Appendix A

Notice of Preparation/Initial Study and Comments Received Regarding the Notice of Preparation

Notice of Preparation
Sebastopol General Plan Update
Draft Program Environmental Impact Report

Date: March 1, 2016

To: State Clearinghouse
State Responsible Agencies
State Trustee Agencies
Other Public Agencies
Organizations and Interested Persons

Lead Agency: City of Sebastopol Planning Department
Kenyon Webster, Planning Director
Planning Department
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Sebastopol, CA 95472
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Summary

The City of Sebastopol (City) will serve as Lead Agency in the preparation of a programmatic Environmental Impact Report (Program EIR) addressing the comprehensive update to the City's General Plan. This programmatic EIR will address the environmental impacts associated with the adoption and implementation of the Sebastopol General Plan (Sebastopol General Plan, or General Plan). Information regarding the project description, project location, public outreach process, and topics to be addressed in the Draft EIR is provided below. Additional information, including background documents and the preliminary Draft Sebastopol General Plan, is available at: www.sebastopol.generalplan.org

Submitting Comments

Public agencies and interested parties are invited to submit comments in writing as to the scope and content of the EIR. Public agencies submitting comments are encouraged to identify a contact person and any key agency concerns regarding the proposed project. The City needs to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection to the proposed project. Public and agency comments will be received over a 30-day period, **ending on March 31, 2016**. All comments must be received prior to 5:00 p.m. on March 31, 2016. In the event that no response

or request for additional time is received by any Responsible or Trustee Agency by the end of the review period, the Lead Agency may presume that the Responsible Agency has no response to make [CEQA Guidelines Section 15082(b)(2)].

Please send your responses to Kenyon Webster, Planning Director, at the address shown above.

Scoping Meeting

The City will conduct a scoping meeting to receive public input on the scope of the Sebastopol General Plan EIR. At this meeting, individuals, agencies, and organizations are encouraged to provide the City with their input on the topics and analysis for the EIR.

The scoping meeting will be held with the Planning Commission on Tuesday, March 22, 2016 at 7:00 p.m. at the Sebastopol Youth Annex, located at 425 Morris Street, Sebastopol, CA 95472.

Project Characteristics and Background

Project Location and Setting

Sebastopol was incorporated in 1902, primarily to address critical public health concerns. Sebastopol is a 'general law' Council-Manager city with five Council members elected at large. Boards and Commissions include: Planning Commission; Design Review Board/Tree Board; Complete Streets Committee; and Public Arts Committee.

Sebastopol has a unique and highly-valued small-town character. A community of about 7,500, located in the San Francisco/North Bay region, Sebastopol is the hub of West Sonoma County. While the incorporated area is small, Sebastopol serves a much larger unincorporated area stretching to the Pacific Ocean and the Russian River. The City's 'market area' comprises a population of approximately 40,000-50,000 people, who, to varying degrees, use Sebastopol as their 'town' for goods, services, and recreational and cultural activities. Thus, the town has far more economic activity, traffic, and recreational and cultural services than would be apparent based simply on the incorporated area's population.

The City has an extraordinary location, being surrounded by vineyards, orchards, rural residential and wetlands, located minutes from the Sonoma Coast and the Russian River area, and just 60 miles north of San Francisco, one of the world's premier urban visitor destinations. Sebastopol is at the crossroads of two State Highways, Highways 116 and 12, and is just eight miles from Sonoma County's largest city, Santa Rosa. Sebastopol has an active population, highly engaged in community affairs. Although a very small city, Sebastopol has been a leader in community planning, adopting a number of innovative policies and programs.

Excepting the Housing Element, the City's current General Plan was adopted in 1994 and includes the following elements:

- Land Use
- Transportation
- Conservation, Parks and Open Space
- Housing
- Community Identity
- Economic Vitality
- Safety

The City has limited developable areas and a history of few annexations since the current General Plan was adopted. The City has a voter-approved Urban Growth Boundary and a Growth Management Program, both of which are intended to preserve the small-town character of the town, discourage sprawl, and preserve open space, agriculture and environmental resources on the town's perimeter.

Study Area

There are three key boundary lines addressed by the General Plan. These include the city limits, the Sphere of Influence (SOI), and the Urban Growth Boundary, as shown on Figure 2.

City Limits: Includes the area within the City's corporate boundary, over which the City exercises land use authority and provides public services.

Sphere of Influence (SOI): The probable physical boundary and service area of the City, as adopted by the Local Agency Formation Commission (LAFCO). The SOI includes both incorporated and unincorporated areas within which Sebastopol will have the primary responsibility for the provision of public facilities and services. Lands within the SOI but outside existing city limits may be considered for development after annexation.

Until that time, the area within the SOI is under the jurisdiction of Sonoma County and its General Plan; however, City policies will influence the County's considerations of development proposals for lands within the SOI.

Urban Growth Boundary (UGB): The City's 1994 General Plan established an Urban Growth Boundary (UGB). The Urban Growth Boundary is a line beyond which development will not be allowed, except for public parks and public schools. Measure O, approved by Sebastopol voters in November 1996, amended the 1994 General Plan to reaffirm the City's UGB and amend the 1994 General Plan to keep the UGB in effect until December 31, 2016. The UGB is shown on Figure 2. Measure O also amended the 1994 General Plan to prohibit extension of City services outside the UGB, except under specific extraordinary circumstances.

Project Description

The City of Sebastopol is preparing a comprehensive update to its existing General Plan, which was last comprehensively updated in 1994. The General Plan Update is expected to be complete in late 2016.

The overall purpose of the Sebastopol General Plan is to create a policy framework that articulates a vision for the city's long-term physical form and development, while preserving and enhancing the quality of life for Sebastopol residents, and increasing opportunities for high-quality local job growth balanced with robust environmental sustainability principles. The key components of the General Plan will include broad goals for the future of Sebastopol, and specific policies and actions that will help implement the stated goals.

General Plan Elements

The Sebastopol General Plan will include a comprehensive set of goals, policies, and actions (implementation measures), as well as a revised Land Use Map (Figure 2). The State requires that the General Plan contain seven mandatory elements: Land Use, Circulation, Housing, Open Space, Noise, Safety, and Conservation. The Sebastopol General Plan will include all of the State-mandated elements, as well as several optional elements, including: Community Services and Facilities, Economic Vitality, Community Character, and Community Health and Wellness.

- The **Land Use Element** designates the general distribution and intensity of residential, commercial, industrial, open space, public/semi-public, and other categories of public and private land uses. The Land Use Element includes the Land Use Map, which identifies land use designations for each parcel in the city limits and SOI/UGB (Figure 2).

- The **Circulation Element** correlates closely with the Land Use Element, and identifies the general locations and extent of existing and proposed major thoroughfares, transportation routes, and alternative transportation facilities necessary to support a multi-modal transportation system. This element is intended to facilitate mobility of people and goods throughout Sebastopol by a variety of transportation modes, with an emphasis on bicycle, pedestrian, and transit.

- The **Community Services and Facilities Element** includes goals, policies, and actions that address public services and facilities, including: parks, trails, and recreation facilities; police services; fire protection services; schools; and civic, library, medical, and other community facilities. While not specifically required by State law for inclusion in the General Plan, the Community Services and Facilities Element is a critical component in meeting the infrastructure and public services needs of businesses and residents.

- The **Conservation and Open Space Element** addresses the conservation, development, and use of natural resources, riparian environments, native plant and animal species, soils, mineral deposits, cultural/historical resources, air quality, and alternative energy. It also details plans and measures for preserving open space for natural resources and the managed production of resources.

- The **Noise Element** establishes standards and policies to protect the community from the harmful and annoying effects of exposure to excessive noise levels. This element includes strategies to reduce land use conflicts that may result in exposure to unacceptable noise levels.

- The **Community Character Element** focuses on the ways in which Sebastopol's buildings, streets, and open spaces work together to define the City's sense of place. The purpose of this Element is to provide an overall policy framework for the continued design improvement and evolution of the City.

- The **Safety Element** establishes policies and programs to protect the community from risk associated with geologic, flood, and fire hazards, as well as setting standards for emergency preparedness.

- The **Economic Vitality Element** seeks to sustain and diversify the city's economy, recognizing the importance of supporting existing and local businesses while broadening and expanding the employment base and economic opportunities within the city. Long-term fiscal sustainability will be supported by economic growth from increasing the range of business, commercial services, and high-quality jobs in the city. Providing a broader economic base is intended to improve the city's economic vitality while increasing access for residents to local goods and services and local employment opportunities.

- The **Community Health and Wellness Element** addresses a wide range of community health topics, including access to healthy foods, substance abuse, access to medical care, and maintaining healthy lifestyles.

Goals, Policies, and Actions

Each element of the Sebastopol General Plan contains a series of goals, policies, and actions. The goals, policies, and actions provide guidance to the City on how to direct change, manage growth, and manage resources over the 20-year life of the General Plan. The following provides a description of each and explains the relationship of each:

- A **goal** is a description of the general desired result that the City seeks to create through the implementation of the General Plan.

- A **policy** is a specific statement that guides decision-making as the City works to achieve its goals and objectives. Once adopted, policies represent statements of City regulations. The General Plan's policies set out the standards that will be used by City staff, the Planning Commission, and the City Council in their review of land development projects, resource protection activities, infrastructure improvements, and other City actions. Policies are on-going and require no specific action on behalf of the City.

- An **action** is an implementation measure, procedure, technique, or specific program to be undertaken by the City to help achieve a specified goal or implement an adopted policy. The City must take additional steps to implement each action item in the General Plan. An action item is something that can and will be completed.

General Plan Land Use Map

The General Plan Land Use Map identifies land use designations for each parcel within the city of Sebastopol and the City's SOI/UGB. The Sebastopol General Plan Land Use Map is attached as Figure 2.

General Plan Land Use Designations

The Land Use Element of the Sebastopol General Plan defines various land use designations by their allowable uses, minimum parcel sizes, and maximum development densities. The following describes the proposed land use designations for the General Plan. Table 1 shows the total acreage for each land use designation shown on the proposed Land Use Map.

Very Low Density Single Family Residential: Designates areas suitable for single family dwellings at a density up to one unit per acre. Smaller existing parcels within this designation would not be precluded from developing one housing unit.

Low Density Single Family Residential: Designates areas suitable for single family dwellings at a density of 1.1 to 2.5 units per acre. Smaller existing parcels within this designation would not be precluded from developing one housing unit.

Medium Density Single Family Residential: Designates areas suitable for single family dwellings at a density of 2.6 to 12.0 units per acre. Smaller existing parcels within this designation would not be precluded from developing one housing unit.

High Density Single Family Residential: Designates areas suitable for multifamily dwellings at a density of 12.1 to 25 units per acre. This designation is suitable for duplexes, apartments, townhouses, and other attached dwelling units.

Commercial/Office: This designation provides areas for commercial and office uses with off-street parking and/or clusters of street-front stores. This designation permits primarily local-serving retail establishments, specialty shops, banks, professional offices, motels, professional, administrative, medical, dental, and business offices, bed and breakfast users, and business and personal services, along with ancillary commercial and service uses. This designation is typically assigned to parcels, located on a major arterial street, that can provide sufficient land for commercial establishments that do not benefit from high-volume pedestrian concentrations found Downtown. The following types of retail uses are discouraged in this land use designation: factory outlets; large regional-serving shopping centers; and other similar retail uses generating high traffic volumes. Maximum floor area ratio (FAR) shall not exceed 1.5. Residential uses are permitted as a secondary use to the primary commercial uses permitted in this land use designation if generally located above the ground floor at the High Density Residential density of 12.1 to 25 units per acre. The residential space will not be counted in calculating the FAR for a development.

Downtown Core: This designation applies to Sebastopol's Downtown and permits office, commercial, and retail uses, as well as mixed-use residential developments. Residential uses are permitted at a density of 15.1 to 44 units per acre if combined with commercial land uses, such as office and retail. Projects shall achieve a minimum FAR of 1.0, and the maximum FAR shall not exceed 2.5 (not including the residential use). This designation is

intended to implement the Downtown Plan and enhance the vitality and character of Sebastopol's historic commercial area. Housing is encouraged on upper stories.

Office/Light Industrial: This designation synthesizes Office and Light Industrial classifications and is intended to promote well planned, integrated business parks, which will serve as major employment center within the community. The Office/Light Industrial designations only applies to sites of three (3) acres or larger and must be implemented through the PC-Planned Community zoning process. Land uses within business parks shall be limited to non-polluting, "clean" industries and businesses with primary permitted uses including corporate and administrative offices and research development uses. Ancillary uses shall be permitted under this designation, which may include warehousing and distribution, exercise facilities, child care uses, and food service uses which provides support services to primary uses. FAR shall not exceed 1.5.

Light Industrial: This designation provides for a wide variety of commercial, wholesale, service, and processing uses which do not generate excessive adverse environmental impacts. Other uses permitted in this designation include office ancillary to industrial uses; warehousing and agricultural products sales and services; auto sales and repair; food and drink processing; construction yards; research and development, laboratories, light manufacturing; and similar uses. Residential uses are permitted as a secondary use to the primary light industrial uses permitted in this land use designation at the High Density Residential density of 12.1 to 25 units per acre. Maximum FAR shall not exceed 0.75 (not including the residential use).

Open Space: This designation applies to areas of land which are essentially unimproved and devoted to the preservation of natural resources, agriculture, outdoor recreation, and for the maintenance of public health and safety. The only structures permitted are shelters, restrooms, storage sheds, and other structures needed to accommodate public use or provide for maintenance of the land. Maximum FAR shall not exceed 0.10.

Parkland: This designation applies to existing and proposed active and passive parks, and linear parks (landscaped paths) in urban areas. Structures allowed are shelters, restrooms, storage sheds, other structures needed to accommodate public use or provide for maintenance of the land, and recreational facilities. Maximum FAR shall not exceed 0.10.

Community Facilities: This designation includes public buildings and facilities, utility facilities and related easements, public libraries, city offices, fire and police stations, and school sites. Maximum FAR shall not exceed 2.0.

Table 1: Land Use Designation Acreages		
Land Use Designation	**Total Acres**	
	City Limits	**SOI/UGB**
Very Low Density Residential	7.40	68.95
Low Density Residential	81.17	22.03
Medium Density Residential	356.35	67.00
High Density Residential	148.58	6.38
Downtown Core	50.83	--
Commercial Office	101.38	--
Office / Light Industrial	13.31	--
Light Industrial	29.02	44.78
Open Space	115.65	10.37
Parkland	19.11	--
Community Facilities	93.17	--
Right of Way	171.45	15.54
Totals	**1187.42**	**235.05**

General Plan Outreach and Public Input

Visioning Workshops

In April and May 2014, the General Plan Update team held two public visioning workshops and a housing workshop to help kick-off the General Plan Update process. City residents and stakeholders attended workshops at the Sebastopol Center for the Arts. The workshops provided an opportunity for the public to offer their thoughts on what they value about their community and the city, and what important issues should be addressed in updating the General Plan.

Each workshop included a presentation by the consultant team that explained the role of the General Plan, an overview of the General Plan Update process, and an opportunity for the workshop participants to ask questions and seek clarification on the process and the role of the community. Workshop participants were asked to complete activities and exercises in order to provide information to the General Plan Update team. Each workshop focused on different themes and topics to be addressed in the General Plan. A summary of the visioning workshops is provided in Chapter 2.0 of the Issues and Opportunities Report, which is available for review online at: www.sebastopol.generalplan.org.

Online Surveys and Polls

City staff and the consultant team developed an online survey to gather additional information from the public related to the General Plan Update. The online survey was available through the General Plan Update website, and was developed to pose similar questions to those posed at the visioning workshops, and to gather additional details regarding City service levels, residential homeownership, employment locations, and economic development priorities. The survey included 21 specific questions, and was completed or partially completed by approximately 700 people. Detailed survey results and responses are contained in Appendix C of the Issues and Opportunities Report, which is available for review online at: www.sebastopol.generalplan.org.

General Plan Advisory Committee (GPAC)

The City Council appointed a 16-member General Plan Advisory Committee (GPAC), which consisted of members from the Planning Commission, local business owners, residents, and the community at-large. The GPAC collaborated with City staff and the General Plan Update consultant team throughout the development of the General Plan. The GPAC met 12 times between July 2014 and December 2015, to identify key issues and challenges that Sebastopol faces over the next 20-30 years, and to develop the comprehensive set of goals, policies, and actions contained in the General Plan. Each GPAC meeting was open to the public, and numerous members of the public and other local interested agencies attended the meetings and provided detailed input to the GPAC.

City Council and Planning Commission Workshops

The City Council and Planning Commission has held, and continues to hold, public workshops and hearings to review and consider the goals and policies of the existing General Plan, review input from the Visioning Workshops, receive information relevant to the specific topics addressed at the GPAC meetings, and provide specific direction and guidance to staff and the consultant team regarding how goals should be achieved and how to address current issues in the General Plan Update.

Program EIR Analysis

The City, as the Lead Agency under the California Environmental Quality Act (CEQA), will prepare a Program Environmental Impact Report for the Sebastopol General Plan. The City's General Plan will be comprehensive in scope. The EIR will be prepared in accordance with CEQA, implementing the CEQA Guidelines (Guidelines), relevant case law, and City procedures. The Sebastopol General Plan is considered a "project" under CEQA, and is therefore subject to CEQA review. As a policy document, the General Plan provides guidance and sets standards for several areas of mandatory environmental review for later "projects" that would be undertaken by local government and the private sector.

The EIR will analyze potentially significant impacts associated with adoption and implementation of the Sebastopol General Plan. In particular, the EIR will focus on areas of planned land use changes in the city. Figure 2 shows the Draft Land Use Map for the Sebastopol General Plan.

Pursuant to Section 15063(a) of the CEQA Guidelines, no Initial Study will be prepared for the proposed project. The EIR will evaluate the full range of environmental issues contemplated under CEQA and the CEQA Guidelines. At this time, the City anticipates that EIR sections will be organized in the following manner:

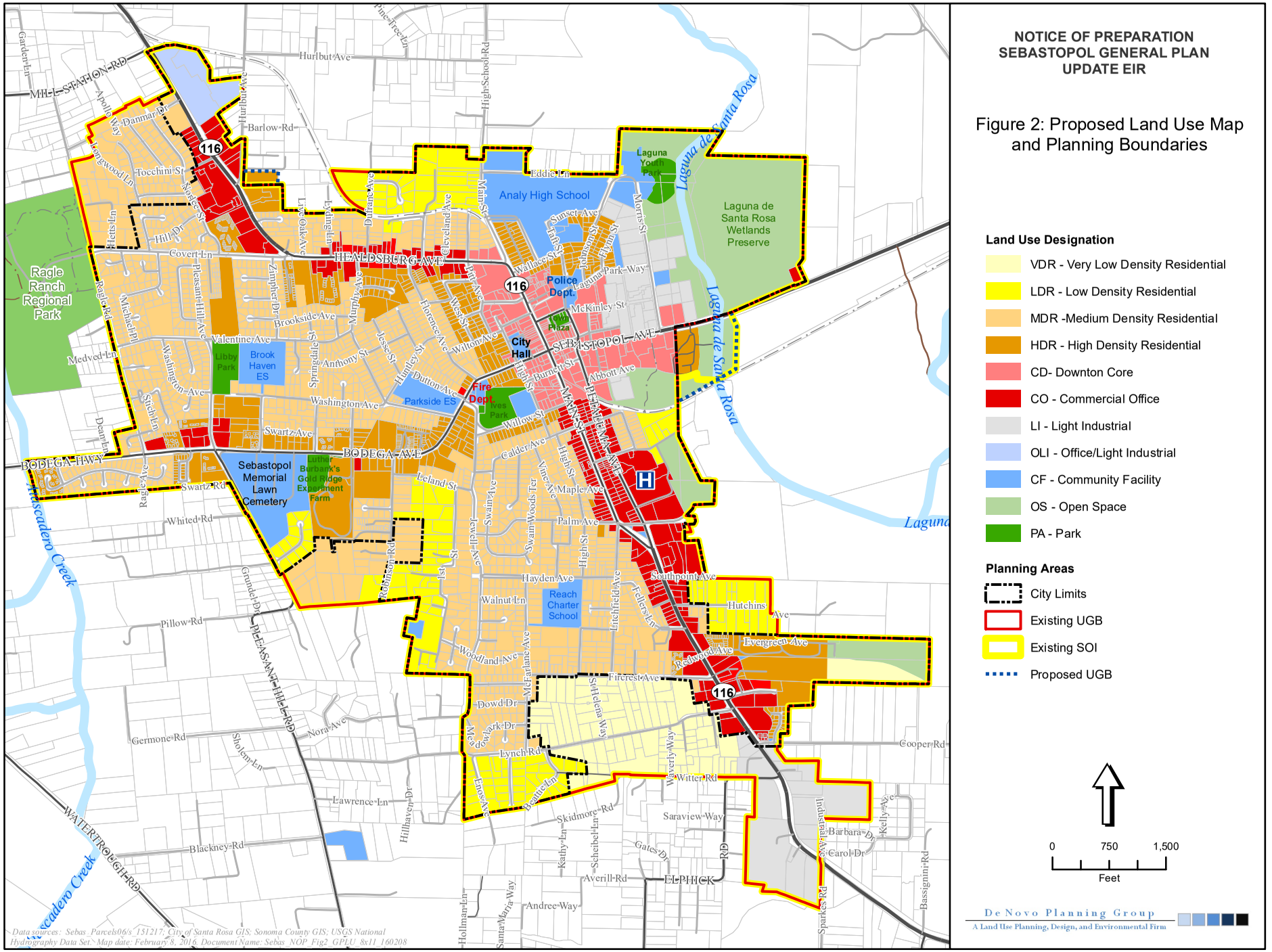
- Aesthetics and Visual Resources
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Mineral Resources
- Greenhouse Gases and Climate Change
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Population
- Noise
- Public Services and Recreation
- Transportation and Circulation
- Utilities
- Mandatory Findings of Significance/Cumulative Impacts

NOTICE OF PREPARATION
SEBASTOPOL GENERAL PLAN UDATE EIR

Figure 1: Project Location

Sources: CalAtlas. Map date: February 5, 2016.

