycled water produced in the service area was applied to landscapes over the Main Basin. Nitrates and salinity have historically been the primary water quality parameters of concern in recycled water, but nitrates have become less of a concern since 1995 when the City of Livermore Water Reclamation Plant (which, along with DSRSD, is one of the two largest wastewater agencies in the area) stopped nitrifying its effluent. In 2015, Zone 7 completed a Nutrient Management Plan, which provides an assessment of the existing and future groundwater nutrient concentrations relative to the current and planned expansion of recycled water projects and future developments in the Livermore Valley. The Nutrient Management Plan also presents planned actions for addressing positive nutrient loads and high groundwater nitrate concentrations in localized Areas of Concern where the use of onsite wastewater treatment systems (i.e., septic tank systems) is the predominant method for sewage disposal. The Nutrient Management Plan was prepared as a supplement to the SMP; together, they are a Salt and Nutrient Management Plan and have been incorporated into the GMP.

To further manage the water quality in the Main Basin, Zone 7 also runs a Toxic Site Surveillance Program, documenting and tracking sites across the groundwater basin that pose a potential threat to drinking water supplies. Zone 7 works closely with the Regional Board and Alameda County Environmental Health in these efforts. In general, there are two types of contamination threatening the Livermore Valley Groundwater Basin: petroleum-based fuel products and industrial chemical contaminants. In 2014, Zone 7 tracked the progress of 53 sites where groundwater contamination has been detected or contamination is threatening groundwater. More details on the affected sites and their remediation can be found in the Zone 7's *Annual Report for the Groundwater Management Program*.

5.4 Recycled Water

The City does not produce recycled water. It purchases tertiary, disinfected recycled water produced from DSRSD's RWTF, as well as from the LWRP. These two recycled water sources are described below. As was shown in Table 4-2, the projected recycled water demand within the City's service area is estimated to be about 1,800 AFA by 2020.

5.4.1 DSRSD/ East Bay Municipal Utility District (EBMUD) Recycled Water Authority (DERWA) Source

Currently, wastewater from Dublin, Pleasanton and the southern portion of San Ramon are treated at DSRSD's wastewater treatment plant. A portion of the secondary effluent is routed to DSRSD's RWTF for tertiary treatment and distribution through the DERWA facilities. DSRSD coordinates with the planning departments in the cities of Dublin and San Ramon, Alameda and Contra Costa counties, and the U.S. Army Reserve to ensure that recycled water is used where it is available. DSRSD and EBMUD work together to manage recycled water supply demands.

Pleasanton and DSRSD each own 8.5 million gallons per day (mgd) of secondary treatment capacity at the DSRSD wastewater treatment plant (WWTP). Pleasanton maintains the first right to use the secondary effluent produced from wastewater emanating from the City's wastewater collection system for recycling. DSRSD maintains the first right to use secondary effluent produced from the DSRSD collection system for recycling. According to the 2003 DERWA Water Sales Agreement, all recycled water produced by DSRSD is delivered to DERWA for subsequent

wheeling to the EBMUD and DSRSD water service areas. DSRSD tertiary treatment capacity is 9.7 mgd, but is currently undergoing a Phase 2 expansion to increase the Sand Filtration Ultraviolet Treatment Facilities capacity to 16.2 mgd. The Phase 2 expansion of the recycled water facilities is anticipated to be completed in Fall 2018.

DSRSD monitors recycled water uses and files reports with regulatory agencies: the Department of Public Health and the San Francisco Bay Regional Board, in conformance with DSRSD's General Water Reuse Order No. 96-011 (General Order).