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm


NOTICE OF PREPARATION
SEBASTOPOL GENERAL PLAN
UPDATE EIR
Figure 2: Proposed Land Use Map and Planning Boundaries
Land Use Designation
VDR - Very Low Density Residential
LDR - Low Density Residential
MDR -Medium Density Residential
HDR - High Density Residential
CD- Downton Core
CO - Commercial Office
LI - Light Industrial
OLI - Office/Light Industrial
CF - Community Facility
OS - Open Space
PA - Park
Planning Areas
City Limits
Existing UGB
Existing SOI
Proposed UGB
0
750
1,500
Feet
De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm
Laguna de Santa Rosa Wetlands Preserve
Ragle Ranch Regional Park
Analy High School
Laguna Youth Park
Police Dept.
City Hall
Fire Dept.
Plaza
Ives Park
Brook Haven ES
Parkside ES
Libby Park
Sebastopol Memorial Lawn Cemetery
Luther Burbank's Gold Ridge Experiment Farm
Reach Charter School
SEBASTOPOL AVE
BODEGA AVE
HEADSBERG AVE
BODEGA HWY
MILL STATION RD
PLEASANT HILL RD
WATERTROUGH RD
ELPHICK RD
Laguna de Santa Rosa
Laguna
Atascadero Creek
Data sources: Sebas_Parcels06/s_151217; City of Santa Rosa GIS; Sonoma County GIS; USGS National Hydrography Data Set. Map date: February 8, 2016. Document Name: Sebas_NOP_Fig2_GPLU_8x11_160208

Received 3/28/16 - KW

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Edmund G. Brown Jr., Governor

March 21, 2016

Kenyon Webster
City of Sebastopol
7120 Bodega Ave
Sebastopol, CA 95472

RE: SCH#2016032001, Sebastopol General Plan Update, Sonoma County

Dear Ms. Webster:

The Native American Heritage Commission has received the Notice of Preparation (NOP) 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: sharaya.souza@nahc.ca.gov.

Sincerely,

Sharaya Souza
Staff Services Analyst
cc: State Clearinghouse

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 4
P.O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5528
FAX (510) 286-5559
TTY 711
www.dot.ca.gov

Serious Drought.
Help save water!

March 29, 2016

SONVAR179
SON-VAR-VAR
SCH # 2016032001

Mr. Kenyon Webster
Planning Department
City of Sebastopol
7120 Bodega Avenue
Sebastopol, CA 95472

Sebastopol General Plan Update – Notice of Preparation

Dear Mr. Webster:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Sebastopol General Plan Update. Caltrans' new mission, vision, and goals signal a modernization of our approach to California's transportation system, in which we seek to reduce statewide vehicle miles traveled (VMT) and increase non-auto modes of active transportation. Caltrans plans to increase non-auto mode shares by 2020 through tripling bicycle, and doubling pedestrian and transit. Also, these targets support the Metropolitan Transportation Commission's (MTC) Sustainable Communities Strategy, which promotes the increase of non-auto mode shares by ten percentage points and a decrease in automobile VMT per capita by ten percent. Our comments are based on the Notice of Preparation.

Project Understanding
The proposed project is a comprehensive update to the City of Sebastopol's (City) General Plan, which was last comprehensively updated in 1994. The General Plan identifies the community's vision for the future and would be updated to reflect current issues and policies. Proposed updates include sets of goals, policies, and actions that the City has identified for each various plan element. These elements include: Land Use, Circulation, Community Services and Facilities, Conservation and Open Space, Noise, Community Character, Safety, Economic Vitality, Community Health and Wellness, and Housing. The City is located in the southern portion of Sonoma County with the cities of Santa Rosa and Rohnert Park positioned to the west. Regional access to the City is gained via State Route (SR) 116 and SR 12.

Traffic Impacts
One of Caltrans' ongoing responsibilities is to collaborate with local agencies to reduce potential adverse impacts of local developments to insignificance on the State highway system (SHS). State

facilities that transverse the City's jurisdiction are the shared responsibility of the State and the City; Caltrans asks that this be recognized in the General Plan update. We also recommend that the City engage in continuous, coordinated consultation with Caltrans regarding plans to mitigate traffic impacts to the SHS.

Traffic Impact Fees
Please identify traffic impact fees to be used for mitigation on local development projects. Development plans should require traffic impact fees based on projected trip generation and/or associated cost estimated for active transportation facilities necessitated by development. Scheduling and costs associated with planned improvements on State right-of-way should be listed, in addition to identifying viable funding sources.

Traffic Impact Study
If future proposed projects under the General Plan update have potential impacts to the structure, safety, or operations of the SHS, based on the project's location and potential for significant traffic impacts, Caltrans requests a Traffic Impact Study (TIS) to assess the impacts on the SHS and adjacent road network. We recommend using Caltrans' *Guide for the Preparation of Traffic Impact Studies* (TIS Guide) for determining which scenarios and methodologies to use in the analysis. The guide is available at the following website address: http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf.

Multimodal Planning
The plan should ensure the connection of existing bike lanes, sidewalks, and multi-use trails to facilitate walking and biking to nearby jobs, neighborhood services, and transit. Providing these connections with streets configured for alternative transportation modes will reduce VMT by promoting usage of nearby Sonoma County Transit Routes 20, 22, 24, and 26.

Successful long-term implementation of the Complete Streets policy can help revitalize communities, and they can give people more options to lower transportation costs by using public transit, walking, or bicycling rather than driving to reach their destinations. Moreover, the elements to Complete Streets reduce traffic congestion and greenhouse gas emissions, create walkable communities (with healthier and more active residents), and eliminate barriers for the elderly, children, and people with disabilities.

We also encourage you to develop Travel Demand Management (TDM) policies to promote smart mobility and reduce regional VMT and traffic impacts to the SHS. Please consider the TDM options below. For information about parking ratios, please see MTC's report, *Reforming Parking Policies to Support Smart Growth*, or visit the MTC parking webpage: http://www.mtc.ca.gov/planning/smart_growth/parking.

- Project design to encourage walking, bicycling, and convenient transit access;
- Lower parking ratios;
- Car-sharing programs;
- Designated bicycle parking;
- Formation of Transportation Management Associations (TMA) in partnership with other

developments in the area,

- Aggressive trip reduction targets with Lead Agency monitoring and enforcement;
- Reducing headway times of nearby transit routes; and
- Transit fare incentives such as such as subsidized transit passes on a continuing basis.

Habitat Restoration and Management

Where Caltrans' programs share stewardship responsibilities for habitat, species and/or migration routes, project-level activities related to habitat restoration and management should be done in coordination with local and regional Habitat Conservation Plans and with Caltrans.

Encroachment Permit

Please be advised that any work or traffic control that encroaches onto the State right-of-way (ROW) requires an encroachment permit that is issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to the following address: David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. See the website linked below for more information: http://www.dot.ca.gov/hq/traffops/developserv/permits

Should you have any questions regarding this letter or require additional information, please contact Cole Iwamasa at (510) 286-5534 or cole.iwamasa@dot.ca.gov.

Sincerely,

PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

Cc: State Clearinghouse

COUNTY OF SONOMA
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403-2829
(707) 565-1900 FAX (707) 565-1103

29 March 2016

Kenyon Webster, Planning Director
City of Sebastopol
Planning Department
7120 Bodega Avenue, Sebastopol, CA 95472
kwebster@cityofsebastopol.org

Re: NOP FOR THE GENERAL PLAN UPDATE PROGRAM EIR

Dear Kenyon:

The County of Sonoma appreciates the opportunity to review and comment on the Notice of Preparation (NOP) for the City of Sebastopol's General Plan Update Program Environmental Impact Report (EIR). The County strongly supports the General Plan's stated vision to enhance quality of life, increase high-quality local jobs, and include environmental sustainability principles in the city's long-term development. With respect to the NOP for the Draft EIR, the County submits the comments below for the City's consideration.

Climate Change
The EIR should include the impact of the General Plan on climate change. The EIR should describe how it interacts with the Community Climate Action Plan and be consistent with that document.

Groundwater
The EIR should include a discussion of groundwater and the City's jurisdiction within the Sustainable Groundwater Management Act. The General Plan should identify proposed groundwater usage, groundwater recharge opportunities, and overall water conservation opportunities and consumption at buildout.

Health
The EIR should include the General Plan's impact on public health, including access to health services, access to healthy food, non-vehicular transportation options, etc. The County's Health Action group publishes Action Plans every three years. These plans include policies that any jurisdiction can adopt, with an overarching goal to make Sonoma County the healthiest county in California by 2020.

Urban Growth Boundary (UGB) Expansion
The EIR should include analysis on the proposed expansion of the UGB on the northern and eastern sides of the city. The proposed UGB expansion does not include lands within Community Separators. Given their location within the Laguna, potential opportunities for and impacts to biotic resources on the eastern parcels should be

included.

The northern parcel (APN 060-250-064) has a County General Plan land use designation of Rural Residential with a density of five acres per dwelling unit. The eastern parcels (APNs 060-060-001 and 060-120-015) have a County General Plan designation of Diverse Agriculture with a density of 40 acres per dwelling unit. The potential growth-inducing impacts with the density increases should be included.

Thank you for the opportunity to provide input. We sincerely appreciate the visioning efforts and dedication required to update Sebastopol's General Plan. We look forward to reviewing the Draft EIR when it's available. Please contact Misti Harris, Planner III, at (707) 565-1352 or misti.harris@sonoma-county.org with any questions.

Sincerely,

Tennis Wick

Tennis Wick, AICP
Director

Appendix B

Air Quality Calculation Sheets

Existing Conditions_AQ-GHG

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	38.13	1000sqft	2.40	38,126.00	0
General Office Building	532.96	1000sqft	163.80	532,956.00	0
Government Office Building	59.99	1000sqft	46.40	59,987.00	0
Hospital	0.00	1000sqft	3.60	0.00	0
Medical Office Building	161.28	1000sqft	31.50	161,284.00	0
Place of Worship	91.75		46.60		0
General Light Industry	278.68	1000sqft	21.10	278,680.00	0
Manufacturing	11.46	1000sqft	1.10	11,464.00	0
Unrefrigerated Warehouse-No Rail	34.19	1000sqft	3.10	34,190.00	0
Parking Lot	10.30	Acre	10.30	448,668.00	0
Health Club	31.12	1000sqft	0.71	31,120.00	0
Hotel	113.00	Room	3.77	164,076.00	0
Movie Theater (No Matinee)	4.91		1.60		0
Quality Restaurant	39.92	1000sqft	5.20	39,917.00	0
Apartments Low Rise	783.00	Dwelling Unit	54.40	562,820.00	2239
Apartments Mid Rise	248.00	Dwelling Unit	14.00	127,192.00	709
Condo/Townhouse	312.00	Dwelling Unit	9.10	381,964.00	892
Mobile Home Park	103.00	Dwelling Unit	17.20	1,344.00	295
Retirement Community	57.00	Dwelling Unit	13.90	78,740.00	163
Single Family Housing	1,992.00	Dwelling Unit	459.70	3,436,455.00	5697
Automobile Care Center	99.64	1000sqft	10.20	99,641.00	0
Free-Standing Discount Store	169.71	1000sqft	11.70	169,713.00	0
Regional Shopping Center	150.18	1000sqft	9.90	150,181.00	0
Supermarket	96.91	1000sqft	6.00	96,911.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 64

Climate Zone	4			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Project Description

Construction Phase - No construction proposed in Existing Condition

Area Mitigation - Per BAAQMD guidance

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	150
tblLandUse	LandUseSquareFeet	38,130.00	38,126.00
tblLandUse	LandUseSquareFeet	532,960.00	532,956.00
tblLandUse	LandUseSquareFeet	59,990.00	59,987.00
tblLandUse	LandUseSquareFeet	161,280.00	161,284.00
tblLandUse	LandUseSquareFeet	11,460.00	11,464.00
tblLandUse	LandUseSquareFeet	39,920.00	39,917.00
tblLandUse	LandUseSquareFeet	783,000.00	562,820.00
tblLandUse	LandUseSquareFeet	248,000.00	127,192.00
tblLandUse	LandUseSquareFeet	312,000.00	381,964.00
tblLandUse	LandUseSquareFeet	123,600.00	1,344.00
tblLandUse	LandUseSquareFeet	57,000.00	78,740.00
tblLandUse	LandUseSquareFeet	3,585,600.00	3,436,455.00

tblLandUse	LandUseSquareFeet	99,640.00	99,641.00
tblLandUse	LandUseSquareFeet	169,710.00	169,713.00
tblLandUse	LandUseSquareFeet	150,180.00	150,181.00
tblLandUse	LandUseSquareFeet	96,910.00	96,911.00
tblLandUse	LotAcreage	0.88	2.40
tblLandUse	LotAcreage	12.24	163.80
tblLandUse	LotAcreage	1.38	46.40
tblLandUse	LotAcreage	0.00	3.60
tblLandUse	LotAcreage	3.70	31.50
tblLandUse	LotAcreage	6.40	21.10
tblLandUse	LotAcreage	0.26	1.10
tblLandUse	LotAcreage	0.78	3.10
tblLandUse	LotAcreage	0.92	5.20
tblLandUse	LotAcreage	48.94	54.40
tblLandUse	LotAcreage	6.53	14.00
tblLandUse	LotAcreage	19.50	9.10
tblLandUse	LotAcreage	12.98	17.20
tblLandUse	LotAcreage	11.40	13.90
tblLandUse	LotAcreage	646.75	459.70
tblLandUse	LotAcreage	2.29	10.20
tblLandUse	LotAcreage	3.90	11.70
tblLandUse	LotAcreage	3.45	9.90
tblLandUse	LotAcreage	2.22	6.00
tblProjectCharacteristics	OperationalYear	2014	2016

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					
2017	10.2280	0.6217	3.4924	7.8000e-003	0.6226	0.0275	0.6501	0.1656	0.0271	0.1927	0.0000	576.7145	576.7145	0.0319	0.0000	577.3851
2018	10.2379	0.5669	3.1590	7.8200e-003	0.6250	0.0245	0.6495	0.1663	0.0241	0.1904	0.0000	558.6927	558.6927	0.0294	0.0000	559.3103
2019	10.2152	0.5175	2.8882	7.8200e-003	0.6250	0.0215	0.6465	0.1663	0.0212	0.1874	0.0000	539.8043	539.8043	0.0272	0.0000	540.3760
2020	10.2378	0.4775	2.6884	7.8500e-003	0.6274	0.0192	0.6466	0.1669	0.0189	0.1858	0.0000	521.4369	521.4369	0.0256	0.0000	521.9752
2021	2.1855	0.0939	0.5397	1.6800e-003	0.1341	3.6300e-003	0.1377	0.0357	3.5600e-003	0.0392	0.0000	109.6189	109.6189	5.1700e-003	0.0000	109.7274
Total	**43.1042**	**2.2774**	**12.7677**	**0.0330**	**2.6342**	**0.0963**	**2.7305**	**0.7007**	**0.0948**	**0.7955**	**0.0000**	**2,306.2672**	**2,306.2672**	**0.1194**	**0.0000**	**2,308.7741**

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					
2017	10.2280	0.6217	3.4924	7.8000e-003	0.6226	0.0275	0.6501	0.1656	0.0271	0.1927	0.0000	576.7145	576.7145	0.0319	0.0000	577.3851
2018	10.2379	0.5669	3.1590	7.8200e-003	0.6250	0.0245	0.6495	0.1663	0.0241	0.1904	0.0000	558.6926	558.6926	0.0294	0.0000	559.3102
2019	10.2152	0.5175	2.8882	7.8200e-003	0.6250	0.0215	0.6465	0.1663	0.0212	0.1874	0.0000	539.8043	539.8043	0.0272	0.0000	540.3760
2020	10.2378	0.4775	2.6884	7.8500e-003	0.6274	0.0192	0.6466	0.1669	0.0189	0.1858	0.0000	521.4368	521.4368	0.0256	0.0000	521.9752
2021	2.1855	0.0939	0.5397	1.6800e-003	0.1341	3.6300e-003	0.1377	0.0357	3.5600e-003	0.0392	0.0000	109.6189	109.6189	5.1700e-003	0.0000	109.7274
Total	**43.1042**	**2.2774**	**12.7677**	**0.0330**	**2.6342**	**0.0963**	**2.7305**	**0.7007**	**0.0948**	**0.7955**	**0.0000**	**2,306.2671**	**2,306.2671**	**0.1194**	**0.0000**	**2,308.7739**

	ROG	NOx	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	tons/yr										MT/yr					
Area	46.2610	0.5834	48.6709	0.0260		3.4077	3.4077		3.4076	3.4076	345.5246	159.3930	504.9176	0.8166	0.0181	527.6709
Energy	0.7250	6.3267	3.6022	0.0395		0.5009	0.5009		0.5009	0.5009	0.0000	21,754.2150	21,754.2150	0.7968	0.2679	21,854.0052
Mobile	52.8840	105.6660	489.0971	0.8120	56.0084	1.3187	57.3271	15.0307	1.2113	16.2420	0.0000	64,515.0444	64,515.0444	2.9249	0.0000	64,576.4666
Waste						0.0000	0.0000		0.0000	0.0000	1,602.6746	0.0000	1,602.6746	94.7154	0.0000	3,591.6970
Water						0.0000	0.0000		0.0000	0.0000	156.3886	1,016.8167	1,173.2054	16.1086	0.3888	1,632.0093
Total	**99.8699**	**112.5762**	**541.3702**	**0.8775**	**56.0084**	**5.2272**	**61.2357**	**15.0307**	**5.1198**	**20.1505**	**2,104.5878**	**87,445.4691**	**89,550.0569**	**115.3622**	**0.6748**	**92,181.8490**

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	33.4345	0.3080	26.3316	1.3700e-003		0.1558	0.1558		0.1556	0.1556	0.0000	239.7154	239.7154	0.0471	3.6200e-003	241.8253
Energy	0.7250	6.3267	3.6022	0.0395		0.5009	0.5009		0.5009	0.5009	0.0000	21,754.2150	21,754.2150	0.7968	0.2679	21,854.0052
Mobile	52.8840	105.6660	489.0971	0.8120	56.0084	1.3187	57.3271	15.0307	1.2113	16.2420	0.0000	64,515.0444	64,515.0444	2.9249	0.0000	64,576.4666
Waste						0.0000	0.0000		0.0000	0.0000	1,602.6746	0.0000	1,602.6746	94.7154	0.0000	3,591.6970
Water						0.0000	0.0000		0.0000	0.0000	125.1109	846.9331	972.0440	12.8860	0.3109	1,339.0165
Total	**87.0434**	**112.3008**	**519.0309**	**0.8529**	**56.0084**	**1.9753**	**57.9838**	**15.0307**	**1.8678**	**16.8985**	**1,727.7855**	**87,355.9079**	**89,083.6933**	**111.3701**	**0.5824**	**91,603.0105**

	ROG	NOx	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	**12.84**	**0.24**	**4.13**	**2.81**	**0.00**	**62.21**	**5.31**	**0.00**	**63.52**	**16.14**	**17.90**	**0.10**	**0.52**	**3.46**	**13.69**	**0.63**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	3/19/2021	5	1100	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 9,291,743; Residential Outdoor: 3,097,248; Non-Residential Indoor: 2,822,559; Non-Residential Outdoor: 940,853 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	528.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

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	9.9538					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**9.9970**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

3.2 Architectural Coating - 2017

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	0.2309	0.3376	3.2496	7.4100e-003	0.6226	4.9600e-003	0.6276	0.1656	4.5700e-003	0.1702	0.0000	543.5222	543.5222	0.0284	0.0000	544.1193
Total	**0.2309**	**0.3376**	**3.2496**	**7.4100e-003**	**0.6226**	**4.9600e-003**	**0.6276**	**0.1656**	**4.5700e-003**	**0.1702**	**0.0000**	**543.5222**	**543.5222**	**0.0284**	**0.0000**	**544.1193**

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	9.9538					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**9.9970**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

3.2 Architectural Coating - 2017

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	0.2309	0.3376	3.2496	7.4100e-003	0.6226	4.9600e-003	0.6276	0.1656	4.5700e-003	0.1702	0.0000	543.5222	543.5222	0.0284	0.0000	544.1193
Total	**0.2309**	**0.3376**	**3.2496**	**7.4100e-003**	**0.6226**	**4.9600e-003**	**0.6276**	**0.1656**	**4.5700e-003**	**0.1702**	**0.0000**	**543.5222**	**543.5222**	**0.0284**	**0.0000**	**544.1193**

3.2 Architectural Coating - 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					
Archit. Coating	9.9921					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0390	0.2618	0.2420	3.9000e-004		0.0197	0.0197		0.0197	0.0197	0.0000	33.3200	33.3200	3.1700e-003	0.0000	33.3865
Total	**10.0311**	**0.2618**	**0.2420**	**3.9000e-004**		**0.0197**	**0.0197**		**0.0197**	**0.0197**	**0.0000**	**33.3200**	**33.3200**	**3.1700e-003**	**0.0000**	**33.3865**

3.2 Architectural Coating - 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	0.2068	0.3051	2.9170	7.4300e-003	0.6250	4.8100e-003	0.6298	0.1663	4.4500e-003	0.1707	0.0000	525.3726	525.3726	0.0262	0.0000	525.9238
Total	**0.2068**	**0.3051**	**2.9170**	**7.4300e-003**	**0.6250**	**4.8100e-003**	**0.6298**	**0.1663**	**4.4500e-003**	**0.1707**	**0.0000**	**525.3726**	**525.3726**	**0.0262**	**0.0000**	**525.9238**

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	9.9921					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0390	0.2618	0.2420	3.9000e-004		0.0197	0.0197		0.0197	0.0197	0.0000	33.3200	33.3200	3.1700e-003	0.0000	33.3865
Total	**10.0311**	**0.2618**	**0.2420**	**3.9000e-004**		**0.0197**	**0.0197**		**0.0197**	**0.0197**	**0.0000**	**33.3200**	**33.3200**	**3.1700e-003**	**0.0000**	**33.3865**

3.2 Architectural Coating - 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	0.2068	0.3051	2.9170	7.4300e-003	0.6250	4.8100e-003	0.6298	0.1663	4.4500e-003	0.1707	0.0000	525.3726	525.3726	0.0262	0.0000	525.9238
Total	**0.2068**	**0.3051**	**2.9170**	**7.4300e-003**	**0.6250**	**4.8100e-003**	**0.6298**	**0.1663**	**4.4500e-003**	**0.1707**	**0.0000**	**525.3726**	**525.3726**	**0.0262**	**0.0000**	**525.9238**

3.2 Architectural Coating - 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					
Archit. Coating	9.9921					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0348	0.2395	0.2403	3.9000e-004		0.0168	0.0168		0.0168	0.0168	0.0000	33.3200	33.3200	2.8100e-003	0.0000	33.3791
Total	**10.0269**	**0.2395**	**0.2403**	**3.9000e-004**		**0.0168**	**0.0168**		**0.0168**	**0.0168**	**0.0000**	**33.3200**	**33.3200**	**2.8100e-003**	**0.0000**	**33.3791**

3.2 Architectural Coating - 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	0.1883	0.2779	2.6480	7.4300e-003	0.6250	4.7100e-003	0.6297	0.1663	4.3600e-003	0.1706	0.0000	506.4843	506.4843	0.0244	0.0000	506.9969
Total	**0.1883**	**0.2779**	**2.6480**	**7.4300e-003**	**0.6250**	**4.7100e-003**	**0.6297**	**0.1663**	**4.3600e-003**	**0.1706**	**0.0000**	**506.4843**	**506.4843**	**0.0244**	**0.0000**	**506.9969**

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	9.9921					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0348	0.2395	0.2403	3.9000e-004		0.0168	0.0168		0.0168	0.0168	0.0000	33.3199	33.3199	2.8100e-003	0.0000	33.3790
Total	**10.0269**	**0.2395**	**0.2403**	**3.9000e-004**		**0.0168**	**0.0168**		**0.0168**	**0.0168**	**0.0000**	**33.3199**	**33.3199**	**2.8100e-003**	**0.0000**	**33.3790**

3.2 Architectural Coating - 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	0.1883	0.2779	2.6480	7.4300e-003	0.6250	4.7100e-003	0.6297	0.1663	4.3600e-003	0.1706	0.0000	506.4843	506.4843	0.0244	0.0000	506.9969
Total	**0.1883**	**0.2779**	**2.6480**	**7.4300e-003**	**0.6250**	**4.7100e-003**	**0.6297**	**0.1663**	**4.3600e-003**	**0.1706**	**0.0000**	**506.4843**	**506.4843**	**0.0244**	**0.0000**	**506.9969**

3.2 Architectural Coating - 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					
Archit. Coating	10.0304					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.2206	0.2399	3.9000e-004		0.0145	0.0145		0.0145	0.0145	0.0000	33.4476	33.4476	2.5900e-003	0.0000	33.5020
Total	**10.0621**	**0.2206**	**0.2399**	**3.9000e-004**		**0.0145**	**0.0145**		**0.0145**	**0.0145**	**0.0000**	**33.4476**	**33.4476**	**2.5900e-003**	**0.0000**	**33.5020**

3.2 Architectural Coating - 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	0.1757	0.2569	2.4484	7.4600e-003	0.6274	4.6700e-003	0.6321	0.1669	4.3300e-003	0.1712	0.0000	487.9892	487.9892	0.0231	0.0000	488.4732
Total	**0.1757**	**0.2569**	**2.4484**	**7.4600e-003**	**0.6274**	**4.6700e-003**	**0.6321**	**0.1669**	**4.3300e-003**	**0.1712**	**0.0000**	**487.9892**	**487.9892**	**0.0231**	**0.0000**	**488.4732**

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	10.0304					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.2206	0.2399	3.9000e-004		0.0145	0.0145		0.0145	0.0145	0.0000	33.4476	33.4476	2.5900e-003	0.0000	33.5020
Total	**10.0621**	**0.2206**	**0.2399**	**3.9000e-004**		**0.0145**	**0.0145**		**0.0145**	**0.0145**	**0.0000**	**33.4476**	**33.4476**	**2.5900e-003**	**0.0000**	**33.5020**

3.2 Architectural Coating - 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	0.1757	0.2569	2.4484	7.4600e-003	0.6274	4.6700e-003	0.6321	0.1669	4.3300e-003	0.1712	0.0000	487.9892	487.9892	0.0231	0.0000	488.4732
Total	**0.1757**	**0.2569**	**2.4484**	**7.4600e-003**	**0.6274**	**4.6700e-003**	**0.6321**	**0.1669**	**4.3300e-003**	**0.1712**	**0.0000**	**487.9892**	**487.9892**	**0.0231**	**0.0000**	**488.4732**

3.2 Architectural Coating - 2021

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	2.1439					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1300e-003	0.0428	0.0509	8.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	7.1491	7.1491	4.9000e-004	0.0000	7.1594
Total	**2.1500**	**0.0428**	**0.0509**	**8.0000e-005**		**2.6300e-003**	**2.6300e-003**		**2.6300e-003**	**2.6300e-003**	**0.0000**	**7.1491**	**7.1491**	**4.9000e-004**	**0.0000**	**7.1594**

3.2 Architectural Coating - 2021

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	0.0354	0.0511	0.4888	1.5900e-003	0.1341	9.9000e-004	0.1351	0.0357	9.2000e-004	0.0366	0.0000	102.4698	102.4698	4.6800e-003	0.0000	102.5680
Total	**0.0354**	**0.0511**	**0.4888**	**1.5900e-003**	**0.1341**	**9.9000e-004**	**0.1351**	**0.0357**	**9.2000e-004**	**0.0366**	**0.0000**	**102.4698**	**102.4698**	**4.6800e-003**	**0.0000**	**102.5680**

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	2.1439					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1300e-003	0.0428	0.0509	8.0000e-005		2.6300e-003	2.6300e-003		2.6300e-003	2.6300e-003	0.0000	7.1491	7.1491	4.9000e-004	0.0000	7.1594
Total	**2.1500**	**0.0428**	**0.0509**	**8.0000e-005**		**2.6300e-003**	**2.6300e-003**		**2.6300e-003**	**2.6300e-003**	**0.0000**	**7.1491**	**7.1491**	**4.9000e-004**	**0.0000**	**7.1594**

3.2 Architectural Coating - 2021

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	0.0354	0.0511	0.4888	1.5900e-003	0.1341	9.9000e-004	0.1351	0.0357	9.2000e-004	0.0366	0.0000	102.4698	102.4698	4.6800e-003	0.0000	102.5680
Total	**0.0354**	**0.0511**	**0.4888**	**1.5900e-003**	**0.1341**	**9.9000e-004**	**0.1351**	**0.0357**	**9.2000e-004**	**0.0366**	**0.0000**	**102.4698**	**102.4698**	**4.6800e-003**	**0.0000**	**102.5680**

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	52.8840	105.6660	489.0971	0.8120	56.0084	1.3187	57.3271	15.0307	1.2113	16.2420	0.0000	64,515.0444	64,515.0444	2.9249	0.0000	64,576.4666
Unmitigated	52.8840	105.6660	489.0971	0.8120	56.0084	1.3187	57.3271	15.0307	1.2113	16.2420	0.0000	64,515.0444	64,515.0444	2.9249	0.0000	64,576.4666

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	5,159.97	5,606.28	4752.81	11,531,427	11,531,427
Apartments Mid Rise	1,634.32	1,775.68	1505.36	3,652,355	3,652,355
Automobile Care Center	6,177.68	6,177.68	6177.68	6,154,119	6,154,119
Bank (with Drive-Through)	5,648.96	3,291.38	1216.35	4,327,899	4,327,899
Condo/Townhouse	2,056.08	2,233.92	1893.84	4,594,898	4,594,898
Free-Standing Discount Store	9,714.20	12,061.29	9564.86	15,636,530	15,636,530
General Light Industry	1,942.40	367.86	189.50	4,283,072	4,283,072
General Office Building	5,867.89	1,263.12	522.30	10,625,819	10,625,819
Government Office Building	4,135.11	0.00	0.00	5,065,157	5,065,157
Health Club	1,024.78	649.47	831.84	1,630,231	1,630,231
Hospital	0.00	0.00	0.00		
Hotel	923.21	925.47	672.35	1,686,560	1,686,560
Manufacturing	43.78	17.08	7.11	101,377	101,377
Medical Office Building	5,827.05	1,445.07	249.98	8,620,367	8,620,367
Mobile Home Park	513.97	515.00	449.08	1,127,004	1,127,004
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	3,590.80	3,766.85	2880.63	4,168,783	4,168,783
Regional Shopping Center	6,448.73	7,504.49	3790.54	10,905,226	10,905,226
Retirement Community	160.17	160.17	160.17	357,558	357,558
Single Family Housing	19,063.44	20,079.36	17469.84	42,372,349	42,372,349
Supermarket	9,908.08	17,210.25	16129.70	13,467,387	13,467,387
Unrefrigerated Warehouse-No Rail	88.55	88.55	88.55	258,529	258,529
Total	89,929.17	85,138.97	68,552.49	150,566,647	150,566,647

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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Apartments Mid Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	27	26	47
Condo/Townhouse	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Free-Standing Discount Store	9.50	7.30	7.30	12.20	68.80	19.00	47.5	35.5	17
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	50	34	16
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Mobile Home Park	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Retirement Community	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546434	0.062864	0.174629	0.123506	0.034170	0.004889	0.015456	0.023695	0.002073	0.003288	0.006639	0.000690	0.001668

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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					
NaturalGas Mitigated	0.7250	6.3267	3.6022	0.0395		0.5009	0.5009		0.5009	0.5009	0.0000	7,174.4860	7,174.4860	0.1375	0.1315	7,218.1488
NaturalGas Unmitigated	0.7250	6.3267	3.6022	0.0395		0.5009	0.5009		0.5009	0.5009	0.0000	7,174.4860	7,174.4860	0.1375	0.1315	7,218.1488
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14,579.7290	14,579.7290	0.6593	0.1364	14,635.8564
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	14,579.7290	14,579.7290	0.6593	0.1364	14,635.8564

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 Mid Rise	2.01565e+006	0.0109	0.0929	0.0395	5.9000e-004		7.5100e-003	7.5100e-003		7.5100e-003	7.5100e-003	0.0000	107.5628	107.5628	2.0600e-003	1.9700e-003	108.2174
Automobile Care Center	2.73116e+006	0.0147	0.1339	0.1125	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.7451	145.7451	2.7900e-003	2.6700e-003	146.6321
Bank (with Drive-Through)	1.04503e+006	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.7670	55.7670	1.0700e-003	1.0200e-003	56.1064
Condo/Townhouse	6.07608e+006	0.0328	0.2800	0.1191	1.7900e-003		0.0226	0.0226		0.0226	0.0226	0.0000	324.2427	324.2427	6.2100e-003	5.9400e-003	326.2160
Free-Standing Discount Store	422585	2.2800e-003	0.0207	0.0174	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003	0.0000	22.5508	22.5508	4.3000e-004	4.1000e-004	22.6880

	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					
General Light Industry	7.63862e+006	0.0412	0.3744	0.3145	2.2500e-003		0.0285	0.0285		0.0285	0.0285	0.0000	407.6258	407.6258	7.8100e-003	7.4700e-003	410.1065
General Office Building	9.1775e+006	0.0495	0.4499	0.3779	2.7000e-003		0.0342	0.0342		0.0342	0.0342	0.0000	489.7465	489.7465	9.3900e-003	8.9800e-003	492.7270
Government Office Building	1.03298e+006	5.5700e-003	0.0506	0.0425	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003	0.0000	55.1235	55.1235	1.0600e-003	1.0100e-003	55.4590
Health Club	852999	4.6000e-003	0.0418	0.0351	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003	0.0000	45.5193	45.5193	8.7000e-004	8.3000e-004	45.7963
Hospital	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	7.60984e+006	0.0410	0.3730	0.3134	2.2400e-003		0.0284	0.0284		0.0284	0.0284	0.0000	406.0903	406.0903	7.7800e-003	7.4400e-003	408.5617
Manufacturing	314228	1.6900e-003	0.0154	0.0129	9.0000e-005		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	16.7684	16.7684	3.2000e-004	3.1000e-004	16.8705
Medical Office Building	2.77731e+006	0.0150	0.1361	0.1144	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.2079	148.2079	2.8400e-003	2.7200e-003	149.1098
Mobile Home Park	1.7295e+006	9.3300e-003	0.0797	0.0339	5.1000e-004		6.4400e-003	6.4400e-003		6.4400e-003	6.4400e-003	0.0000	92.2929	92.2929	1.7700e-003	1.6900e-003	92.8546
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	8.42408e+006	0.0454	0.4130	0.3469	2.4800e-003		0.0314	0.0314		0.0314	0.0314	0.0000	449.5412	449.5412	8.6200e-003	8.2400e-003	452.2770
Regional Shopping Center	373951	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9554	19.9554	3.8000e-004	3.7000e-004	20.0769
Retirement Community	1.11005e+006	5.9900e-003	0.0512	0.0218	3.3000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	59.2366	59.2366	1.1400e-003	1.0900e-003	59.5972
Single Family Housing	7.02837e+007	0.3790	3.2386	1.3781	0.0207		0.2618	0.2618		0.2618	0.2618	0.0000	3,750.6036	3,750.6036	0.0719	0.0688	3,773.4291
Supermarket	2.26287e+006	0.0122	0.1109	0.0932	6.7000e-004		8.4300e-003	8.4300e-003		8.4300e-003	8.4300e-003	0.0000	120.7555	120.7555	2.3100e-003	2.2100e-003	121.4904
Unrefrigerated Warehouse-No Rail	124794	6.7000e-004	6.1200e-003	5.1400e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.6595	6.6595	1.3000e-004	1.2000e-004	6.7000

	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	8.44189e+006	0.0455	0.3890	0.1655	2.4800e-003		0.0315	0.0315		0.0315	0.0315	0.0000	450.4915	450.4915	8.6300e-003	8.2600e-003	453.2331
Total		**0.7250**	**6.3267**	**3.6022**	**0.0396**		**0.5009**	**0.5009**		**0.5009**	**0.5009**	**0.0000**	**7,174.4860**	**7,174.4860**	**0.1375**	**0.1315**	**7,218.1488**

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					
Automobile Care Center	2.73116e+006	0.0147	0.1339	0.1125	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.7451	145.7451	2.7900e-003	2.6700e-003	146.6321
Bank (with Drive-Through)	1.04503e+006	5.6300e-003	0.0512	0.0430	3.1000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	55.7670	55.7670	1.0700e-003	1.0200e-003	56.1064
Condo/Townhouse	6.07608e+006	0.0328	0.2800	0.1191	1.7900e-003		0.0226	0.0226		0.0226	0.0226	0.0000	324.2427	324.2427	6.2100e-003	5.9400e-003	326.2160
Free-Standing Discount Store	422585	2.2800e-003	0.0207	0.0174	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003	0.0000	22.5508	22.5508	4.3000e-004	4.1000e-004	22.6880
General Light Industry	7.63862e+006	0.0412	0.3744	0.3145	2.2500e-003		0.0285	0.0285		0.0285	0.0285	0.0000	407.6258	407.6258	7.8100e-003	7.4700e-003	410.1065
General Office Building	9.1775e+006	0.0495	0.4499	0.3779	2.7000e-003		0.0342	0.0342		0.0342	0.0342	0.0000	489.7465	489.7465	9.3900e-003	8.9800e-003	492.7270
Government Office Building	1.03298e+006	5.5700e-003	0.0506	0.0425	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003	0.0000	55.1235	55.1235	1.0600e-003	1.0100e-003	55.4590
Health Club	852999	4.6000e-003	0.0418	0.0351	2.5000e-004		3.1800e-003	3.1800e-003		3.1800e-003	3.1800e-003	0.0000	45.5193	45.5193	8.7000e-004	8.3000e-004	45.7963
Hospital	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	7.60984e+006	0.0410	0.3730	0.3134	2.2400e-003		0.0284	0.0284		0.0284	0.0284	0.0000	406.0903	406.0903	7.7800e-003	7.4400e-003	408.5617
Manufacturing	314228	1.6900e-003	0.0154	0.0129	9.0000e-005		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	16.7684	16.7684	3.2000e-004	3.1000e-004	16.8705

	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					
Medical Office Building	2.77731e+006	0.0150	0.1361	0.1144	8.2000e-004		0.0104	0.0104		0.0104	0.0104	0.0000	148.2079	148.2079	2.8400e-003	2.7200e-003	149.1098
Mobile Home Park	1.7295e+006	9.3300e-003	0.0797	0.0339	5.1000e-004		6.4400e-003	6.4400e-003		6.4400e-003	6.4400e-003	0.0000	92.2929	92.2929	1.7700e-003	1.6900e-003	92.8546
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	8.42408e+006	0.0454	0.4130	0.3469	2.4800e-003		0.0314	0.0314		0.0314	0.0314	0.0000	449.5412	449.5412	8.6200e-003	8.2400e-003	452.2770
Regional Shopping Center	373951	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9554	19.9554	3.8000e-004	3.7000e-004	20.0769
Retirement Community	1.11005e+006	5.9900e-003	0.0512	0.0218	3.3000e-004		4.1400e-003	4.1400e-003		4.1400e-003	4.1400e-003	0.0000	59.2366	59.2366	1.1400e-003	1.0900e-003	59.5972
Single Family Housing	7.02837e+007	0.3790	3.2386	1.3781	0.0207		0.2618	0.2618		0.2618	0.2618	0.0000	3,750.6036	3,750.6036	0.0719	0.0688	3,773.4291
Supermarket	2.26287e+006	0.0122	0.1109	0.0932	6.7000e-004		8.4300e-003	8.4300e-003		8.4300e-003	8.4300e-003	0.0000	120.7555	120.7555	2.3100e-003	2.2100e-003	121.4904
Unrefrigerated Warehouse-No Rail	124794	6.7000e-004	6.1200e-003	5.1400e-003	4.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	6.6595	6.6595	1.3000e-004	1.2000e-004	6.7000
Apartments Low Rise	8.44189e+006	0.0455	0.3890	0.1655	2.4800e-003		0.0315	0.0315		0.0315	0.0315	0.0000	450.4915	450.4915	8.6300e-003	8.2600e-003	453.2331
Apartments Mid Rise	2.01565e+006	0.0109	0.0929	0.0395	5.9000e-004		7.5100e-003	7.5100e-003		7.5100e-003	7.5100e-003	0.0000	107.5628	107.5628	2.0600e-003	1.9700e-003	108.2174
Total		**0.7250**	**6.3267**	**3.6022**	**0.0396**		**0.5009**	**0.5009**		**0.5009**	**0.5009**	**0.0000**	**7,174.4860**	**7,174.4860**	**0.1375**	**0.1315**	**7,218.1488**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.88278e+006	838.6335	0.0379	7.8500e-003	841.8619
Apartments Mid Rise	874587	254.4274	0.0115	2.3800e-003	255.4068
Automobile Care Center	899758	261.7500	0.0118	2.4500e-003	262.7576
Bank (with Drive-Through)	344278	100.1544	4.5300e-003	9.4000e-004	100.5399
Condo/Townhouse	1.34509e+006	391.3034	0.0177	3.6600e-003	392.8098
Free-Standing Discount Store	1.98394e+006	577.1523	0.0261	5.4000e-003	579.3742
General Light Industry	2.51648e+006	732.0730	0.0331	6.8500e-003	734.8913
General Office Building	1.05046e+007	3,055.8978	0.1382	0.0286	3,067.6620
Government Office Building	1.18234e+006	343.9574	0.0156	3.2200e-003	345.2815
Health Club	281014	81.7501	3.7000e-003	7.6000e-004	82.0648
Hospital	0	0.0000	0.0000	0.0000	0.0000
Hotel	1.3848e+006	402.8546	0.0182	3.7700e-003	404.4055
Manufacturing	103520	30.1151	1.3600e-003	2.8000e-004	30.2311
Medical Office Building	3.17891e+006	924.7807	0.0418	8.6500e-003	928.3408
Mobile Home Park	504591	146.7913	6.6400e-003	1.3700e-003	147.3564
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	394828	114.8600	5.1900e-003	1.0700e-003	115.3021
Place of Worship	0	0.0000	0.0000	0.0000	0.0000