The DERWA recycled water system has three components owned by three different agencies:

- DERWA owns the Pump Stations R1 (at the WWTP), R200B, and R200A, as well as reservoirs R100 and R200
- EBMUD owns and operates the recycled water distribution pipeline system contained within its service area and will have two pump stations and a reservoir (future facilities)
- DSRSD owns and operates the recycled water treatment facilities at its wastewater treatment plant that treat wastewater from Dublin, South San Ramon and Pleasanton, and the recycled water distribution pipeline system within its service area, along with three pump stations, R300A, R300B, and R20, and two reservoirs, R20 and R300

The City connects to the DERWA system near the corner of the DSRSD Dedicated Land Disposal site adjacent to Stoneridge Drive near the DSRSD WWTP.

5.4.2 Livermore Water Reclamation Plant Source

The LWRP can produce up to 6.0 mgd, which is approximately 18 AF per day of recycled water. In 2015, the LWRP produced 2,400 AF of recycled water with 2,300 AF used within the Livermore Municipal Service Area. In 2014, the City of Livermore implemented the Residential Recycled Water Program at no charge to the City of Livermore permittees to make it more convenient for Livermore and Cal Water customers to obtain up to 300 gallons of recycled water per visit. In 2014, Livermore provided 73 permittees approximately 1 AF of recycled water. In 2015, interest in the Residential Recycled Water Program increased more than 1,200 percent from the previous year, resulting in Livermore providing 15 AF of recycled water to 898 permittees. Recycled water from the LWRP is used for landscape irrigation at the Ruby Hills housing development located on the east side of the City.

5.5 Summary of Current and Projected Future Water Supplies

Table 5-2 provides a summary of the City's current and projected future water supplies.

Table 5-2. City of Pleasanton Current and Projected Future Water Supplies During Normal Years

Water Source	2015, Actual[a]	2020[b]	2025[b]	2030[b]	2035[b]	2040[b]
Water Purchased from Zone 7, AFA	7,726	12,442	13,200	14,005	14,867	15,764
Groundwater from City Wells, AFA	3,629	3,500	3,500	3,500	3,500	3,500
Total Potable Water, AFA	11,355	15,942	16,700	17,505	18,367	19,264
Recycled Water, AFA	104	1,800	1,800	1,800	1,800	1,800
Total, AFA	11,459	17,742	18,500	19,305	20,167	21,064

(a) Actual 2015 supplies are from City of Pleasanton 2015 UWMP (June 2016), Table 4-4. Assumes that all potable water not supplied by City wells in 2015 was purchased from Zone 7.

(b) Projected supplies are from City of Pleasanton 2015 UWMP (June 2016), Table 4-4. Assumes that City wells will produce the City's GPQ of 3,500 AFA, and that additional potable water needed to meet demands will be purchased from Zone 7.

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6.0 WATER SUPPLY RELIABILITY

> *10910 (c)(4) address "total projected water supplies available…during normal, single dry, and multiple dry water years during a 20-year projection…"*

The following section describes the reliability of the City's various water sources under normal, single-dry, and multiple-dry year conditions. The descriptions provided below have been taken, for the most part, from the City's 2015 UWMP (adopted in June 2016) and Zone 7's 2015 UWMP (adopted in March 2016).

6.1 Zone 7 Potable Water Supply Reliability

The current reliability of the City's potable water supply is largely dependent upon its water supply contract with Zone 7 and Zone 7's water supply reliability policy. The following sections discuss Zone 7's reliability policies and projected reliability in single-dry and multiple-dry years.

6.1.1 Zone 7 Reliability Policy for Municipal & Industrial Water Supplies

On October 17, 2012, the Zone 7 Board of Directors approved a revised Water Supply Reliability Policy, which adopts the following level of service goals to guide the management of Zone 7's treated water supplies as well as its Capital Improvement Program (CIP):

- **Goal 1:** Zone 7 will meet its treated water customers' water supply needs, in accordance with Zone 7's most current Contracts for M&I Water Supply, including existing and projected demands as specified in Zone 7's most recent UWMP, during normal, average, and drought conditions, as follows:
  - At least 85 percent of M&I water demands 99 percent of the time
  - 100 percent of M&I water demands 90 percent of the time
- **Goal 2**: Provide sufficient treated water production capacity and infrastructure to meet at least 80 percent of the maximum month M&I contractual demands should any one of Zone 7's major supply, production, or transmission facilities experience an extended unplanned outage of at least one week.