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Quality Restaurant	1.36875e+006	398.1862	0.0180	3.7300e-003	399.7191
Regional Shopping Center	1.75562e+006	510.7288	0.0231	4.7800e-003	512.6949
Retirement Community	245738	71.4881	3.2300e-003	6.7000e-004	71.7633
Single Family Housing	1.40893e+007	4,098.7379	0.1853	0.0383	4,114.5168
Supermarket	4.14488e+006	1,205.7941	0.0545	0.0113	1,210.4361
Unrefrigerated Warehouse-No Rail	131632	38.2931	1.7300e-003	3.6000e-004	38.4405
Total		**14,579.7290**	**0.6592**	**0.1364**	**14,635.8564**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.88278e+006	838.6335	0.0379	7.8500e-003	841.8619
Apartments Mid Rise	874587	254.4274	0.0115	2.3800e-003	255.4068
Automobile Care Center	899758	261.7500	0.0118	2.4500e-003	262.7576
Bank (with Drive-Through)	344278	100.1544	4.5300e-003	9.4000e-004	100.5399
Condo/Townhouse	1.34509e+006	391.3034	0.0177	3.6600e-003	392.8098
Free-Standing Discount Store	1.98394e+006	577.1523	0.0261	5.4000e-003	579.3742

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	2.51648e+006	732.0730	0.0331	6.8500e-003	734.8913
General Office Building	1.05046e+007	3,055.8978	0.1382	0.0286	3,067.6620
Government Office Building	1.18234e+006	343.9574	0.0156	3.2200e-003	345.2815
Health Club	281014	81.7501	3.7000e-003	7.6000e-004	82.0648
Hospital	0	0.0000	0.0000	0.0000	0.0000
Hotel	1.3848e+006	402.8546	0.0182	3.7700e-003	404.4055
Manufacturing	103520	30.1151	1.3600e-003	2.8000e-004	30.2311
Medical Office Building	3.17891e+006	924.7807	0.0418	8.6500e-003	928.3408
Mobile Home Park	504591	146.7913	6.6400e-003	1.3700e-003	147.3564
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	394828	114.8600	5.1900e-003	1.0700e-003	115.3021
Place of Worship	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.36875e+006	398.1862	0.0180	3.7300e-003	399.7191
Regional Shopping Center	1.75562e+006	510.7288	0.0231	4.7800e-003	512.6949
Retirement Community	245738	71.4881	3.2300e-003	6.7000e-004	71.7633
Single Family Housing	1.40893e+007	4,098.7379	0.1853	0.0383	4,114.5168
Supermarket	4.14488e+006	1,205.7941	0.0545	0.0113	1,210.4361
Unrefrigerated Warehouse-No Rail	131632	38.2931	1.7300e-003	3.6000e-004	38.4405

Total		**14,579.7290**	**0.6592**	**0.1364**	**14,635.8564**

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

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	33.4345	0.3080	26.3316	1.3700e-003		0.1558	0.1558		0.1556	0.1556	0.0000	239.7154	239.7154	0.0471	3.6200e-003	241.8253
Unmitigated	46.2610	0.5834	48.6709	0.0260		3.4077	3.4077		3.4076	3.4076	345.5246	159.3930	504.9176	0.8166	0.0181	527.6709

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	4.2112					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	26.9692					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	14.2502	0.2754	22.3404	0.0246		3.2657	3.2657		3.2656	3.2656	345.5246	116.9685	462.4931	0.7733	0.0181	484.3372
Landscaping	0.8304	0.3080	26.3305	1.3700e-003		0.1420	0.1420		0.1420	0.1420	0.0000	42.4245	42.4245	0.0433	0.0000	43.3337
Total	**46.2610**	**0.5834**	**48.6710**	**0.0260**		**3.4077**	**3.4077**		**3.4076**	**3.4076**	**345.5246**	**159.3930**	**504.9176**	**0.8166**	**0.0181**	**527.6709**

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	5.6150					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	26.9692					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0199	0.0000	1.0900e-003	0.0000		0.0138	0.0138		0.0136	0.0136	0.0000	197.2908	197.2908	3.7800e-003	3.6200e-003	198.4915
Landscaping	0.8304	0.3080	26.3305	1.3700e-003		0.1420	0.1420		0.1420	0.1420	0.0000	42.4245	42.4245	0.0433	0.0000	43.3337
Total	**33.4345**	**0.3080**	**26.3316**	**1.3700e-003**		**0.1558**	**0.1558**		**0.1557**	**0.1557**	**0.0000**	**239.7154**	**239.7154**	**0.0471**	**3.6200e-003**	**241.8253**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	1,173.2054	16.1086	0.3888	1,632.0093
Mitigated	972.0440	12.8860	0.3109	1,339.0165

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	51.0156 / 32.162	129.2367	1.6675	0.0403	176.7491
Apartments Mid Rise	16.1582 / 10.1867	40.9332	0.5281	0.0128	55.9819
Automobile Care Center	9.37424 / 5.7455	23.5802	0.3064	7.4100e-003	32.3101
Bank (with Drive-Through)	1.51082 / 0.925988	3.8004	0.0494	1.1900e-003	5.2073
Condo/Townhouse	20.3281 / 12.8155	51.4966	0.6644	0.0161	70.4288
Free-Standing Discount Store	12.5708 / 7.70471	31.6211	0.4109	9.9300e-003	43.3278
General Light Industry	64.4447 / 0	121.8892	2.1045	0.0505	181.7494
General Office Building	94.725 / 58.0572	238.2739	3.0960	0.0748	326.4877

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Government Office Building	11.9176 / 7.30433	29.9779	0.3895	9.4100e-003	41.0763
Health Club	1.84053 / 1.12807	4.6297	0.0602	1.4500e-003	6.3438
Hospital	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	2.86645 / 0.318494	5.7458	0.0936	2.2500e-003	8.4096
Manufacturing	2.65013 / 0	5.0124	0.0865	2.0800e-003	7.4740
Medical Office Building	20.2375 / 3.85476	42.2016	0.6611	0.0159	61.0145
Mobile Home Park	6.71086 / 4.23076	17.0005	0.2194	5.3000e-003	23.2505
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	12.1171 / 0.77343	23.7054	0.3957	9.5100e-003	34.9635
Regional Shopping Center	11.1242 / 6.81806	27.9822	0.3636	8.7900e-003	38.3417
Retirement Community	3.71378 / 2.3413	9.4080	0.1214	2.9300e-003	12.8668
Single Family Housing	129.787 / 81.8221	328.7861	4.2421	0.1026	449.6606
Supermarket	11.9459 / 0.369462	22.9704	0.3901	9.3700e-003	34.0680
Unrefrigerated Warehouse-No Rail	7.90644 / 0	14.9540	0.2582	6.2000e-003	22.2980
Total		**1,173.2053**	**16.1086**	**0.3888**	**1,632.0094**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	40.8125 / 30.2001	107.9412	1.3339	0.0322	145.9480
Apartments Mid Rise	12.9266 / 9.5653	34.1883	0.4225	0.0102	46.2262
Automobile Care Center	7.49939 / 5.39503	19.6773	0.2451	5.9200e-003	26.6606
Bank (with Drive-Through)	1.20866 / 0.869502	3.1713	0.0395	9.5000e-004	4.2968
Condo/Townhouse	16.2624 / 12.0338	43.0111	0.5315	0.0129	58.1555
Free-Standing Discount Store	10.0567 / 7.23473	26.3873	0.3287	7.9400e-003	35.7518
General Light Industry	51.5558 / 0	97.5114	1.6833	0.0404	145.3734
General Office Building	75.78 / 54.5158	198.8358	2.4767	0.0599	269.4002
Government Office Building	9.53408 / 6.85877	25.0161	0.3116	7.5300e-003	33.8939
Health Club	1.47243 / 1.05926	3.8634	0.0481	1.1600e-003	5.2345
Hospital	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	2.29316 / 0.299066	4.6417	0.0749	1.8000e-003	6.7718
Manufacturing	2.1201 / 0	4.0099	0.0692	1.6600e-003	5.9781
Medical Office Building	16.19 / 3.61962	34.3068	0.5288	0.0127	49.3511
Mobile Home Park	5.36869 / 3.97269	14.1992	0.1755	4.2400e-003	19.1988
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	9.69365 / 0.726251	19.0738	0.3165	7.6000e-003	28.0758
Regional Shopping Center	8.89937 / 6.40216	23.3507	0.2909	7.0300e-003	31.6375

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Retirement Community	2.97102 / 2.19848	7.8578	0.0971	2.3500e-003	10.6246
Single Family Housing	103.829 / 76.831	274.6091	3.3936	0.0820	371.3007
Supermarket	9.55674 / 0.346924	18.4286	0.3121	7.4900e-003	27.3020
Unrefrigerated Warehouse-No Rail	6.32515 / 0	11.9632	0.2065	4.9500e-003	17.8352
Total		**972.0440**	**12.8861**	**0.3109**	**1,339.0165**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,602.6746	94.7154	0.0000	3,591.6970
Unmitigated	1,602.6746	94.7154	0.0000	3,591.6970

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	360.18	73.1133	4.3209	0.0000	163.8516
Apartments Mid Rise	114.08	23.1572	1.3686	0.0000	51.8968
Automobile Care Center	380.62	77.2624	4.5661	0.0000	173.1501
Bank (with Drive-Through)	35.58	7.2224	0.4268	0.0000	16.1859
Condo/Townhouse	143.52	29.1333	1.7217	0.0000	65.2895
Free-Standing Discount Store	729.87	148.1570	8.7558	0.0000	332.0294
General Light Industry	345.56	70.1456	4.1455	0.0000	157.2007
General Office Building	495.65	100.6125	5.9460	0.0000	225.4790
Government Office Building	55.79	11.3249	0.6693	0.0000	25.3798
Health Club	177.38	36.0065	2.1279	0.0000	80.6930
Hospital	0	0.0000	0.0000	0.0000	0.0000
Hotel	61.87	12.5591	0.7422	0.0000	28.1456
Manufacturing	14.21	2.8845	0.1705	0.0000	6.4644
Medical Office Building	1741.82	353.5737	20.8956	0.0000	792.3815
Mobile Home Park	47.38	9.6177	0.5684	0.0000	21.5539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	36.43	7.3950	0.4370	0.0000	16.5726
Regional Shopping Center	157.69	32.0096	1.8917	0.0000	71.7357

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Retirement Community	26.22	5.3224	0.3146	0.0000	11.9279
Single Family Housing	2392.74	485.7046	28.7043	0.0000	1,088.4953
Supermarket	546.57	110.9488	6.5569	0.0000	248.6434
Unrefrigerated Warehouse-No Rail	32.14	6.5241	0.3856	0.0000	14.6210
Total		**1,602.6745**	**94.7154**	**0.0000**	**3,591.6969**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	360.18	73.1133	4.3209	0.0000	163.8516
Apartments Mid Rise	114.08	23.1572	1.3686	0.0000	51.8968
Automobile Care Center	380.62	77.2624	4.5661	0.0000	173.1501
Bank (with Drive-Through)	35.58	7.2224	0.4268	0.0000	16.1859
Condo/Townhouse	143.52	29.1333	1.7217	0.0000	65.2895
Free-Standing Discount Store	729.87	148.1570	8.7558	0.0000	332.0294
General Light Industry	345.56	70.1456	4.1455	0.0000	157.2007
General Office Building	495.65	100.6125	5.9460	0.0000	225.4790

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Government Office Building	55.79	11.3249	0.6693	0.0000	25.3798
Health Club	177.38	36.0065	2.1279	0.0000	80.6930
Hospital	0	0.0000	0.0000	0.0000	0.0000
Hotel	61.87	12.5591	0.7422	0.0000	28.1456
Manufacturing	14.21	2.8845	0.1705	0.0000	6.4644
Medical Office Building	1741.82	353.5737	20.8956	0.0000	792.3815
Mobile Home Park	47.38	9.6177	0.5684	0.0000	21.5539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	36.43	7.3950	0.4370	0.0000	16.5726
Regional Shopping Center	157.69	32.0096	1.8917	0.0000	71.7357
Retirement Community	26.22	5.3224	0.3146	0.0000	11.9279
Single Family Housing	2392.74	485.7046	28.7043	0.0000	1,088.4953
Supermarket	546.57	110.9488	6.5569	0.0000	248.6434
Unrefrigerated Warehouse-No Rail	32.14	6.5241	0.3856	0.0000	14.6210
Total		**1,602.6745**	**94.7154**	**0.0000**	**3,591.6969**

9.0 Operational Offroad

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

10.0 Vegetation

Existing Conditions_AQ-GHG

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	38.13	1000sqft	2.40	38,126.00	0
General Office Building	532.96	1000sqft	163.80	532,956.00	0
Government Office Building	59.99	1000sqft	46.40	59,987.00	0
Hospital	0.00	1000sqft	3.60	0.00	0
Medical Office Building	161.28	1000sqft	31.50	161,284.00	0
Place of Worship	91.75		46.60		0
General Light Industry	278.68	1000sqft	21.10	278,680.00	0
Manufacturing	11.46	1000sqft	1.10	11,464.00	0
Unrefrigerated Warehouse-No Rail	34.19	1000sqft	3.10	34,190.00	0
Parking Lot	10.30	Acre	10.30	448,668.00	0
Health Club	31.12	1000sqft	0.71	31,120.00	0
Hotel	113.00	Room	3.77	164,076.00	0
Movie Theater (No Matinee)	4.91		1.60		0
Quality Restaurant	39.92	1000sqft	5.20	39,917.00	0
Apartments Low Rise	783.00	Dwelling Unit	54.40	562,820.00	2239
Apartments Mid Rise	248.00	Dwelling Unit	14.00	127,192.00	709
Condo/Townhouse	312.00	Dwelling Unit	9.10	381,964.00	892
Mobile Home Park	103.00	Dwelling Unit	17.20	1,344.00	295
Retirement Community	57.00	Dwelling Unit	13.90	78,740.00	163
Single Family Housing	1,992.00	Dwelling Unit	459.70	3,436,455.00	5697
Automobile Care Center	99.64	1000sqft	10.20	99,641.00	0
Free-Standing Discount Store	169.71	1000sqft	11.70	169,713.00	0
Regional Shopping Center	150.18	1000sqft	9.90	150,181.00	0
Supermarket	96.91	1000sqft	6.00	96,911.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 64

Climate Zone	4			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Project Description

Construction Phase - No construction proposed in Existing Condition

Area Mitigation - Per BAAQMD guidance

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	150
tblLandUse	LandUseSquareFeet	38,130.00	38,126.00
tblLandUse	LandUseSquareFeet	532,960.00	532,956.00
tblLandUse	LandUseSquareFeet	59,990.00	59,987.00
tblLandUse	LandUseSquareFeet	161,280.00	161,284.00
tblLandUse	LandUseSquareFeet	11,460.00	11,464.00
tblLandUse	LandUseSquareFeet	39,920.00	39,917.00
tblLandUse	LandUseSquareFeet	783,000.00	562,820.00
tblLandUse	LandUseSquareFeet	248,000.00	127,192.00
tblLandUse	LandUseSquareFeet	312,000.00	381,964.00
tblLandUse	LandUseSquareFeet	123,600.00	1,344.00
tblLandUse	LandUseSquareFeet	57,000.00	78,740.00
tblLandUse	LandUseSquareFeet	3,585,600.00	3,436,455.00

tblLandUse	LandUseSquareFeet	99,640.00	99,641.00
tblLandUse	LandUseSquareFeet	169,710.00	169,713.00
tblLandUse	LandUseSquareFeet	150,180.00	150,181.00
tblLandUse	LandUseSquareFeet	96,910.00	96,911.00
tblLandUse	LotAcreage	0.88	2.40
tblLandUse	LotAcreage	12.24	163.80
tblLandUse	LotAcreage	1.38	46.40
tblLandUse	LotAcreage	0.00	3.60
tblLandUse	LotAcreage	3.70	31.50
tblLandUse	LotAcreage	6.40	21.10
tblLandUse	LotAcreage	0.26	1.10
tblLandUse	LotAcreage	0.78	3.10
tblLandUse	LotAcreage	0.92	5.20
tblLandUse	LotAcreage	48.94	54.40
tblLandUse	LotAcreage	6.53	14.00
tblLandUse	LotAcreage	19.50	9.10
tblLandUse	LotAcreage	12.98	17.20
tblLandUse	LotAcreage	11.40	13.90
tblLandUse	LotAcreage	646.75	459.70
tblLandUse	LotAcreage	2.29	10.20
tblLandUse	LotAcreage	3.90	11.70
tblLandUse	LotAcreage	3.45	9.90
tblLandUse	LotAcreage	2.22	6.00
tblProjectCharacteristics	OperationalYear	2014	2016

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					
2017	78.8132	4.4810	28.6576	0.0642	4.9792	0.2115	5.1907	1.3206	0.2085	1.5291	0.0000	5,232.5314	5,232.5314	0.2708	0.0000	5,238.2180
2018	78.5841	4.0729	25.9343	0.0642	4.9792	0.1874	5.1666	1.3206	0.1846	1.5052	0.0000	5,049.2932	5,049.2932	0.2484	0.0000	5,054.5102
2019	78.4054	3.7185	23.7939	0.0642	4.9792	0.1648	5.1440	1.3206	0.1622	1.4828	0.0000	4,878.2500	4,878.2500	0.2300	0.0000	4,883.0791
2020	78.2730	3.4187	22.1106	0.0642	4.9792	0.1466	5.1258	1.3206	0.1440	1.4646	0.0000	4,693.8157	4,693.8157	0.2157	0.0000	4,698.3459
2021	78.1683	3.1431	20.7975	0.0642	4.9792	0.1296	5.1088	1.3206	0.1270	1.4476	0.0000	4,616.5673	4,616.5673	0.2034	0.0000	4,620.8395
Total	**392.2439**	**18.8341**	**121.2938**	**0.3211**	**24.8960**	**0.8399**	**25.7359**	**6.6031**	**0.8263**	**7.4293**	**0.0000**	**24,470.4576**	**24,470.4576**	**1.1683**	**0.0000**	**24,494.9927**

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					
2017	78.8132	4.4810	28.6576	0.0642	4.9792	0.2115	5.1907	1.3206	0.2085	1.5291	0.0000	5,232.5314	5,232.5314	0.2708	0.0000	5,238.2180
2018	78.5841	4.0729	25.9343	0.0642	4.9792	0.1874	5.1666	1.3206	0.1846	1.5052	0.0000	5,049.2932	5,049.2932	0.2484	0.0000	5,054.5102
2019	78.4054	3.7185	23.7939	0.0642	4.9792	0.1648	5.1440	1.3206	0.1622	1.4828	0.0000	4,878.2500	4,878.2500	0.2300	0.0000	4,883.0791
2020	78.2730	3.4187	22.1106	0.0642	4.9792	0.1466	5.1258	1.3206	0.1440	1.4646	0.0000	4,693.8157	4,693.8157	0.2157	0.0000	4,698.3459
2021	78.1683	3.1431	20.7975	0.0642	4.9792	0.1296	5.1088	1.3206	0.1270	1.4476	0.0000	4,616.5673	4,616.5673	0.2034	0.0000	4,620.8395
Total	**392.2439**	**18.8341**	**121.2938**	**0.3211**	**24.8960**	**0.8399**	**25.7359**	**6.6031**	**0.8263**	**7.4293**	**0.0000**	**24,470.4576**	**24,470.4576**	**1.1683**	**0.0000**	**24,494.9927**

	ROG	NOx	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	4,810.5470	83.0606	6,977.0851	5.8882		967.2524	967.2524		967.2208	967.2208	109,084.1290	48,010.4938	157,094.6228	204.0571	6.6714	163,447.9601
Energy	3.9723	34.6670	19.7380	0.2167		2.7445	2.7445		2.7445	2.7445		43,334.3403	43,334.3403	0.8306	0.7945	43,598.0659
Mobile	352.7896	643.0812	2,984.8369	5.5606	376.4723	8.5245	384.9967	100.7087	7.8304	108.5391		486,470.5241	486,470.5241	20.9130		486,909.6967
Total	**5,167.3088**	**760.8089**	**9,981.6601**	**11.6655**	**376.4723**	**978.5214**	**1,354.9936**	**100.7087**	**977.7957**	**1,078.5044**	**109,084.1290**	**577,815.3582**	**686,899.4872**	**225.8007**	**7.4659**	**693,955.7227**

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	194.8555	3.4229	292.9478	0.0152		6.4734	6.4734		6.4219	6.4219	0.0000	77,816.1644	77,816.1644	2.0118	1.4171	78,297.7142
Energy	3.9723	34.6670	19.7380	0.2167		2.7445	2.7445		2.7445	2.7445		43,334.3403	43,334.3403	0.8306	0.7945	43,598.0659
Mobile	352.7896	643.0812	2,984.8369	5.5606	376.4723	8.5245	384.9967	100.7087	7.8304	108.5391		486,470.5241	486,470.5241	20.9130		486,909.6967
Total	**551.6174**	**681.1712**	**3,297.5227**	**5.7925**	**376.4723**	**17.7424**	**394.2146**	**100.7087**	**16.9968**	**117.7055**	**0.0000**	**607,621.0288**	**607,621.0288**	**23.7554**	**2.2116**	**608,805.4767**