This revised reliability policy provides Zone 7 with the additional flexibility and time necessary to evaluate, develop and implement cost-effective solutions necessary to allow Zone 7 to continue to provide a reliable, high-quality water supply to its customers in the face of an uncertain water supply future. Changing the second goal to reflect a prolonged outage based on the maximum month instead of the maximum day should allow Zone 7 to develop more cost-effective solutions to major, prolonged outages, while also providing the time necessary to communicate with and obtain a response from its customers.

6.1.2 Zone 7 Water Supply Reliability

The treated potable water that the City receives from Zone 7 is blended from various sources. It meets all Federal and State drinking water requirements. The quality of water delivered to the City depends on the blend of supplies available to Zone 7.

Table 6-1 lists the years that Zone 7 identifies as their historical average, single driest year, and driest multi-year period, also known as the "Base Years." Table 6-2 summarizes the volume of water supply expected by source and the total percentage of water supply expected if there were to be a repeat of the hydrology of that type of year. The water year basis varies depending on the water source; explanatory details are included in Section 7.2 of Zone 7's 2015 UWMP, along with historical percentages of normal delivery.

Table 6-1. Basis of Water Year Data for Various Zone 7 Water Supplies[(a)]

Water Source	Average Year	Single Dry Year	Multiple-Dry Year		
			Year 1	Year 2	Year 3
Arroyo del Valle	1919	1977	1988	1989	1990
SWP - Table A	1964	2014	1990	1991	1992
SWP - Carryover	1964	2014	1990	1991	1992
SWP - Yuba Accord	1964	2014	1990	1991	1992
BBID	1964	2015	1990	1991	1992
From Storage					
Main Basin	1964	2014	1990	1991	1992
Semitropic	1964	2014	1990	1991	1992
Cawelo	1964	2014	1990	1991	1992

(a) Source: Zone 7 2015 UWMP, Tables 7-1 through 7-8.

In the City of Pleasanton 2015 UWMP, projected Normal Year supplies are assumed to satisfy the City's projected Normal Year demands. However, as shown in Table 6-2, purchased supplies from Zone 7 may be subject to reductions during dry years. In the City's 2015 UWMP and this WSA, the City's purchased supplies from Zone 7 during dry years assume the following supply reductions:

- During Single Dry Years, purchased supplies from Zone 7 are assumed to be 75 percent of Normal Year supplies (25 percent reduction in supplies)
- During Multiple Dry Years, purchased supplies from Zone 7 are assumed to be 85 percent of Normal Year supplies (15 percent reduction in supplies)

Table 6-2. Zone 7 Potable Water Supply Reliability, AFA[(a)]

Water Source	Average Year	Single Dry Year	Multiple-Dry Year		
			Year 1	Year 2	Year 3
Arroyo del Valle	7,300-10,300	0	350	520	150
SWP – Table A	50,000	4,000	21,800	12,900	19,300
SWP – Carryover	10,000	10,000	10,000	10,000	10,000
SWP – Yuba Accord	145	676	676	676	676
BBID	2,000	0	2,000	2,000	2,000
From Storage					
Main Basin	9,200	28,000-34,400	12,400	16,100	13,500
Semitropic	0	7,200	10,400	9,100	9,100
Cawelo	0	7,800	10,000	10,000	10,000
Total	78,645	57,676	67,626	61,296	64,726
Percent of Average Year Supply		73.3%	86.0%	77.9%	82.3%

(a) Source: Zone 7 2015 UWMP, Table 7-11.

The following sections discuss the reliability of Zone 7's water supply sources and Zone 7's strategies for managing the risks associated with each supply.