	ROG	NOx	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	**89.32**	**10.47**	**66.96**	**50.34**	**0.00**	**98.19**	**70.91**	**0.00**	**98.26**	**89.09**	**100.00**	**-5.16**	**11.54**	**89.48**	**70.38**	**12.27**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	3/19/2021	5	1100	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 9,291,743; Residential Outdoor: 3,097,248; Non-Residential Indoor: 2,822,559; Non-Residential Outdoor: 940,853 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	528.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**76.9002**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	1.9129	2.2959	26.7895	0.0613	4.9792	0.0382	5.0174	1.3206	0.0351	1.3558		4,951.0834	4,951.0834	0.2411		4,956.1459
Total	**1.9129**	**2.2959**	**26.7895**	**0.0613**	**4.9792**	**0.0382**	**5.0174**	**1.3206**	**0.0351**	**1.3558**		**4,951.0834**	**4,951.0834**	**0.2411**		**4,956.1459**

3.2 Architectural Coating - 2017

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**76.9002**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	1.9129	2.2959	26.7895	0.0613	4.9792	0.0382	5.0174	1.3206	0.0351	1.3558		4,951.0834	4,951.0834	0.2411		4,956.1459
Total	**1.9129**	**2.2959**	**26.7895**	**0.0613**	**4.9792**	**0.0382**	**5.0174**	**1.3206**	**0.0351**	**1.3558**		**4,951.0834**	**4,951.0834**	**0.2411**		**4,956.1459**

3.2 Architectural Coating - 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					
Archit. Coating	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**76.8665**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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
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
Worker	1.7175	2.0671	24.0801	0.0613	4.9792	0.0369	5.0161	1.3206	0.0341	1.3547		4,767.8447	4,767.8447	0.2217		4,772.5001
Total	**1.7175**	**2.0671**	**24.0801**	**0.0613**	**4.9792**	**0.0369**	**5.0161**	**1.3206**	**0.0341**	**1.3547**		**4,767.8447**	**4,767.8447**	**0.2217**		**4,772.5001**

3.2 Architectural Coating - 2018

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**76.8665**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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
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
Worker	1.7175	2.0671	24.0801	0.0613	4.9792	0.0369	5.0161	1.3206	0.0341	1.3547		4,767.8447	4,767.8447	0.2217		4,772.5001
Total	**1.7175**	**2.0671**	**24.0801**	**0.0613**	**4.9792**	**0.0369**	**5.0161**	**1.3206**	**0.0341**	**1.3547**		**4,767.8447**	**4,767.8447**	**0.2217**		**4,772.5001**

3.2 Architectural Coating - 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					
Archit. Coating	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**76.8343**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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
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
Worker	1.5711	1.8831	21.9525	0.0612	4.9792	0.0361	5.0153	1.3206	0.0334	1.3540		4,596.8020	4,596.8020	0.2062		4,601.1319
Total	**1.5711**	**1.8831**	**21.9525**	**0.0612**	**4.9792**	**0.0361**	**5.0153**	**1.3206**	**0.0334**	**1.3540**		**4,596.8020**	**4,596.8020**	**0.2062**		**4,601.1319**

3.2 Architectural Coating - 2019

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**76.8343**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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
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
Worker	1.5711	1.8831	21.9525	0.0612	4.9792	0.0361	5.0153	1.3206	0.0334	1.3540		4,596.8020	4,596.8020	0.2062		4,601.1319
Total	**1.5711**	**1.8831**	**21.9525**	**0.0612**	**4.9792**	**0.0361**	**5.0153**	**1.3206**	**0.0334**	**1.3540**		**4,596.8020**	**4,596.8020**	**0.2062**		**4,601.1319**

3.2 Architectural Coating - 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					
Archit. Coating	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**76.8101**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

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
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
Worker	1.4629	1.7349	20.2791	0.0612	4.9792	0.0356	5.0148	1.3206	0.0330	1.3537		4,412.3677	4,412.3677	0.1939		4,416.4403
Total	**1.4629**	**1.7349**	**20.2791**	**0.0612**	**4.9792**	**0.0356**	**5.0148**	**1.3206**	**0.0330**	**1.3537**		**4,412.3677**	**4,412.3677**	**0.1939**		**4,416.4403**

3.2 Architectural Coating - 2020

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**76.8101**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

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
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
Worker	1.4629	1.7349	20.2791	0.0612	4.9792	0.0356	5.0148	1.3206	0.0330	1.3537		4,412.3677	4,412.3677	0.1939		4,416.4403
Total	**1.4629**	**1.7349**	**20.2791**	**0.0612**	**4.9792**	**0.0356**	**5.0148**	**1.3206**	**0.0330**	**1.3537**		**4,412.3677**	**4,412.3677**	**0.1939**		**4,416.4403**

3.2 Architectural Coating - 2021

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**76.7868**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

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
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
Worker	1.3815	1.6163	18.9800	0.0612	4.9792	0.0355	5.0147	1.3206	0.0329	1.3535		4,335.1192	4,335.1192	0.1841		4,338.9858
Total	**1.3815**	**1.6163**	**18.9800**	**0.0612**	**4.9792**	**0.0355**	**5.0147**	**1.3206**	**0.0329**	**1.3535**		**4,335.1192**	**4,335.1192**	**0.1841**		**4,338.9858**

3.2 Architectural Coating - 2021

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**76.7868**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

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
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
Worker	1.3815	1.6163	18.9800	0.0612	4.9792	0.0355	5.0147	1.3206	0.0329	1.3535		4,335.1192	4,335.1192	0.1841		4,338.9858
Total	**1.3815**	**1.6163**	**18.9800**	**0.0612**	**4.9792**	**0.0355**	**5.0147**	**1.3206**	**0.0329**	**1.3535**		**4,335.1192**	**4,335.1192**	**0.1841**		**4,338.9858**

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					
Unmitigated	352.7896	643.0812	2,984.8369	5.5606	376.4723	8.5245	384.9967	100.7087	7.8304	108.5391		486,470.5241	486,470.5241	20.9130		486,909.6967
Mitigated	352.7896	643.0812	2,984.8369	5.5606	376.4723	8.5245	384.9967	100.7087	7.8304	108.5391		486,470.5241	486,470.5241	20.9130		486,909.6967

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	5,159.97	5,606.28	4752.81	11,531,427	11,531,427
Apartments Mid Rise	1,634.32	1,775.68	1505.36	3,652,355	3,652,355
Automobile Care Center	6,177.68	6,177.68	6177.68	6,154,119	6,154,119
Bank (with Drive-Through)	5,648.96	3,291.38	1216.35	4,327,899	4,327,899
Condo/Townhouse	2,056.08	2,233.92	1893.84	4,594,898	4,594,898
Free-Standing Discount Store	9,714.20	12,061.29	9564.86	15,636,530	15,636,530
General Light Industry	1,942.40	367.86	189.50	4,283,072	4,283,072
General Office Building	5,867.89	1,263.12	522.30	10,625,819	10,625,819
Government Office Building	4,135.11	0.00	0.00	5,065,157	5,065,157
Health Club	1,024.78	649.47	831.84	1,630,231	1,630,231
Hospital	0.00	0.00	0.00		
Hotel	923.21	925.47	672.35	1,686,560	1,686,560
Manufacturing	43.78	17.08	7.11	101,377	101,377
Medical Office Building	5,827.05	1,445.07	249.98	8,620,367	8,620,367
Mobile Home Park	513.97	515.00	449.08	1,127,004	1,127,004
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	3,590.80	3,766.85	2880.63	4,168,783	4,168,783
Regional Shopping Center	6,448.73	7,504.49	3790.54	10,905,226	10,905,226
Retirement Community	160.17	160.17	160.17	357,558	357,558
Single Family Housing	19,063.44	20,079.36	17469.84	42,372,349	42,372,349
Supermarket	9,908.08	17,210.25	16129.70	13,467,387	13,467,387
Unrefrigerated Warehouse-No Rail	88.55	88.55	88.55	258,529	258,529
Total	89,929.17	85,138.97	68,552.49	150,566,647	150,566,647

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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Apartments Mid Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	27	26	47
Condo/Townhouse	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Free-Standing Discount Store	9.50	7.30	7.30	12.20	68.80	19.00	47.5	35.5	17
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	50	34	16
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Mobile Home Park	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Retirement Community	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546434	0.062864	0.174629	0.123506	0.034170	0.004889	0.015456	0.023695	0.002073	0.003288	0.006639	0.000690	0.001668

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	3.9723	34.6670	19.7380	0.2167		2.7445	2.7445		2.7445	2.7445		43,334.3403	43,334.3403	0.8306	0.7945	43,598.0659
NaturalGas Unmitigated	3.9723	34.6670	19.7380	0.2167		2.7445	2.7445		2.7445	2.7445		43,334.3403	43,334.3403	0.8306	0.7945	43,598.0659

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 Mid Rise	5522.33	0.0596	0.5089	0.2166	3.2500e-003		0.0412	0.0412		0.0412	0.0412		649.6857	649.6857	0.0125	0.0119	653.6395
Automobile Care Center	7482.63	0.0807	0.7336	0.6162	4.4000e-003		0.0558	0.0558		0.0558	0.0558		880.3094	880.3094	0.0169	0.0161	885.6668
Bank (with Drive-Through)	2863.11	0.0309	0.2807	0.2358	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8360	336.8360	6.4600e-003	6.1800e-003	338.8859
Condo/Townhouse	16646.8	0.1795	1.5341	0.6528	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.4459	1,958.4459	0.0375	0.0359	1,970.3647
Free-Standing Discount Store	1157.77	0.0125	0.1135	0.0954	6.8000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003		136.2080	136.2080	2.6100e-003	2.5000e-003	137.0370
General Light Industry	20927.7	0.2257	2.0517	1.7235	0.0123		0.1559	0.1559		0.1559	0.1559		2,462.0850	2,462.0850	0.0472	0.0451	2,477.0689
General Office Building	25143.8	0.2712	2.4651	2.0707	0.0148		0.1874	0.1874		0.1874	0.1874		2,958.0991	2,958.0991	0.0567	0.0542	2,976.1016

	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					
Government Office Building	2830.07	0.0305	0.2775	0.2331	1.6600e-003		0.0211	0.0211		0.0211	0.0211		332.9496	332.9496	6.3800e-003	6.1000e-003	334.9759
Health Club	2336.98	0.0252	0.2291	0.1925	1.3700e-003		0.0174	0.0174		0.0174	0.0174		274.9393	274.9393	5.2700e-003	5.0400e-003	276.6125
Hospital	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	20848.9	0.2248	2.0440	1.7170	0.0123		0.1553	0.1553		0.1553	0.1553		2,452.8106	2,452.8106	0.0470	0.0450	2,467.7380
Manufacturing	860.899	9.2800e-003	0.0844	0.0709	5.1000e-004		6.4100e-003	6.4100e-003		6.4100e-003	6.4100e-003		101.2823	101.2823	1.9400e-003	1.8600e-003	101.8987
Medical Office Building	7609.07	0.0821	0.7460	0.6266	4.4800e-003		0.0567	0.0567		0.0567	0.0567		895.1847	895.1847	0.0172	0.0164	900.6326
Mobile Home Park	4738.37	0.0511	0.4367	0.1858	2.7900e-003		0.0353	0.0353		0.0353	0.0353		557.4549	557.4549	0.0107	0.0102	560.8475
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	23079.7	0.2489	2.2627	1.9007	0.0136		0.1720	0.1720		0.1720	0.1720		2,715.2566	2,715.2566	0.0520	0.0498	2,731.7812
Regional Shopping Center	1024.52	0.0111	0.1004	0.0844	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5321	120.5321	2.3100e-003	2.2100e-003	121.2656
Retirement Community	3041.24	0.0328	0.2803	0.1193	1.7900e-003		0.0227	0.0227		0.0227	0.0227		357.7930	357.7930	6.8600e-003	6.5600e-003	359.9705
Single Family Housing	192558	2.0766	17.7455	7.5513	0.1133		1.4348	1.4348		1.4348	1.4348		22,653.8779	22,653.8779	0.4342	0.4153	22,791.7457
Supermarket	6199.65	0.0669	0.6078	0.5106	3.6500e-003		0.0462	0.0462		0.0462	0.0462		729.3705	729.3705	0.0140	0.0134	733.8093
Unrefrigerated Warehouse-No Rail	341.9	3.6900e-003	0.0335	0.0282	2.0000e-004		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003		40.2235	40.2235	7.7000e-004	7.4000e-004	40.4683
Apartments Low Rise	23128.5	0.2494	2.1315	0.9070	0.0136		0.1723	0.1723		0.1723	0.1723		2,720.9963	2,720.9963	0.0522	0.0499	2,737.5558
Total		**3.9723**	**34.6671**	**19.7380**	**0.2167**		**2.7445**	**2.7445**		**2.7445**	**2.7445**		**43,334.3403**	**43,334.3403**	**0.8306**	**0.7945**	**43,598.0659**

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					
Automobile Care Center	7.48263	0.0807	0.7336	0.6162	4.4000e-003		0.0558	0.0558		0.0558	0.0558		880.3094	880.3094	0.0169	0.0161	885.6668
Bank (with Drive-Through)	2.86311	0.0309	0.2807	0.2358	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8360	336.8360	6.4600e-003	6.1800e-003	338.8859
Condo/Townhouse	16.6468	0.1795	1.5341	0.6528	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.4459	1,958.4459	0.0375	0.0359	1,970.3647
Free-Standing Discount Store	1.15777	0.0125	0.1135	0.0954	6.8000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003		136.2080	136.2080	2.6100e-003	2.5000e-003	137.0370
General Light Industry	20.9277	0.2257	2.0517	1.7235	0.0123		0.1559	0.1559		0.1559	0.1559		2,462.0850	2,462.0850	0.0472	0.0451	2,477.0689
General Office Building	25.1438	0.2712	2.4651	2.0707	0.0148		0.1874	0.1874		0.1874	0.1874		2,958.0991	2,958.0991	0.0567	0.0542	2,976.1016
Government Office Building	2.83007	0.0305	0.2775	0.2331	1.6600e-003		0.0211	0.0211		0.0211	0.0211		332.9496	332.9496	6.3800e-003	6.1000e-003	334.9759
Health Club	2.33698	0.0252	0.2291	0.1925	1.3700e-003		0.0174	0.0174		0.0174	0.0174		274.9393	274.9393	5.2700e-003	5.0400e-003	276.6125
Hospital	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	20.8489	0.2248	2.0440	1.7170	0.0123		0.1553	0.1553		0.1553	0.1553		2,452.8106	2,452.8106	0.0470	0.0450	2,467.7380
Manufacturing	0.860899	9.2800e-003	0.0844	0.0709	5.1000e-004		6.4100e-003	6.4100e-003		6.4100e-003	6.4100e-003		101.2823	101.2823	1.9400e-003	1.8600e-003	101.8987
Medical Office Building	7.60907	0.0821	0.7460	0.6266	4.4800e-003		0.0567	0.0567		0.0567	0.0567		895.1847	895.1847	0.0172	0.0164	900.6326
Mobile Home Park	4.73837	0.0511	0.4367	0.1858	2.7900e-003		0.0353	0.0353		0.0353	0.0353		557.4549	557.4549	0.0107	0.0102	560.8475
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

	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					
Place of Worship	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	23.0797	0.2489	2.2627	1.9007	0.0136		0.1720	0.1720		0.1720	0.1720		2,715.2566	2,715.2566	0.0520	0.0498	2,731.7812
Regional Shopping Center	1.02452	0.0111	0.1004	0.0844	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5321	120.5321	2.3100e-003	2.2100e-003	121.2656
Retirement Community	3.04124	0.0328	0.2803	0.1193	1.7900e-003		0.0227	0.0227		0.0227	0.0227		357.7930	357.7930	6.8600e-003	6.5600e-003	359.9705
Single Family Housing	192.558	2.0766	17.7455	7.5513	0.1133		1.4348	1.4348		1.4348	1.4348		22,653.8779	22,653.8779	0.4342	0.4153	22,791.7457
Supermarket	6.19965	0.0669	0.6078	0.5106	3.6500e-003		0.0462	0.0462		0.0462	0.0462		729.3705	729.3705	0.0140	0.0134	733.8093
Unrefrigerated Warehouse-No Rail	0.3419	3.6900e-003	0.0335	0.0282	2.0000e-004		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003		40.2235	40.2235	7.7000e-004	7.4000e-004	40.4683
Apartments Low Rise	23.1285	0.2494	2.1315	0.9070	0.0136		0.1723	0.1723		0.1723	0.1723		2,720.9963	2,720.9963	0.0522	0.0499	2,737.5558
Apartments Mid Rise	5.52233	0.0596	0.5089	0.2166	3.2500e-003		0.0412	0.0412		0.0412	0.0412		649.6857	649.6857	0.0125	0.0119	653.6395
Total		**3.9723**	**34.6671**	**19.7380**	**0.2167**		**2.7445**	**2.7445**		**2.7445**	**2.7445**		**43,334.3403**	**43,334.3403**	**0.8306**	**0.7945**	**43,598.0659**

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

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	194.8555	3.4229	292.9478	0.0152		6.4734	6.4734		6.4219	6.4219	0.0000	77,816.1644	77,816.1644	2.0118	1.4171	78,297.7142
Unmitigated	4,810.5470	83.0606	6,977.0851	5.8882		967.2524	967.2524		967.2208	967.2208	109,084.1290	48,010.4938	157,094.6228	204.0571	6.6714	163,447.9601

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	23.0753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	147.7762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4,630.4687	79.6381	6,684.5239	5.8729		965.6745	965.6745		965.6428	965.6428	109,084.1290	47,490.8824	156,575.0114	203.5268	6.6714	162,917.2128
Landscaping	9.2268	3.4226	292.5613	0.0152		1.5780	1.5780		1.5780	1.5780		519.6114	519.6114	0.5303		530.7473
Total	**4,810.5470**	**83.0606**	**6,977.0851**	**5.8882**		**967.2524**	**967.2524**		**967.2208**	**967.2208**	**109,084.1290**	**48,010.4938**	**157,094.6228**	**204.0571**	**6.6714**	**163,447.9601**

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	30.7670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	147.7762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	7.0855	3.2000e-004	0.3865	0.0000		4.8955	4.8955		4.8439	4.8439	0.0000	77,296.5529	77,296.5529	1.4815	1.4171	77,766.9669
Landscaping	9.2268	3.4226	292.5613	0.0152		1.5780	1.5780		1.5780	1.5780		519.6114	519.6114	0.5303		530.7473
Total	**194.8555**	**3.4229**	**292.9478**	**0.0152**		**6.4734**	**6.4734**		**6.4219**	**6.4219**	**0.0000**	**77,816.1644**	**77,816.1644**	**2.0118**	**1.4171**	**78,297.7142**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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 Vegetation

Existing Conditions_AQ-GHG

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Bank (with Drive-Through)	38.13	1000sqft	2.40	38,126.00	0
General Office Building	532.96	1000sqft	163.80	532,956.00	0
Government Office Building	59.99	1000sqft	46.40	59,987.00	0
Hospital	0.00	1000sqft	3.60	0.00	0
Medical Office Building	161.28	1000sqft	31.50	161,284.00	0
Place of Worship	91.75		46.60		0
General Light Industry	278.68	1000sqft	21.10	278,680.00	0
Manufacturing	11.46	1000sqft	1.10	11,464.00	0
Unrefrigerated Warehouse-No Rail	34.19	1000sqft	3.10	34,190.00	0
Parking Lot	10.30	Acre	10.30	448,668.00	0
Health Club	31.12	1000sqft	0.71	31,120.00	0
Hotel	113.00	Room	3.77	164,076.00	0
Movie Theater (No Matinee)	4.91		1.60		0
Quality Restaurant	39.92	1000sqft	5.20	39,917.00	0
Apartments Low Rise	783.00	Dwelling Unit	54.40	562,820.00	2239
Apartments Mid Rise	248.00	Dwelling Unit	14.00	127,192.00	709
Condo/Townhouse	312.00	Dwelling Unit	9.10	381,964.00	892
Mobile Home Park	103.00	Dwelling Unit	17.20	1,344.00	295
Retirement Community	57.00	Dwelling Unit	13.90	78,740.00	163
Single Family Housing	1,992.00	Dwelling Unit	459.70	3,436,455.00	5697
Automobile Care Center	99.64	1000sqft	10.20	99,641.00	0
Free-Standing Discount Store	169.71	1000sqft	11.70	169,713.00	0
Regional Shopping Center	150.18	1000sqft	9.90	150,181.00	0
Supermarket	96.91	1000sqft	6.00	96,911.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 64

Climate Zone	4			**Operational Year**	2016
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Project Description