6.1.2.1 Imported Water: State Water Project

Imported surface water from the SWP is by far Zone 7's largest water supply source, providing over 80 percent of the treated water supplied to retail customers. Much of this imported surface water is derived from the Feather River watershed, in the northern part of California, and ultimately flows through the Delta before it is conveyed by the California Aqueduct and the SBA to Zone 7's water facilities. Zone 7's other imported surface water supply, BBID, is also diverted from the Delta and provides water to Zone 7 via the SBA.

The instability of the aging levees in the Delta (including their vulnerability to seismic events and climate change), regulatory uncertainty, water quality issues including saltwater intrusion, and the declining health of the Delta ecosystem, all challenge the long-term reliability of the SWP and, more generally, the water conveyance capability of the Delta.

There are some important water quality considerations associated with the water that is conveyed through the Delta. In 1982, DWR formed the Interagency Delta Health Aspects Monitoring Program to monitor water quality in the Delta for human health protection. The Program was renamed the Municipal Water Quality Investigations Program in 1990. From a municipal water supply perspective, water quality issues in the Delta are associated with salinity from seawater intrusion; wastewater effluent discharges; agricultural drainages from the islands; and recreational activities. Water quality issues of specific concern to Zone 7 include the following:

- Algal byproducts – Parameters of concern include components that cause taste and odor (T&O) and algal toxins. T&O is primarily a problem in the warmer months, when algal blooms may be present. It can affect supplies from the Delta and from Lake Del Valle. Algae produce geosmin and 2 methylisoborneol, which are key taste

and odor causing compounds in surface water supply. Zone 7 currently treats T&O using powdered activated carbon, which is of limited effectiveness under high levels of algal byproducts. Adding ozonation, which is a more effective treatment process, is in Zone 7's CIP, see below. A switch to groundwater supplies may be necessary under high levels of algal byproducts in surface water.

- Total and Dissolved Organic Carbon (TOC/DOC) – Levels of organic carbon affect the amounts of coagulant and disinfectant chemicals used at Zone 7's water treatment plants (WTPs), and therefore, result in higher costs. In addition, the formation of disinfection byproducts (DBPs) is dependent upon the amount of TOC/DOC. Zone 7's WTPs have been able to manage high TOC/DOC by increasing coagulant dosages. However, this operational change results in greater sludge production and limits plant production. Ozone will reduce coagulant and chlorine demands, thus reducing typical chlorination DBPs (disinfection byproducts), but will create other ozonation DBPs such as bromate.
- Turbidity – Like TOC/DOC, turbidity affects the amounts of chemicals used at the WTPs and Zone 7's ability to meet drinking water standards. It also can affect the production capacities of Zone 7's WTPs, requiring increased groundwater production under high demands. Planned ozonation facilities can help address settled water turbidity and reduce impacts on WTP production.
- Salinity or TDS – Salinity is a water quality parameter that has significant impacts on SWP operations and the availability of water. To meet the salinity objectives in the Delta, water exports from the Delta may be restricted, reducing the amount of water supply available during certain times of the year.
- Algal Blooms – In addition to T&O and the threat of algal toxins, algal blooms can significantly impact the performance of the filters through clogging, reducing plant production capacities, and requiring additional groundwater use.

Zone 7 plans to install ozonation facilities at Del Valle Water Treatment Plant in 2019 and at Patterson Pass Water Treatment Plant in 2020. These facilities will provide improved treatment of T&O, TOC/DOC, turbidity, and algal blooms. The facilities are expected to result in more reliable production capacities from the surface water treatment plants.

To protect water quality once the water from the Delta reaches the SBA, recipients of water from the SBA ACWD, Santa Clara Valley Water District, and Zone 7, known collectively as the SBA Contractors) developed the SBA Watershed Protection Program Plan in 2008. The SBA Watershed Protection Program Plan is designed to protect the SBA system, including Lake Del Valle and Bethany Reservoir, from identified potential contaminant sources (e.g., septic tanks) for urban water supply purposes, as well as agricultural, recreational, and environmental uses.