Construction Phase - No construction proposed in Existing Condition

Area Mitigation - Per BAAQMD guidance

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	150
tblLandUse	LandUseSquareFeet	38,130.00	38,126.00
tblLandUse	LandUseSquareFeet	532,960.00	532,956.00
tblLandUse	LandUseSquareFeet	59,990.00	59,987.00
tblLandUse	LandUseSquareFeet	161,280.00	161,284.00
tblLandUse	LandUseSquareFeet	11,460.00	11,464.00
tblLandUse	LandUseSquareFeet	39,920.00	39,917.00
tblLandUse	LandUseSquareFeet	783,000.00	562,820.00
tblLandUse	LandUseSquareFeet	248,000.00	127,192.00
tblLandUse	LandUseSquareFeet	312,000.00	381,964.00
tblLandUse	LandUseSquareFeet	123,600.00	1,344.00
tblLandUse	LandUseSquareFeet	57,000.00	78,740.00
tblLandUse	LandUseSquareFeet	3,585,600.00	3,436,455.00

tblLandUse	LandUseSquareFeet	99,640.00	99,641.00
tblLandUse	LandUseSquareFeet	169,710.00	169,713.00
tblLandUse	LandUseSquareFeet	150,180.00	150,181.00
tblLandUse	LandUseSquareFeet	96,910.00	96,911.00
tblLandUse	LotAcreage	0.88	2.40
tblLandUse	LotAcreage	12.24	163.80
tblLandUse	LotAcreage	1.38	46.40
tblLandUse	LotAcreage	0.00	3.60
tblLandUse	LotAcreage	3.70	31.50
tblLandUse	LotAcreage	6.40	21.10
tblLandUse	LotAcreage	0.26	1.10
tblLandUse	LotAcreage	0.78	3.10
tblLandUse	LotAcreage	0.92	5.20
tblLandUse	LotAcreage	48.94	54.40
tblLandUse	LotAcreage	6.53	14.00
tblLandUse	LotAcreage	19.50	9.10
tblLandUse	LotAcreage	12.98	17.20
tblLandUse	LotAcreage	11.40	13.90
tblLandUse	LotAcreage	646.75	459.70
tblLandUse	LotAcreage	2.29	10.20
tblLandUse	LotAcreage	3.90	11.70
tblLandUse	LotAcreage	3.45	9.90
tblLandUse	LotAcreage	2.22	6.00
tblProjectCharacteristics	OperationalYear	2014	2016

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					
2017	78.8062	5.0264	27.8215	0.0595	4.9792	0.2115	5.1907	1.3206	0.2085	1.5291	0.0000	4,849.1641	4,849.1641	0.2708	0.0000	4,854.8507
2018	78.5626	4.5648	24.9755	0.0594	4.9792	0.1874	5.1666	1.3206	0.1846	1.5052	0.0000	4,679.6585	4,679.6585	0.2484	0.0000	4,684.8755
2019	78.3766	4.1670	22.7669	0.0594	4.9792	0.1648	5.1440	1.3206	0.1622	1.4828	0.0000	4,521.4783	4,521.4783	0.2300	0.0000	4,526.3074
2020	78.2416	3.8305	21.0729	0.0594	4.9792	0.1466	5.1258	1.3206	0.1440	1.4646	0.0000	4,351.0059	4,351.0059	0.2157	0.0000	4,355.5361
2021	78.1369	3.5255	19.7678	0.0594	4.9792	0.1296	5.1088	1.3206	0.1270	1.4476	0.0000	4,279.4326	4,279.4326	0.2034	0.0000	4,283.7049
Total	**392.1239**	**21.1143**	**116.4046**	**0.2971**	**24.8960**	**0.8399**	**25.7359**	**6.6031**	**0.8263**	**7.4293**	**0.0000**	**22,680.7393**	**22,680.7393**	**1.1683**	**0.0000**	**22,705.2744**

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					
2017	78.8062	5.0264	27.8215	0.0595	4.9792	0.2115	5.1907	1.3206	0.2085	1.5291	0.0000	4,849.1641	4,849.1641	0.2708	0.0000	4,854.8507
2018	78.5626	4.5648	24.9755	0.0594	4.9792	0.1874	5.1666	1.3206	0.1846	1.5052	0.0000	4,679.6585	4,679.6585	0.2484	0.0000	4,684.8755
2019	78.3766	4.1670	22.7669	0.0594	4.9792	0.1648	5.1440	1.3206	0.1622	1.4828	0.0000	4,521.4783	4,521.4783	0.2300	0.0000	4,526.3074
2020	78.2416	3.8305	21.0729	0.0594	4.9792	0.1466	5.1258	1.3206	0.1440	1.4646	0.0000	4,351.0059	4,351.0059	0.2157	0.0000	4,355.5361
2021	78.1369	3.5255	19.7678	0.0594	4.9792	0.1296	5.1088	1.3206	0.1270	1.4476	0.0000	4,279.4326	4,279.4326	0.2034	0.0000	4,283.7049
Total	**392.1239**	**21.1143**	**116.4046**	**0.2971**	**24.8960**	**0.8399**	**25.7359**	**6.6031**	**0.8263**	**7.4293**	**0.0000**	**22,680.7393**	**22,680.7393**	**1.1683**	**0.0000**	**22,705.2744**

	ROG	NOx	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	4,810.5470	83.0606	6,977.0851	5.8882		967.2524	967.2524		967.2208	967.2208	109,084.1290	48,010.4938	157,094.6228	204.0571	6.6714	163,447.9601
Energy	3.9723	34.6670	19.7380	0.2167		2.7445	2.7445		2.7445	2.7445		43,334.3403	43,334.3403	0.8306	0.7945	43,598.0659
Mobile	375.4921	713.7025	3,535.4233	5.2282	376.4723	8.5881	385.0604	100.7087	7.8890	108.5977		457,391.2415	457,391.2415	20.9350		457,830.8770
Total	**5,190.0113**	**831.4301**	**10,532.2465**	**11.3330**	**376.4723**	**978.5851**	**1,355.0573**	**100.7087**	**977.8543**	**1,078.5630**	**109,084.1290**	**548,736.0755**	**657,820.2045**	**225.8227**	**7.4659**	**664,876.9030**

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	194.8555	3.4229	292.9478	0.0152		6.4734	6.4734		6.4219	6.4219	0.0000	77,816.1644	77,816.1644	2.0118	1.4171	78,297.7142
Energy	3.9723	34.6670	19.7380	0.2167		2.7445	2.7445		2.7445	2.7445		43,334.3403	43,334.3403	0.8306	0.7945	43,598.0659
Mobile	375.4921	713.7025	3,535.4233	5.2282	376.4723	8.5881	385.0604	100.7087	7.8890	108.5977		457,391.2415	457,391.2415	20.9350		457,830.8770
Total	**574.3199**	**751.7924**	**3,848.1091**	**5.4601**	**376.4723**	**17.8060**	**394.2783**	**100.7087**	**17.0554**	**117.7641**	**0.0000**	**578,541.7461**	**578,541.7461**	**23.7774**	**2.2116**	**579,726.6571**

	ROG	NOx	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	**88.93**	**9.58**	**63.46**	**51.82**	**0.00**	**98.18**	**70.90**	**0.00**	**98.26**	**89.08**	**100.00**	**-5.43**	**12.05**	**89.47**	**70.38**	**12.81**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	3/19/2021	5	1100	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 9,291,743; Residential Outdoor: 3,097,248; Non-Residential Indoor: 2,822,559; Non-Residential Outdoor: 940,853 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	528.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**76.9002**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	1.9060	2.8414	25.9534	0.0565	4.9792	0.0382	5.0174	1.3206	0.0351	1.3558		4,567.7160	4,567.7160	0.2411		4,572.7786
Total	**1.9060**	**2.8414**	**25.9534**	**0.0565**	**4.9792**	**0.0382**	**5.0174**	**1.3206**	**0.0351**	**1.3558**		**4,567.7160**	**4,567.7160**	**0.2411**		**4,572.7786**

3.2 Architectural Coating - 2017

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**76.9002**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	1.9060	2.8414	25.9534	0.0565	4.9792	0.0382	5.0174	1.3206	0.0351	1.3558		4,567.7160	4,567.7160	0.2411		4,572.7786
Total	**1.9060**	**2.8414**	**25.9534**	**0.0565**	**4.9792**	**0.0382**	**5.0174**	**1.3206**	**0.0351**	**1.3558**		**4,567.7160**	**4,567.7160**	**0.2411**		**4,572.7786**

3.2 Architectural Coating - 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					
Archit. Coating	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**76.8665**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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
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
Worker	1.6961	2.5591	23.1213	0.0565	4.9792	0.0369	5.0161	1.3206	0.0341	1.3547		4,398.2099	4,398.2099	0.2217		4,402.8653
Total	**1.6961**	**2.5591**	**23.1213**	**0.0565**	**4.9792**	**0.0369**	**5.0161**	**1.3206**	**0.0341**	**1.3547**		**4,398.2099**	**4,398.2099**	**0.2217**		**4,402.8653**

3.2 Architectural Coating - 2018

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**76.8665**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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
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
Worker	1.6961	2.5591	23.1213	0.0565	4.9792	0.0369	5.0161	1.3206	0.0341	1.3547		4,398.2099	4,398.2099	0.2217		4,402.8653
Total	**1.6961**	**2.5591**	**23.1213**	**0.0565**	**4.9792**	**0.0369**	**5.0161**	**1.3206**	**0.0341**	**1.3547**		**4,398.2099**	**4,398.2099**	**0.2217**		**4,402.8653**

3.2 Architectural Coating - 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					
Archit. Coating	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	**76.8343**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**281.9473**

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
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
Worker	1.5423	2.3317	20.9255	0.0565	4.9792	0.0361	5.0153	1.3206	0.0334	1.3540		4,240.0302	4,240.0302	0.2062		4,244.3601
Total	**1.5423**	**2.3317**	**20.9255**	**0.0565**	**4.9792**	**0.0361**	**5.0153**	**1.3206**	**0.0334**	**1.3540**		**4,240.0302**	**4,240.0302**	**0.2062**		**4,244.3601**

3.2 Architectural Coating - 2019

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		281.9473
Total	**76.8343**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**281.9473**

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
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
Worker	1.5423	2.3317	20.9255	0.0565	4.9792	0.0361	5.0153	1.3206	0.0334	1.3540		4,240.0302	4,240.0302	0.2062		4,244.3601
Total	**1.5423**	**2.3317**	**20.9255**	**0.0565**	**4.9792**	**0.0361**	**5.0153**	**1.3206**	**0.0334**	**1.3540**		**4,240.0302**	**4,240.0302**	**0.2062**		**4,244.3601**

3.2 Architectural Coating - 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					
Archit. Coating	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9057
Total	**76.8101**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9057**

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
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
Worker	1.4316	2.1466	19.2415	0.0564	4.9792	0.0356	5.0148	1.3206	0.0330	1.3537		4,069.5578	4,069.5578	0.1939		4,073.6304
Total	**1.4316**	**2.1466**	**19.2415**	**0.0564**	**4.9792**	**0.0356**	**5.0148**	**1.3206**	**0.0330**	**1.3537**		**4,069.5578**	**4,069.5578**	**0.1939**		**4,073.6304**

3.2 Architectural Coating - 2020

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9057
Total	**76.8101**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9057**

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
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
Worker	1.4316	2.1466	19.2415	0.0564	4.9792	0.0356	5.0148	1.3206	0.0330	1.3537		4,069.5578	4,069.5578	0.1939		4,073.6304
Total	**1.4316**	**2.1466**	**19.2415**	**0.0564**	**4.9792**	**0.0356**	**5.0148**	**1.3206**	**0.0330**	**1.3537**		**4,069.5578**	**4,069.5578**	**0.1939**		**4,073.6304**

3.2 Architectural Coating - 2021

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.8537
Total	**76.7868**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.8537**

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
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
Worker	1.3501	1.9987	17.9502	0.0564	4.9792	0.0355	5.0147	1.3206	0.0329	1.3535		3,997.9846	3,997.9846	0.1841		4,001.8512
Total	**1.3501**	**1.9987**	**17.9502**	**0.0564**	**4.9792**	**0.0355**	**5.0147**	**1.3206**	**0.0329**	**1.3535**		**3,997.9846**	**3,997.9846**	**0.1841**		**4,001.8512**

3.2 Architectural Coating - 2021

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	76.5679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.8537
Total	**76.7868**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.8537**

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
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
Worker	1.3501	1.9987	17.9502	0.0564	4.9792	0.0355	5.0147	1.3206	0.0329	1.3535		3,997.9846	3,997.9846	0.1841		4,001.8512
Total	**1.3501**	**1.9987**	**17.9502**	**0.0564**	**4.9792**	**0.0355**	**5.0147**	**1.3206**	**0.0329**	**1.3535**		**3,997.9846**	**3,997.9846**	**0.1841**		**4,001.8512**

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	375.4921	713.7025	3,535.4233	5.2282	376.4723	8.5881	385.0604	100.7087	7.8890	108.5977		457,391.2415	457,391.2415	20.9350		457,830.8770
Unmitigated	375.4921	713.7025	3,535.4233	5.2282	376.4723	8.5881	385.0604	100.7087	7.8890	108.5977		457,391.2415	457,391.2415	20.9350		457,830.8770

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	5,159.97	5,606.28	4752.81	11,531,427	11,531,427
Apartments Mid Rise	1,634.32	1,775.68	1505.36	3,652,355	3,652,355
Automobile Care Center	6,177.68	6,177.68	6177.68	6,154,119	6,154,119
Bank (with Drive-Through)	5,648.96	3,291.38	1216.35	4,327,899	4,327,899
Condo/Townhouse	2,056.08	2,233.92	1893.84	4,594,898	4,594,898
Free-Standing Discount Store	9,714.20	12,061.29	9564.86	15,636,530	15,636,530
General Light Industry	1,942.40	367.86	189.50	4,283,072	4,283,072
General Office Building	5,867.89	1,263.12	522.30	10,625,819	10,625,819
Government Office Building	4,135.11	0.00	0.00	5,065,157	5,065,157
Health Club	1,024.78	649.47	831.84	1,630,231	1,630,231
Hospital	0.00	0.00	0.00		
Hotel	923.21	925.47	672.35	1,686,560	1,686,560
Manufacturing	43.78	17.08	7.11	101,377	101,377
Medical Office Building	5,827.05	1,445.07	249.98	8,620,367	8,620,367
Mobile Home Park	513.97	515.00	449.08	1,127,004	1,127,004
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	3,590.80	3,766.85	2880.63	4,168,783	4,168,783
Regional Shopping Center	6,448.73	7,504.49	3790.54	10,905,226	10,905,226
Retirement Community	160.17	160.17	160.17	357,558	357,558
Single Family Housing	19,063.44	20,079.36	17469.84	42,372,349	42,372,349
Supermarket	9,908.08	17,210.25	16129.70	13,467,387	13,467,387
Unrefrigerated Warehouse-No Rail	88.55	88.55	88.55	258,529	258,529
Total	89,929.17	85,138.97	68,552.49	150,566,647	150,566,647

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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Apartments Mid Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Bank (with Drive-Through)	9.50	7.30	7.30	6.60	74.40	19.00	27	26	47
Condo/Townhouse	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Free-Standing Discount Store	9.50	7.30	7.30	12.20	68.80	19.00	47.5	35.5	17
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Government Office Building	9.50	7.30	7.30	33.00	62.00	5.00	50	34	16
Health Club	9.50	7.30	7.30	16.90	64.10	19.00	52	39	9
Hospital	9.50	7.30	7.30	64.90	16.10	19.00	73	25	2
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Medical Office Building	9.50	7.30	7.30	29.60	51.40	19.00	60	30	10
Mobile Home Park	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00	38	18	44
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Retirement Community	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546434	0.062864	0.174629	0.123506	0.034170	0.004889	0.015456	0.023695	0.002073	0.003288	0.006639	0.000690	0.001668

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	3.9723	34.6670	19.7380	0.2167		2.7445	2.7445		2.7445	2.7445		43,334.3403	43,334.3403	0.8306	0.7945	43,598.0659
NaturalGas Unmitigated	3.9723	34.6670	19.7380	0.2167		2.7445	2.7445		2.7445	2.7445		43,334.3403	43,334.3403	0.8306	0.7945	43,598.0659

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 Mid Rise	5522.33	0.0596	0.5089	0.2166	3.2500e-003		0.0412	0.0412		0.0412	0.0412		649.6857	649.6857	0.0125	0.0119	653.6395
Automobile Care Center	7482.63	0.0807	0.7336	0.6162	4.4000e-003		0.0558	0.0558		0.0558	0.0558		880.3094	880.3094	0.0169	0.0161	885.6668
Bank (with Drive-Through)	2863.11	0.0309	0.2807	0.2358	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8360	336.8360	6.4600e-003	6.1800e-003	338.8859
Condo/Townhouse	16646.8	0.1795	1.5341	0.6528	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.4459	1,958.4459	0.0375	0.0359	1,970.3647
Free-Standing Discount Store	1157.77	0.0125	0.1135	0.0954	6.8000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003		136.2080	136.2080	2.6100e-003	2.5000e-003	137.0370
General Light Industry	20927.7	0.2257	2.0517	1.7235	0.0123		0.1559	0.1559		0.1559	0.1559		2,462.0850	2,462.0850	0.0472	0.0451	2,477.0689
General Office Building	25143.8	0.2712	2.4651	2.0707	0.0148		0.1874	0.1874		0.1874	0.1874		2,958.0991	2,958.0991	0.0567	0.0542	2,976.1016

	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					
Government Office Building	2830.07	0.0305	0.2775	0.2331	1.6600e-003		0.0211	0.0211		0.0211	0.0211		332.9496	332.9496	6.3800e-003	6.1000e-003	334.9759
Health Club	2336.98	0.0252	0.2291	0.1925	1.3700e-003		0.0174	0.0174		0.0174	0.0174		274.9393	274.9393	5.2700e-003	5.0400e-003	276.6125
Hospital	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	20848.9	0.2248	2.0440	1.7170	0.0123		0.1553	0.1553		0.1553	0.1553		2,452.8106	2,452.8106	0.0470	0.0450	2,467.7380
Manufacturing	860.899	9.2800e-003	0.0844	0.0709	5.1000e-004		6.4100e-003	6.4100e-003		6.4100e-003	6.4100e-003		101.2823	101.2823	1.9400e-003	1.8600e-003	101.8987
Medical Office Building	7609.07	0.0821	0.7460	0.6266	4.4800e-003		0.0567	0.0567		0.0567	0.0567		895.1847	895.1847	0.0172	0.0164	900.6326
Mobile Home Park	4738.37	0.0511	0.4367	0.1858	2.7900e-003		0.0353	0.0353		0.0353	0.0353		557.4549	557.4549	0.0107	0.0102	560.8475
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Place of Worship	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	23079.7	0.2489	2.2627	1.9007	0.0136		0.1720	0.1720		0.1720	0.1720		2,715.2566	2,715.2566	0.0520	0.0498	2,731.7812
Regional Shopping Center	1024.52	0.0111	0.1004	0.0844	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5321	120.5321	2.3100e-003	2.2100e-003	121.2656
Retirement Community	3041.24	0.0328	0.2803	0.1193	1.7900e-003		0.0227	0.0227		0.0227	0.0227		357.7930	357.7930	6.8600e-003	6.5600e-003	359.9705
Single Family Housing	192558	2.0766	17.7455	7.5513	0.1133		1.4348	1.4348		1.4348	1.4348		22,653.8779	22,653.8779	0.4342	0.4153	22,791.7457
Supermarket	6199.65	0.0669	0.6078	0.5106	3.6500e-003		0.0462	0.0462		0.0462	0.0462		729.3705	729.3705	0.0140	0.0134	733.8093
Unrefrigerated Warehouse-No Rail	341.9	3.6900e-003	0.0335	0.0282	2.0000e-004		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003		40.2235	40.2235	7.7000e-004	7.4000e-004	40.4683
Apartments Low Rise	23128.5	0.2494	2.1315	0.9070	0.0136		0.1723	0.1723		0.1723	0.1723		2,720.9963	2,720.9963	0.0522	0.0499	2,737.5558
Total		**3.9723**	**34.6671**	**19.7380**	**0.2167**		**2.7445**	**2.7445**		**2.7445**	**2.7445**		**43,334.3403**	**43,334.3403**	**0.8306**	**0.7945**	**43,598.0659**

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					
Automobile Care Center	7.48263	0.0807	0.7336	0.6162	4.4000e-003		0.0558	0.0558		0.0558	0.0558		880.3094	880.3094	0.0169	0.0161	885.6668
Bank (with Drive-Through)	2.86311	0.0309	0.2807	0.2358	1.6800e-003		0.0213	0.0213		0.0213	0.0213		336.8360	336.8360	6.4600e-003	6.1800e-003	338.8859
Condo/Townhouse	16.6468	0.1795	1.5341	0.6528	9.7900e-003		0.1240	0.1240		0.1240	0.1240		1,958.4459	1,958.4459	0.0375	0.0359	1,970.3647
Free-Standing Discount Store	1.15777	0.0125	0.1135	0.0954	6.8000e-004		8.6300e-003	8.6300e-003		8.6300e-003	8.6300e-003		136.2080	136.2080	2.6100e-003	2.5000e-003	137.0370
General Light Industry	20.9277	0.2257	2.0517	1.7235	0.0123		0.1559	0.1559		0.1559	0.1559		2,462.0850	2,462.0850	0.0472	0.0451	2,477.0689
General Office Building	25.1438	0.2712	2.4651	2.0707	0.0148		0.1874	0.1874		0.1874	0.1874		2,958.0991	2,958.0991	0.0567	0.0542	2,976.1016
Government Office Building	2.83007	0.0305	0.2775	0.2331	1.6600e-003		0.0211	0.0211		0.0211	0.0211		332.9496	332.9496	6.3800e-003	6.1000e-003	334.9759
Health Club	2.33698	0.0252	0.2291	0.1925	1.3700e-003		0.0174	0.0174		0.0174	0.0174		274.9393	274.9393	5.2700e-003	5.0400e-003	276.6125
Hospital	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hotel	20.8489	0.2248	2.0440	1.7170	0.0123		0.1553	0.1553		0.1553	0.1553		2,452.8106	2,452.8106	0.0470	0.0450	2,467.7380
Manufacturing	0.860899	9.2800e-003	0.0844	0.0709	5.1000e-004		6.4100e-003	6.4100e-003		6.4100e-003	6.4100e-003		101.2823	101.2823	1.9400e-003	1.8600e-003	101.8987
Medical Office Building	7.60907	0.0821	0.7460	0.6266	4.4800e-003		0.0567	0.0567		0.0567	0.0567		895.1847	895.1847	0.0172	0.0164	900.6326
Mobile Home Park	4.73837	0.0511	0.4367	0.1858	2.7900e-003		0.0353	0.0353		0.0353	0.0353		557.4549	557.4549	0.0107	0.0102	560.8475
Movie Theater (No Matinee)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