6.1.2.2 Local Storage

Zone 7 has three options for local storage: storage in Lake Del Valle, storage in the Main Basin and, in the future, surface storage in the COL. The COL will also continue to be used for groundwater recharge.

The Main Basin is characterized by relatively good quality groundwater that meets all state and federal drinking water standards. Groundwater is chloraminated to maintain consistent disinfectant residual in the distribution system and to preserve delivered water quality. However, there has been a slow degradation of groundwater quality as evidenced by rising TDS and hardness levels over the last few decades. To address this problem, Zone 7 developed a SMP, which was approved by the Regional Board in 2004. As part of this SMP, Zone 7 completed construction of a wellhead demineralization facility in 2009.

The key constraint on the use of the COL for storage is the duration of the mining activities, which affects when the remainder of the COL will be transferred to Zone 7 ownership, and how much storage is available over time. According to Zone 7's Water Supply Evaluation Update, Lake H is anticipated to be available in the next few years; however, the availability of Lakes A through G may extend well beyond 2030, and may be as late as 2060. Zone 7 continues to work closely with mining companies and quarry operators so planning efforts can be coordinated.

6.1.2.3 Non-Local Storage

In addition to local storage, Zone 7 also has storage contracts with two non-local groundwater banking districts in Kern County: Semitropic and Cawelo. There must be sufficient water flowing through the Delta to facilitate these exchanges, which could be a challenging condition to meet during a drought.

During the recent drought, access to banked water became uncertain because of the historically low Table A allocation, leading to minimal amounts of water moving through the SWP, and the potential cessation of pumping in the Delta to control salinity intrusion. Ultimately, DWR was able to manage salinity so that pumping in the Delta could continue, and with coordination among Zone 7, other SWP contractors, DWR, and banking partners, DWR prioritized the delivery of banked water to Zone 7 and other SBA contractors. Even during the serious drought conditions of 2014 and the minimal 5 percent SWP allocation, Zone 7 was able to successfully recover almost 15,000 AF, or approximately 78 percent of the maximum recovery requested by Zone 7. In 2015, Zone 7 recovered 17,400 AF from storage. Zone 7 will continue to coordinate closely with DWR, other SWP contractors, Semitropic, and Cawelo to ensure the future reliability of the banked water supplies.

Some of Semitropic's wells are affected by arsenic. This is currently being managed through treatment before the affected groundwater water is pumped into the California Aqueduct. Arsenic criteria have been established for this "pump in" by the DWR Facilitation Group to mitigate any impacts to the downstream SWP contractors. Semitropic and the banking partners have developed a coordination process for discussing arsenic treatment. While the presence of arsenic in the Semitropic groundwater bank is likely to increase the cost of this water storage option, it is not likely to affect its overall reliability.

6.2 Groundwater Supply Reliability

The Main Basin is characterized by relatively good quality groundwater that meets all state and federal drinking water standards. Groundwater is chloraminated to maintain consistent disinfectant residual in the distribution system and to preserve delivered water quality. However, there has been a slow degradation of groundwater quality as evidenced by rising TDS and hardness levels over the last few decades. To address this problem, Zone 7 developed a SMP, which was approved by the Regional Board in 2004.

As described in Section 6.2.2 (Groundwater Management) of the City of Pleasanton 2015 UWMP, the City has a GPQ of 3,500 AFA from the Main Basin, which comprises approximately 20 percent of its water supply. The City may also carry over any unused portion of its annual GPQ up to a total of 700 AF for use in subsequent years. GPQ's for the Main Basin were determined based on the natural sustainable yield of the Main Basin. As such, the City's groundwater supply from its GPQ is considered reliable under all hydrologic conditions

6.3 Recycled Water Supply Reliability

The recycled water that the City receives comes from DSRSD's RWTF and the LWRP, which are described in Section 6.5 (Wastewater and Recycled Water) of the City of Pleasanton 2015 UWMP. Wastewater effluent from DSRSD's RWTF is treated to produce Title 22 disinfected tertiary recycled water. The City anticipates no significant changes to the land uses in DSRSD's wastewater service area; therefore, it does not anticipate any changes to the quality of the wastewater effluent that it treats to recycled water quality. The City does not expect recycled water quality issues to impact its ability to reliably deliver recycled water to its customers in the future.

Unlike potable water supplies, reliability and vulnerability of the City's recycled water supply are related to seasonal fluctuations in production of wastewater in the City's service area, but are not generally subject to climatic fluctuations. For example, during the dry season, wastewater discharge is low but recycled water demands are high. However, the volume of wastewater produced in the City's service area (5,000 AF in 2015) is considerably larger than the projected recycled water demand (1,800 AF). Therefore, the City's recycled water supply is considered reliable under all hydrologic conditions.

6.4 Supply Reliability Summary

Table 6-3 summarizes the reliability of the City's projected supplies during dry years based on the assumptions in the City's 2015 UWMP.

Table 6-3. Projected Pleasanton Water Supplies During Dry Years, AFA

Hydrologic Condition	Source	% of Normal Year	2020	2025	2030	2035	2040
Single Dry Year[a]	Zone 7	75	9,332	9,900	10,504	11,150	11,823
	Groundwater Supplies	100	3,500	3,500	3,500	3,500	3,500
	Recycled Water Supplies	100	1,800	1,800	1,800	1,800	1,800
	Total Supply		14,632	15,200	15,804	16,450	17,123
Multiple Dry Year[b]	Zone 7	85	10,576	11,220	11,904	12,637	13,399
	Groundwater Supplies	100	3,500	3,500	3,500	3,500	3,500
	Recycled Water Supplies	100	1,800	1,800	1,800	1,800	1,800
	Total Supply		15,876	16,520	17,204	17,937	18,699

(a) Based on City of Pleasanton 2015 UWMP (June 2016), Table 7-5.
(b) Based on City of Pleasanton 2015 UWMP (June 2016), Tables 7-8 and 7-10.

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7.0 DETERMINATION OF WATER SUPPLY SUFFICIENCY BASED ON THE REQUIREMENTS OF SB 610

10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the Proposed Project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

10911 (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or will be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies.

Table 7-1 summarizes the projected availability of the City's existing and planned future potable water supplies and the City's projected water demands in Normal, Single Dry and Multiple Dry years through 2040. As described in Section 2.5, the projected potable water demands for the Proposed Project are greater than those accounted for in the City's 2015 UWMP for the Proposed Project area. Because of this, water demands within the City's water service area are expected to exceed the City's water supplies, as projected in the City's 2015 UWMP, by 99 AFA during Normal, Single Dry, and Multiple Dry water years between 2020 and 2040. This amount represents less than one percent (< 1%) of the available water supplies projected in the City's 2015 UWMP for each of these hydrologic conditions. Although the City's projected demands through 2040, including the demands from the Proposed Project, are expected to slightly exceed the water supplies projected in the City's 2015 UWMP, the City's available water supplies are projected to be sufficient to meet the projected water demands for the Proposed Project for the following reasons:

- Long-term water supply planning, especially for a 20-year forecast, is a highly variable process, and the projected increase in demands due to the Proposed Project of less than one percent of total City supplies is well within the margin of error for projecting future water demands and available water supplies.
- The City plans to continue to manage potable water demands within its water service area through conservation efforts and its recycled water program. However, in the event that actual future demands slightly exceed projected demands, it is anticipated that the City will have sufficient potable water supplies to meet these demands.
- As shown in Table 5-2, future supply projections in the 2015 UWMP assumed that the City would pump groundwater at the maximum permitted rate of 3,500 AFA and that any remaining potable water demand would be met by supplies purchased from Zone 7. Zone 7 is aggressively planning for water supply programs and projects to meet the water demands of its customers through buildout of adopted general plans. According to Zone 7's 2015 UWMP, Zone 7 does not anticipate any water supply shortage during Normal, Single Dry, and Multiple Dry water years through 2035 and, based on the 2015 UWMP analysis, shows that excess supplies are available under normal and dry conditions through 2035[3]. The additional demand projected for the Proposed Project could likely be served by these planned excess supplies. Therefore,