	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					
Place of Worship	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	23.0797	0.2489	2.2627	1.9007	0.0136		0.1720	0.1720		0.1720	0.1720		2,715.2566	2,715.2566	0.0520	0.0498	2,731.7812
Regional Shopping Center	1.02452	0.0111	0.1004	0.0844	6.0000e-004		7.6300e-003	7.6300e-003		7.6300e-003	7.6300e-003		120.5321	120.5321	2.3100e-003	2.2100e-003	121.2656
Retirement Community	3.04124	0.0328	0.2803	0.1193	1.7900e-003		0.0227	0.0227		0.0227	0.0227		357.7930	357.7930	6.8600e-003	6.5600e-003	359.9705
Single Family Housing	192.558	2.0766	17.7455	7.5513	0.1133		1.4348	1.4348		1.4348	1.4348		22,653.8779	22,653.8779	0.4342	0.4153	22,791.7457
Supermarket	6.19965	0.0669	0.6078	0.5106	3.6500e-003		0.0462	0.0462		0.0462	0.0462		729.3705	729.3705	0.0140	0.0134	733.8093
Unrefrigerated Warehouse-No Rail	0.3419	3.6900e-003	0.0335	0.0282	2.0000e-004		2.5500e-003	2.5500e-003		2.5500e-003	2.5500e-003		40.2235	40.2235	7.7000e-004	7.4000e-004	40.4683
Apartments Low Rise	23.1285	0.2494	2.1315	0.9070	0.0136		0.1723	0.1723		0.1723	0.1723		2,720.9963	2,720.9963	0.0522	0.0499	2,737.5558
Apartments Mid Rise	5.52233	0.0596	0.5089	0.2166	3.2500e-003		0.0412	0.0412		0.0412	0.0412		649.6857	649.6857	0.0125	0.0119	653.6395
Total		**3.9723**	**34.6671**	**19.7380**	**0.2167**		**2.7445**	**2.7445**		**2.7445**	**2.7445**		**43,334.3403**	**43,334.3403**	**0.8306**	**0.7945**	**43,598.0659**

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

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	194.8555	3.4229	292.9478	0.0152		6.4734	6.4734		6.4219	6.4219	0.0000	77,816.1644	77,816.1644	2.0118	1.4171	78,297.7142
Unmitigated	4,810.5470	83.0606	6,977.0851	5.8882		967.2524	967.2524		967.2208	967.2208	109,084.1290	48,010.4938	157,094.6228	204.0571	6.6714	163,447.9601

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	23.0753					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	147.7762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	4,630.4687	79.6381	6,684.5239	5.8729		965.6745	965.6745		965.6428	965.6428	109,084.1290	47,490.8824	156,575.0114	203.5268	6.6714	162,917.2128
Landscaping	9.2268	3.4226	292.5613	0.0152		1.5780	1.5780		1.5780	1.5780		519.6114	519.6114	0.5303		530.7473
Total	**4,810.5470**	**83.0606**	**6,977.0851**	**5.8882**		**967.2524**	**967.2524**		**967.2208**	**967.2208**	**109,084.1290**	**48,010.4938**	**157,094.6228**	**204.0571**	**6.6714**	**163,447.9601**

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	30.7670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	147.7762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	7.0855	3.2000e-004	0.3865	0.0000		4.8955	4.8955		4.8439	4.8439	0.0000	77,296.5529	77,296.5529	1.4815	1.4171	77,766.9669
Landscaping	9.2268	3.4226	292.5613	0.0152		1.5780	1.5780		1.5780	1.5780		519.6114	519.6114	0.5303		530.7473
Total	**194.8555**	**3.4229**	**292.9478**	**0.0152**		**6.4734**	**6.4734**		**6.4219**	**6.4219**	**0.0000**	**77,816.1644**	**77,816.1644**	**2.0118**	**1.4171**	**78,297.7142**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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 Vegetation

Existing Conditions_AQ-GHG

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	1.54800E-001	1.04866E+000	1.01592E+000	1.63000E-003	7.61500E-002	7.61500E-002	0.00000E+000	1.40429E+002	1.40429E+002	1.25700E-002	0.00000E+000	1.40693E+002

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	1.54800E-001	1.04865E+000	1.01592E+000	1.63000E-003	7.61500E-002	7.61500E-002	0.00000E+000	1.40429E+002	1.40429E+002	1.25600E-002	0.00000E+000	1.40693E+002

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	9.53598E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.13937E-006	1.13937E-006	7.95545E-004	0.00000E+000	1.20831E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	2.63	0.70	2.63	0.70	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	-33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	99.86	100.00	100.00	100.00	99.58	99.58	100.00	-68.67	57.34	99.51	79.98	59.02
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	16.71	17.15	20.01	20.04	17.95
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.30	0.71		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	150.00
Yes	Use Low VOC Paint (Residential Exterior)	150.00
Yes	Use Low VOC Paint (Non-residential Interior)	150.00
Yes	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Sebastopol GP_AQ-GHG

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	137.38	1000sqft	3.15	137,375.00	0
General Light Industry	59.96	1000sqft	1.38	59,959.00	0
Hotel	173.00	Room	5.77	251,196.00	0
Apartments Low Rise	422.00	Dwelling Unit	26.38	422,000.00	1207
Single Family Housing	328.00	Dwelling Unit	106.49	590,400.00	938
Supermarket	341.16	1000sqft	7.83	341,159.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Project Description

Construction Phase - No construction is proposed

Area Mitigation - Per BAAQMD guidance

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	150
tblLandUse	LandUseSquareFeet	137,380.00	137,375.00
tblLandUse	LandUseSquareFeet	59,960.00	59,959.00
tblLandUse	LandUseSquareFeet	341,160.00	341,159.00
tblProjectCharacteristics	OperationalYear	2014	2035

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					
2017	11.3332	0.3167	0.9398	2.0000e-003	0.1407	0.0202	0.1609	0.0374	0.0201	0.0575	0.0000	150.9009	150.9009	9.3900e-003	0.0000	151.0981
Total	**11.3332**	**0.3167**	**0.9398**	**2.0000e-003**	**0.1407**	**0.0202**	**0.1609**	**0.0374**	**0.0201**	**0.0575**	**0.0000**	**150.9009**	**150.9009**	**9.3900e-003**	**0.0000**	**151.0981**

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					
2017	11.3332	0.3167	0.9398	2.0000e-003	0.1407	0.0202	0.1609	0.0374	0.0201	0.0575	0.0000	150.9009	150.9009	9.3900e-003	0.0000	151.0981
Total	**11.3332**	**0.3167**	**0.9398**	**2.0000e-003**	**0.1407**	**0.0202**	**0.1609**	**0.0374**	**0.0201**	**0.0575**	**0.0000**	**150.9009**	**150.9009**	**9.3900e-003**	**0.0000**	**151.0981**

	ROG	NOx	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	tons/yr										MT/yr					
Area	10.8276	0.1142	9.5812	5.0200e-003		0.6218	0.6218		0.6218	0.6218	63.0968	32.9837	96.0805	0.1570	3.2100e-003	100.3736
Energy	0.2143	1.9010	1.2890	0.0117		0.1481	0.1481		0.1481	0.1481	0.0000	9,054.7461	9,054.7461	0.3542	0.1038	9,094.3472
Mobile	14.4505	22.2639	125.9547	0.3721	24.8870	0.5075	25.3945	6.6794	0.4687	7.1481	0.0000	23,872.2865	23,872.2865	0.6482	0.0000	23,885.8979
Waste						0.0000	0.0000		0.0000	0.0000	570.2118	0.0000	570.2118	33.6986	0.0000	1,277.8813
Water						0.0000	0.0000		0.0000	0.0000	42.3823	258.7137	301.0959	4.3648	0.1052	425.3697
Total	**25.4925**	**24.2791**	**136.8248**	**0.3888**	**24.8870**	**1.2774**	**26.1644**	**6.6794**	**1.2386**	**7.9179**	**675.6908**	**33,218.7300**	**33,894.4208**	**39.2226**	**0.2122**	**34,783.8697**

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	8.7077	0.0641	5.5560	2.9000e-004		0.0336	0.0336		0.0336	0.0336	0.0000	47.3841	47.3841	9.4300e-003	7.0000e-004	47.7995
Energy	0.2143	1.9010	1.2890	0.0117		0.1481	0.1481		0.1481	0.1481	0.0000	9,054.7461	9,054.7461	0.3542	0.1038	9,094.3472
Mobile	14.4505	22.2639	125.9547	0.3721	24.8870	0.5075	25.3945	6.6794	0.4687	7.1481	0.0000	23,872.2865	23,872.2865	0.6482	0.0000	23,885.8979
Waste						0.0000	0.0000		0.0000	0.0000	570.2118	0.0000	570.2118	33.6986	0.0000	1,277.8813
Water						0.0000	0.0000		0.0000	0.0000	33.9058	213.7020	247.6078	3.4915	0.0841	346.9986
Total	**23.3726**	**24.2290**	**132.7996**	**0.3841**	**24.8870**	**0.6892**	**25.5762**	**6.6794**	**0.6503**	**7.3297**	**604.1176**	**33,188.1187**	**33,792.2363**	**38.2018**	**0.1886**	**34,652.9246**

	ROG	NOx	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	**8.32**	**0.21**	**2.94**	**1.22**	**0.00**	**46.05**	**2.25**	**0.00**	**47.49**	**7.43**	**10.59**	**0.09**	**0.30**	**2.60**	**11.13**	**0.38**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	11/3/2017	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 2,050,110; Residential Outdoor: 683,370; Non-Residential Indoor: 1,184,534; Non-Residential Outdoor: 394,845 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	141.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

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	11.2444					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0366	0.2404	0.2055	3.3000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	28.0858	28.0858	2.9700e-003	0.0000	28.1481
Total	**11.2810**	**0.2404**	**0.2055**	**3.3000e-004**		**0.0191**	**0.0191**		**0.0191**	**0.0191**	**0.0000**	**28.0858**	**28.0858**	**2.9700e-003**	**0.0000**	**28.1481**

3.2 Architectural Coating - 2017

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	0.0522	0.0763	0.7343	1.6700e-003	0.1407	1.1200e-003	0.1418	0.0374	1.0300e-003	0.0385	0.0000	122.8151	122.8151	6.4200e-003	0.0000	122.9500
Total	**0.0522**	**0.0763**	**0.7343**	**1.6700e-003**	**0.1407**	**1.1200e-003**	**0.1418**	**0.0374**	**1.0300e-003**	**0.0385**	**0.0000**	**122.8151**	**122.8151**	**6.4200e-003**	**0.0000**	**122.9500**

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	11.2444					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0366	0.2404	0.2055	3.3000e-004		0.0191	0.0191		0.0191	0.0191	0.0000	28.0858	28.0858	2.9700e-003	0.0000	28.1480
Total	**11.2810**	**0.2404**	**0.2055**	**3.3000e-004**		**0.0191**	**0.0191**		**0.0191**	**0.0191**	**0.0000**	**28.0858**	**28.0858**	**2.9700e-003**	**0.0000**	**28.1480**

3.2 Architectural Coating - 2017

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	0.0522	0.0763	0.7343	1.6700e-003	0.1407	1.1200e-003	0.1418	0.0374	1.0300e-003	0.0385	0.0000	122.8151	122.8151	6.4200e-003	0.0000	122.9500
Total	**0.0522**	**0.0763**	**0.7343**	**1.6700e-003**	**0.1407**	**1.1200e-003**	**0.1418**	**0.0374**	**1.0300e-003**	**0.0385**	**0.0000**	**122.8151**	**122.8151**	**6.4200e-003**	**0.0000**	**122.9500**

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	14.4505	22.2639	125.9547	0.3721	24.8870	0.5075	25.3945	6.6794	0.4687	7.1481	0.0000	23,872.2865	23,872.2865	0.6482	0.0000	23,885.8979
Unmitigated	14.4505	22.2639	125.9547	0.3721	24.8870	0.5075	25.3945	6.6794	0.4687	7.1481	0.0000	23,872.2865	23,872.2865	0.6482	0.0000	23,885.8979

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,780.98	3,021.52	2561.54	6,214,894	6,214,894
General Light Industry	417.92	79.15	40.77	921,534	921,534
General Office Building	1,512.55	325.59	134.63	2,738,995	2,738,995
Hotel	1,413.41	1,416.87	1029.35	2,582,079	2,582,079
Single Family Housing	3,138.96	3,306.24	2876.56	6,976,973	6,976,973
Supermarket	34,880.20	60,586.60	56782.67	47,410,317	47,410,317
Total	44,144.02	68,735.97	63,425.53	66,844,792	66,844,792

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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.544287	0.062956	0.171756	0.119283	0.033776	0.004850	0.017325	0.031479	0.002293	0.003006	0.006870	0.000528	0.001591

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	6,933.6309	6,933.6309	0.3135	0.0649	6,960.3233
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6,933.6309	6,933.6309	0.3135	0.0649	6,960.3233
NaturalGas Mitigated	0.2143	1.9010	1.2890	0.0117		0.1481	0.1481		0.1481	0.1481	0.0000	2,121.1152	2,121.1152	0.0407	0.0389	2,134.0240
NaturalGas Unmitigated	0.2143	1.9010	1.2890	0.0117		0.1481	0.1481		0.1481	0.1481	0.0000	2,121.1152	2,121.1152	0.0407	0.0389	2,134.0240

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	4.54978e+006	0.0245	0.2097	0.0892	1.3400e-003		0.0170	0.0170		0.0170	0.0170	0.0000	242.7936	242.7936	4.6500e-003	4.4500e-003	244.2712
General Light Industry	1.64348e+006	8.8600e-003	0.0806	0.0677	4.8000e-004		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	87.7022	87.7022	1.6800e-003	1.6100e-003	88.2359
General Office Building	2.3656e+006	0.0128	0.1160	0.0974	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003	0.0000	126.2373	126.2373	2.4200e-003	2.3100e-003	127.0056
Hotel	1.16505e+007	0.0628	0.5711	0.4797	3.4300e-003		0.0434	0.0434		0.0434	0.0434	0.0000	621.7135	621.7135	0.0119	0.0114	625.4971
Single Family Housing	1.15728e+007	0.0624	0.5333	0.2269	3.4000e-003		0.0431	0.0431		0.0431	0.0431	0.0000	617.5693	617.5693	0.0118	0.0113	621.3277
Supermarket	7.96606e+006	0.0430	0.3905	0.3280	2.3400e-003		0.0297	0.0297		0.0297	0.0297	0.0000	425.0994	425.0994	8.1500e-003	7.7900e-003	427.6865
Total		**0.2143**	**1.9010**	**1.2890**	**0.0117**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,121.1152**	**2,121.1152**	**0.0407**	**0.0389**	**2,134.0240**

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					
General Light Industry	1.64348e+006	8.8600e-003	0.0806	0.0677	4.8000e-004		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	87.7022	87.7022	1.6800e-003	1.6100e-003	88.2359
General Office Building	2.3656e+006	0.0128	0.1160	0.0974	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003	0.0000	126.2373	126.2373	2.4200e-003	2.3100e-003	127.0056
Hotel	1.16505e+007	0.0628	0.5711	0.4797	3.4300e-003		0.0434	0.0434		0.0434	0.0434	0.0000	621.7135	621.7135	0.0119	0.0114	625.4971
Single Family Housing	1.15728e+007	0.0624	0.5333	0.2269	3.4000e-003		0.0431	0.0431		0.0431	0.0431	0.0000	617.5693	617.5693	0.0118	0.0113	621.3277
Supermarket	7.96606e+006	0.0430	0.3905	0.3280	2.3400e-003		0.0297	0.0297		0.0297	0.0297	0.0000	425.0994	425.0994	8.1500e-003	7.7900e-003	427.6865
Apartments Low Rise	4.54978e+006	0.0245	0.2097	0.0892	1.3400e-003		0.0170	0.0170		0.0170	0.0170	0.0000	242.7936	242.7936	4.6500e-003	4.4500e-003	244.2712
Total		**0.2143**	**1.9010**	**1.2890**	**0.0117**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,121.1152**	**2,121.1152**	**0.0407**	**0.0389**	**2,134.0240**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.55368e+006	451.9838	0.0204	4.2300e-003	453.7238
General Light Industry	541430	157.5081	7.1200e-003	1.4700e-003	158.1145
General Office Building	2.70766e+006	787.6897	0.0356	7.3700e-003	790.7221
Hotel	2.12009e+006	616.7597	0.0279	5.7700e-003	619.1341
Single Family Housing	2.31992e+006	674.8926	0.0305	6.3100e-003	677.4907
Supermarket	1.45914e+007	4,244.7970	0.1919	0.0397	4,261.1381
Total		**6,933.6309**	**0.3135**	**0.0649**	**6,960.3233**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	1.55368e+006	451.9838	0.0204	4.2300e-003	453.7238
General Light Industry	541430	157.5081	7.1200e-003	1.4700e-003	158.1145
General Office Building	2.70766e+006	787.6897	0.0356	7.3700e-003	790.7221
Hotel	2.12009e+006	616.7597	0.0279	5.7700e-003	619.1341
Single Family Housing	2.31992e+006	674.8926	0.0305	6.3100e-003	677.4907
Supermarket	1.45914e+007	4,244.7970	0.1919	0.0397	4,261.1381
Total		**6,933.6309**	**0.3135**	**0.0649**	**6,960.3233**

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

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	8.7077	0.0641	5.5560	2.9000e-004		0.0336	0.0336		0.0336	0.0336	0.0000	47.3841	47.3841	9.4300e-003	7.0000e-004	47.7995
Unmitigated	10.8276	0.1142	9.5812	5.0200e-003		0.6218	0.6218		0.6218	0.6218	63.0968	32.9837	96.0805	0.1570	3.2100e-003	100.3736

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	1.1244					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.0381					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.4986	0.0502	4.0254	4.7200e-003		0.5909	0.5909		0.5909	0.5909	63.0968	23.8744	86.9712	0.1483	3.2100e-003	91.0818
Landscaping	0.1665	0.0641	5.5558	2.9000e-004		0.0309	0.0309		0.0309	0.0309	0.0000	9.1093	9.1093	8.6900e-003	0.0000	9.2919
Total	**10.8276**	**0.1142**	**9.5812**	**5.0100e-003**		**0.6218**	**0.6218**		**0.6218**	**0.6218**	**63.0968**	**32.9837**	**96.0805**	**0.1570**	**3.2100e-003**	**100.3736**

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	1.4993					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.0381					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.8700e-003	0.0000	2.1000e-004	0.0000		2.6700e-003	2.6700e-003		2.6400e-003	2.6400e-003	0.0000	38.2748	38.2748	7.3000e-004	7.0000e-004	38.5077
Landscaping	0.1665	0.0641	5.5558	2.9000e-004		0.0309	0.0309		0.0309	0.0309	0.0000	9.1093	9.1093	8.6900e-003	0.0000	9.2919
Total	**8.7077**	**0.0641**	**5.5560**	**2.9000e-004**		**0.0336**	**0.0336**		**0.0336**	**0.0336**	**0.0000**	**47.3841**	**47.3841**	**9.4200e-003**	**7.0000e-004**	**47.7996**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	247.6078	3.4915	0.0841	346.9986
Unmitigated	301.0959	4.3648	0.1052	425.3697

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	27.495 / 17.3338	69.6525	0.8987	0.0217	95.2594
General Light Industry	13.8658 / 0	26.2253	0.4528	0.0109	39.1047
General Office Building	24.4171 / 14.9653	61.4194	0.7981	0.0193	84.1581
Hotel	4.38845 / 0.487606	8.7967	0.1433	3.4500e-003	12.8749
Single Family Housing	21.3705 / 13.4727	54.1375	0.6985	0.0169	74.0405
Supermarket	42.0542 / 1.30064	80.8646	1.3734	0.0330	119.9321
Total		**301.0959**	**4.3648**	**0.1052**	**425.3697**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	21.996 / 16.2764	58.1752	0.7189	0.0174	78.6591
General Light Industry	11.0926 / 0	20.9803	0.3622	8.6800e-003	31.2781
General Office Building	19.5336 / 14.0524	51.2535	0.6384	0.0154	69.4427
Hotel	3.51076 / 0.457862	7.1064	0.1147	2.7500e-003	10.3674
Single Family Housing	17.0964 / 12.6509	45.2168	0.5588	0.0135	61.1379
Supermarket	33.6433 / 1.22131	64.8757	1.0985	0.0264	96.1135
Total		**247.6078**	**3.4915**	**0.0841**	**346.9986**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	570.2118	33.6986	0.0000	1,277.8813
Mitigated	570.2118	33.6986	0.0000	1,277.8813