[3] Zone 7 2015 UWMP Tables 7-12, 7-13 and 7-14.

it is assumed that Zone 7 has sufficient supplies to accommodate the slight increase in the City's total demands due to the Proposed Project.

Therefore, pursuant to Water Code section 10910(c)(4), and based on the technical analyses described in this WSA, the City finds that the total projected water supplies determined to be available for the Proposed Project during Normal, Single Dry, and Multiple Dry water years during a 20-year projection will meet the projected water demand associated with the Proposed Project, in addition to existing and planned future uses.

Table 7-1. City of Pleasanton Summary of Potable Water Demand Versus Supply During Hydrologic Normal, Single Dry, and Multiple Dry Years

Hydrologic Condition		Supply and Demand Comparison, AFA				
		2020	2025	2030	2035	2040
Normal Year						
Available Potable Water Supply[(a)]		15,942	16,700	17,505	18,367	19,264
Potable Water Demand	2015 UWMP Projection (No Project)[(b)]	15,942	16,700	17,505	18,367	19,264
	Increase due to Project[(c)]	99	99	99	99	99
	Total Demand with Project	16,041	16,799	17,604	18,466	19,363
Potential Deficit		99	99	99	99	99
Percent Shortfall of Demand		0.6%	0.6%	0.6%	0.5%	0.5%
Single Dry Year						
Available Potable Water Supply[(d)]		12,832	13,400	14,004	14,650	15,323
Potable Water Demand	2015 UWMP Projection (No Project)[(e)]	12,832	13,400	14,004	14,650	15,323
	Increase due to Project[(c)]	99	99	99	99	99
	Total Demand with Project	12,931	13,499	14,103	14,749	15,422
Potential Deficit		99	99	99	99	99
Percent Shortfall of Demand		0.8%	0.7%	0.7%	0.7%	0.6%
Multiple Dry Years 1, 2, and 3						
Available Potable Water Supply[(d)]		14,076	14,720	15,404	16,137	16,899
Potable Water Demand	2015 UWMP Projection (No Project)[(f)]	14,076	14,720	15,404	16,137	16,899
	Increase due to Project[(c)]	99	99	99	99	99
	Total Demand with Project	14,175	14,819	15,503	16,236	16,998
Potential Deficit		99	99	99	99	99
Percent Shortfall of Demand		0.7%	0.7%	0.6%	0.6%	0.6%

(a) From Table 5-2 of this WSA.
(b) From Table 4-2 of this WSA.
(c) From Table 2-3 of this WSA.
(d) From Table 6-3 of this WSA.
(e) From Table 4-3 of this WSA.
(f) From Table 4-4 of this WSA.

8.0 WATER SUPPLY ASSESSMENT AND VERIFICATION APPROVAL PROCESS

> *10910 (g)(1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.*

The Pleasanton City Council must approve this WSA at a regular or special meeting. Furthermore, this WSA must be included in the Draft EIR being prepared for the Proposed Project.

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9.0 REFERENCES

City of Pleasanton 2015 Urban Water Management Plan, prepared by West Yost Associates, June 2016.

Draft Environmental Impact Report for the Pleasanton Downtown Specific Plan Update, Chapter 2: Project Description, prepared by Dyett & Bhatia, May 2018.

Groundwater Management Plan for Livermore-Amador Valley Groundwater Basin, prepared by Jones & Stokes, September 2005.

Zone 7 Water Agency 2015 Urban Water Management Plan, prepared by Zone 7 Water Agency, March 2015.

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