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	194.12	39.4046	2.3288	0.0000	88.3083
General Light Industry	74.35	15.0924	0.8919	0.0000	33.8230
General Office Building	127.76	25.9341	1.5327	0.0000	58.1201
Hotel	94.72	19.2273	1.1363	0.0000	43.0896
Single Family Housing	393.96	79.9703	4.7261	0.0000	179.2186
Supermarket	1924.14	390.5830	23.0828	0.0000	875.3217
Total		**570.2118**	**33.6986**	**0.0000**	**1,277.8813**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	194.12	39.4046	2.3288	0.0000	88.3083
General Light Industry	74.35	15.0924	0.8919	0.0000	33.8230
General Office Building	127.76	25.9341	1.5327	0.0000	58.1201
Hotel	94.72	19.2273	1.1363	0.0000	43.0896
Single Family Housing	393.96	79.9703	4.7261	0.0000	179.2186
Supermarket	1924.14	390.5830	23.0828	0.0000	875.3217
Total		**570.2118**	**33.6986**	**0.0000**	**1,277.8813**

9.0 Operational Offroad

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

10.0 Vegetation

Sebastopol GP_AQ-GHG

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	137.38	1000sqft	3.15	137,375.00	0
General Light Industry	59.96	1000sqft	1.38	59,959.00	0
Hotel	173.00	Room	5.77	251,196.00	0
Apartments Low Rise	422.00	Dwelling Unit	26.38	422,000.00	1207
Single Family Housing	328.00	Dwelling Unit	106.49	590,400.00	938
Supermarket	341.16	1000sqft	7.83	341,159.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Project Description

Construction Phase - No construction is proposed

Area Mitigation - Per BAAQMD guidance

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	150
tblLandUse	LandUseSquareFeet	137,380.00	137,375.00
tblLandUse	LandUseSquareFeet	59,960.00	59,959.00
tblLandUse	LandUseSquareFeet	341,160.00	341,159.00
tblProjectCharacteristics	OperationalYear	2014	2035

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					
2017	103.0653	2.7981	9.0221	0.0193	1.3297	0.1835	1.5132	0.3527	0.1827	0.5354	0.0000	1,603.6124	1,603.6124	0.0941	0.0000	1,605.5883
Total	**103.0653**	**2.7981**	**9.0221**	**0.0193**	**1.3297**	**0.1835**	**1.5132**	**0.3527**	**0.1827**	**0.5354**	**0.0000**	**1,603.6124**	**1,603.6124**	**0.0941**	**0.0000**	**1,605.5883**

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					
2017	103.0653	2.7981	9.0221	0.0193	1.3297	0.1835	1.5132	0.3527	0.1827	0.5354	0.0000	1,603.6124	1,603.6124	0.0941	0.0000	1,605.5883
Total	**103.0653**	**2.7981**	**9.0221**	**0.0193**	**1.3297**	**0.1835**	**1.5132**	**0.3527**	**0.1827**	**0.5354**	**0.0000**	**1,603.6124**	**1,603.6124**	**0.0941**	**0.0000**	**1,605.5883**

	ROG	NOx	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	886.8653	17.0827	1,386.6226	1.4850		194.3385	194.3385		194.3317	194.3317	22,654.6389	10,302.7464	32,957.3853	51.4211	1.2209	34,415.7118
Energy	1.1744	10.4166	7.0627	0.0641		0.8114	0.8114		0.8114	0.8114		12,811.6674	12,811.6674	0.2456	0.2349	12,889.6371
Mobile	113.2957	158.6619	840.3278	2.9312	192.4780	3.7943	196.2723	51.4933	3.5041	54.9975		206,463.5527	206,463.5527	5.3383		206,575.6579
Total	**1,001.3354**	**186.1611**	**2,234.0131**	**4.4803**	**192.4780**	**198.9442**	**391.4222**	**51.4933**	**198.6472**	**250.1406**	**22,654.6389**	**229,577.9665**	**252,232.6054**	**57.0050**	**1.4558**	**253,881.0068**

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	50.0694	0.7121	61.8092	3.2700e-003		1.3379	1.3379		1.3274	1.3274	0.0000	15,814.1346	15,814.1346	0.4074	0.2879	15,911.9335
Energy	1.1744	10.4166	7.0627	0.0641		0.8114	0.8114		0.8114	0.8114		12,811.6674	12,811.6674	0.2456	0.2349	12,889.6371
Mobile	113.2957	158.6619	840.3278	2.9312	192.4780	3.7943	196.2723	51.4933	3.5041	54.9975		206,463.5527	206,463.5527	5.3383		206,575.6579
Total	**164.5395**	**169.7906**	**909.1997**	**2.9986**	**192.4780**	**5.9436**	**198.4216**	**51.4933**	**5.6430**	**57.1363**	**0.0000**	**235,089.3547**	**235,089.3547**	**5.9913**	**0.5228**	**235,377.2285**

	ROG	NOx	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	**83.57**	**8.79**	**59.30**	**33.07**	**0.00**	**97.01**	**49.31**	**0.00**	**97.16**	**77.16**	**100.00**	**-2.40**	**6.80**	**89.49**	**64.09**	**7.29**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	11/3/2017	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 2,050,110; Residential Outdoor: 683,370; Non-Residential Indoor: 1,184,534; Non-Residential Outdoor: 394,845 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	141.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

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	102.2221					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**102.5544**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	0.5108	0.6131	7.1540	0.0164	1.3297	0.0102	1.3399	0.3527	9.3800e-003	0.3621		1,322.1643	1,322.1643	0.0644		1,323.5162
Total	**0.5108**	**0.6131**	**7.1540**	**0.0164**	**1.3297**	**0.0102**	**1.3399**	**0.3527**	**9.3800e-003**	**0.3621**		**1,322.1643**	**1,322.1643**	**0.0644**		**1,323.5162**

3.2 Architectural Coating - 2017

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	102.2221					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**102.5544**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	0.5108	0.6131	7.1540	0.0164	1.3297	0.0102	1.3399	0.3527	9.3800e-003	0.3621		1,322.1643	1,322.1643	0.0644		1,323.5162
Total	**0.5108**	**0.6131**	**7.1540**	**0.0164**	**1.3297**	**0.0102**	**1.3399**	**0.3527**	**9.3800e-003**	**0.3621**		**1,322.1643**	**1,322.1643**	**0.0644**		**1,323.5162**

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	113.2957	158.6619	840.3278	2.9312	192.4780	3.7943	196.2723	51.4933	3.5041	54.9975		206,463.5527	206,463.5527	5.3383		206,575.6579
Unmitigated	113.2957	158.6619	840.3278	2.9312	192.4780	3.7943	196.2723	51.4933	3.5041	54.9975		206,463.5527	206,463.5527	5.3383		206,575.6579

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,780.98	3,021.52	2561.54	6,214,894	6,214,894
General Light Industry	417.92	79.15	40.77	921,534	921,534
General Office Building	1,512.55	325.59	134.63	2,738,995	2,738,995
Hotel	1,413.41	1,416.87	1029.35	2,582,079	2,582,079
Single Family Housing	3,138.96	3,306.24	2876.56	6,976,973	6,976,973
Supermarket	34,880.20	60,586.60	56782.67	47,410,317	47,410,317
Total	44,144.02	68,735.97	63,425.53	66,844,792	66,844,792

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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.544287	0.062956	0.171756	0.119283	0.033776	0.004850	0.017325	0.031479	0.002293	0.003006	0.006870	0.000528	0.001591

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	1.1744	10.4166	7.0627	0.0641		0.8114	0.8114		0.8114	0.8114		12,811.6674	12,811.6674	0.2456	0.2349	12,889.6371
NaturalGas Unmitigated	1.1744	10.4166	7.0627	0.0641		0.8114	0.8114		0.8114	0.8114		12,811.6674	12,811.6674	0.2456	0.2349	12,889.6371

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					
General Light Industry	4502.67	0.0486	0.4414	0.3708	2.6500e-003		0.0336	0.0336		0.0336	0.0336		529.7264	529.7264	0.0102	9.7100e-003	532.9502
General Office Building	6481.09	0.0699	0.6354	0.5337	3.8100e-003		0.0483	0.0483		0.0483	0.0483		762.4811	762.4811	0.0146	0.0140	767.1214
Hotel	31919.1	0.3442	3.1293	2.6286	0.0188		0.2378	0.2378		0.2378	0.2378		3,755.1879	3,755.1879	0.0720	0.0689	3,778.0414
Single Family Housing	31706.3	0.3419	2.9220	1.2434	0.0187		0.2362	0.2362		0.2362	0.2362		3,730.1566	3,730.1566	0.0715	0.0684	3,752.8577
Supermarket	21824.8	0.2354	2.1397	1.7973	0.0128		0.1626	0.1626		0.1626	0.1626		2,567.6270	2,567.6270	0.0492	0.0471	2,583.2531
Apartments Low Rise	12465.2	0.1344	1.1488	0.4888	7.3300e-003		0.0929	0.0929		0.0929	0.0929		1,466.4884	1,466.4884	0.0281	0.0269	1,475.4132
Total		**1.1744**	**10.4166**	**7.0627**	**0.0641**		**0.8114**	**0.8114**		**0.8114**	**0.8114**		**12,811.6674**	**12,811.6674**	**0.2455**	**0.2349**	**12,889.6371**

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					
General Light Industry	4.50267	0.0486	0.4414	0.3708	2.6500e-003		0.0336	0.0336		0.0336	0.0336		529.7264	529.7264	0.0102	9.7100e-003	532.9502
General Office Building	6.48109	0.0699	0.6354	0.5337	3.8100e-003		0.0483	0.0483		0.0483	0.0483		762.4811	762.4811	0.0146	0.0140	767.1214
Hotel	31.9191	0.3442	3.1293	2.6286	0.0188		0.2378	0.2378		0.2378	0.2378		3,755.1879	3,755.1879	0.0720	0.0689	3,778.0414
Single Family Housing	31.7063	0.3419	2.9220	1.2434	0.0187		0.2362	0.2362		0.2362	0.2362		3,730.1566	3,730.1566	0.0715	0.0684	3,752.8577
Supermarket	21.8248	0.2354	2.1397	1.7973	0.0128		0.1626	0.1626		0.1626	0.1626		2,567.6270	2,567.6270	0.0492	0.0471	2,583.2531
Apartments Low Rise	12.4652	0.1344	1.1488	0.4888	7.3300e-003		0.0929	0.0929		0.0929	0.0929		1,466.4884	1,466.4884	0.0281	0.0269	1,475.4132
Total		**1.1744**	**10.4166**	**7.0627**	**0.0641**		**0.8114**	**0.8114**		**0.8114**	**0.8114**		**12,811.6674**	**12,811.6674**	**0.2455**	**0.2349**	**12,889.6371**

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

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	50.0694	0.7121	61.8092	3.2700e-003		1.3379	1.3379		1.3274	1.3274	0.0000	15,814.1346	15,814.1346	0.4074	0.2879	15,911.9335
Unmitigated	886.8653	17.0827	1,386.6226	1.4850		194.3385	194.3385		194.3317	194.3317	22,654.6389	10,302.7464	32,957.3853	51.4211	1.2209	34,415.7118

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	6.1613					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	38.5647					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	840.2891	16.3707	1,324.8919	1.4817		193.9951	193.9951		193.9883	193.9883	22,654.6389	10,191.1765	32,845.8154	51.3146	1.2209	34,301.9062
Landscaping	1.8502	0.7120	61.7307	3.2700e-003		0.3434	0.3434		0.3434	0.3434		111.5699	111.5699	0.1065		113.8056
Total	**886.8653**	**17.0827**	**1,386.6226**	**1.4850**		**194.3385**	**194.3385**		**194.3317**	**194.3317**	**22,654.6389**	**10,302.7464**	**32,957.3853**	**51.4211**	**1.2209**	**34,415.7118**

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	8.2151					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	38.5647					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.4394	7.0000e-005	0.0785	0.0000		0.9945	0.9945		0.9840	0.9840	0.0000	15,702.5647	15,702.5647	0.3010	0.2879	15,798.1279
Landscaping	1.8502	0.7120	61.7307	3.2700e-003		0.3434	0.3434		0.3434	0.3434		111.5699	111.5699	0.1065		113.8056
Total	**50.0694**	**0.7121**	**61.8092**	**3.2700e-003**		**1.3379**	**1.3379**		**1.3274**	**1.3274**	**0.0000**	**15,814.1347**	**15,814.1347**	**0.4074**	**0.2879**	**15,911.9335**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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 Vegetation

Sebastopol GP_AQ-GHG

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	137.38	1000sqft	3.15	137,375.00	0
General Light Industry	59.96	1000sqft	1.38	59,959.00	0
Hotel	173.00	Room	5.77	251,196.00	0
Apartments Low Rise	422.00	Dwelling Unit	26.38	422,000.00	1207
Single Family Housing	328.00	Dwelling Unit	106.49	590,400.00	938
Supermarket	341.16	1000sqft	7.83	341,159.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Project Description

Construction Phase - No construction is proposed

Area Mitigation - Per BAAQMD guidance

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	150
tblLandUse	LandUseSquareFeet	137,380.00	137,375.00
tblLandUse	LandUseSquareFeet	59,960.00	59,959.00
tblLandUse	LandUseSquareFeet	341,160.00	341,159.00
tblProjectCharacteristics	OperationalYear	2014	2035

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					
2017	103.0634	2.9438	8.7988	0.0181	1.3297	0.1835	1.5132	0.3527	0.1827	0.5354	0.0000	1,501.2359	1,501.2359	0.0941	0.0000	1,503.2118
Total	**103.0634**	**2.9438**	**8.7988**	**0.0181**	**1.3297**	**0.1835**	**1.5132**	**0.3527**	**0.1827**	**0.5354**	**0.0000**	**1,501.2359**	**1,501.2359**	**0.0941**	**0.0000**	**1,503.2118**

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					
2017	103.0634	2.9438	8.7988	0.0181	1.3297	0.1835	1.5132	0.3527	0.1827	0.5354	0.0000	1,501.2359	1,501.2359	0.0941	0.0000	1,503.2118
Total	**103.0634**	**2.9438**	**8.7988**	**0.0181**	**1.3297**	**0.1835**	**1.5132**	**0.3527**	**0.1827**	**0.5354**	**0.0000**	**1,501.2359**	**1,501.2359**	**0.0941**	**0.0000**	**1,503.2118**

	ROG	NOx	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	886.8653	17.0827	1,386.6226	1.4850		194.3385	194.3385		194.3317	194.3317	22,654.6389	10,302.7464	32,957.3853	51.4211	1.2209	34,415.7118
Energy	1.1744	10.4166	7.0627	0.0641		0.8114	0.8114		0.8114	0.8114		12,811.6674	12,811.6674	0.2456	0.2349	12,889.6371
Mobile	118.7690	173.3938	1,096.8573	2.7582	192.4780	3.8197	196.2977	51.4933	3.5275	55.0208		194,957.1844	194,957.1844	5.3619		195,069.7837
Total	**1,006.8087**	**200.8930**	**2,490.5427**	**4.3073**	**192.4780**	**198.9696**	**391.4476**	**51.4933**	**198.6706**	**250.1639**	**22,654.6389**	**218,071.5982**	**240,726.2371**	**57.0285**	**1.4558**	**242,375.1326**

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	50.0694	0.7121	61.8092	3.2700e-003		1.3379	1.3379		1.3274	1.3274	0.0000	15,814.1346	15,814.1346	0.4074	0.2879	15,911.9335
Energy	1.1744	10.4166	7.0627	0.0641		0.8114	0.8114		0.8114	0.8114		12,811.6674	12,811.6674	0.2456	0.2349	12,889.6371
Mobile	118.7690	173.3938	1,096.8573	2.7582	192.4780	3.8197	196.2977	51.4933	3.5275	55.0208		194,957.1844	194,957.1844	5.3619		195,069.7837
Total	**170.0128**	**184.5225**	**1,165.7293**	**2.8256**	**192.4780**	**5.9690**	**198.4470**	**51.4933**	**5.6663**	**57.1596**	**0.0000**	**223,582.9864**	**223,582.9864**	**6.0149**	**0.5228**	**223,871.3543**

	ROG	NOx	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	**83.11**	**8.15**	**53.19**	**34.40**	**0.00**	**97.00**	**49.30**	**0.00**	**97.15**	**77.15**	**100.00**	**-2.53**	**7.12**	**89.45**	**64.09**	**7.63**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	11/3/2017	5	220	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 2,050,110; Residential Outdoor: 683,370; Non-Residential Indoor: 1,184,534; Non-Residential Outdoor: 394,845 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	141.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

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	102.2221					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**102.5544**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	0.5090	0.7588	6.9308	0.0151	1.3297	0.0102	1.3399	0.3527	9.3800e-003	0.3621		1,219.7878	1,219.7878	0.0644		1,221.1397
Total	**0.5090**	**0.7588**	**6.9308**	**0.0151**	**1.3297**	**0.0102**	**1.3399**	**0.3527**	**9.3800e-003**	**0.3621**		**1,219.7878**	**1,219.7878**	**0.0644**		**1,221.1397**

3.2 Architectural Coating - 2017

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	102.2221					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**102.5544**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	0.5090	0.7588	6.9308	0.0151	1.3297	0.0102	1.3399	0.3527	9.3800e-003	0.3621		1,219.7878	1,219.7878	0.0644		1,221.1397
Total	**0.5090**	**0.7588**	**6.9308**	**0.0151**	**1.3297**	**0.0102**	**1.3399**	**0.3527**	**9.3800e-003**	**0.3621**		**1,219.7878**	**1,219.7878**	**0.0644**		**1,221.1397**

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	118.7690	173.3938	1,096.8573	2.7582	192.4780	3.8197	196.2977	51.4933	3.5275	55.0208		194,957.1844	194,957.1844	5.3619		195,069.7837
Unmitigated	118.7690	173.3938	1,096.8573	2.7582	192.4780	3.8197	196.2977	51.4933	3.5275	55.0208		194,957.1844	194,957.1844	5.3619		195,069.7837

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	2,780.98	3,021.52	2561.54	6,214,894	6,214,894
General Light Industry	417.92	79.15	40.77	921,534	921,534
General Office Building	1,512.55	325.59	134.63	2,738,995	2,738,995
Hotel	1,413.41	1,416.87	1029.35	2,582,079	2,582,079
Single Family Housing	3,138.96	3,306.24	2876.56	6,976,973	6,976,973
Supermarket	34,880.20	60,586.60	56782.67	47,410,317	47,410,317
Total	44,144.02	68,735.97	63,425.53	66,844,792	66,844,792

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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.544287	0.062956	0.171756	0.119283	0.033776	0.004850	0.017325	0.031479	0.002293	0.003006	0.006870	0.000528	0.001591

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	1.1744	10.4166	7.0627	0.0641		0.8114	0.8114		0.8114	0.8114		12,811.6674	12,811.6674	0.2456	0.2349	12,889.6371
NaturalGas Unmitigated	1.1744	10.4166	7.0627	0.0641		0.8114	0.8114		0.8114	0.8114		12,811.6674	12,811.6674	0.2456	0.2349	12,889.6371

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					
General Light Industry	4502.67	0.0486	0.4414	0.3708	2.6500e-003		0.0336	0.0336		0.0336	0.0336		529.7264	529.7264	0.0102	9.7100e-003	532.9502
General Office Building	6481.09	0.0699	0.6354	0.5337	3.8100e-003		0.0483	0.0483		0.0483	0.0483		762.4811	762.4811	0.0146	0.0140	767.1214
Hotel	31919.1	0.3442	3.1293	2.6286	0.0188		0.2378	0.2378		0.2378	0.2378		3,755.1879	3,755.1879	0.0720	0.0689	3,778.0414
Single Family Housing	31706.3	0.3419	2.9220	1.2434	0.0187		0.2362	0.2362		0.2362	0.2362		3,730.1566	3,730.1566	0.0715	0.0684	3,752.8577
Supermarket	21824.8	0.2354	2.1397	1.7973	0.0128		0.1626	0.1626		0.1626	0.1626		2,567.6270	2,567.6270	0.0492	0.0471	2,583.2531
Apartments Low Rise	12465.2	0.1344	1.1488	0.4888	7.3300e-003		0.0929	0.0929		0.0929	0.0929		1,466.4884	1,466.4884	0.0281	0.0269	1,475.4132
Total		**1.1744**	**10.4166**	**7.0627**	**0.0641**		**0.8114**	**0.8114**		**0.8114**	**0.8114**		**12,811.6674**	**12,811.6674**	**0.2455**	**0.2349**	**12,889.6371**

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					
General Light Industry	4.50267	0.0486	0.4414	0.3708	2.6500e-003		0.0336	0.0336		0.0336	0.0336		529.7264	529.7264	0.0102	9.7100e-003	532.9502
General Office Building	6.48109	0.0699	0.6354	0.5337	3.8100e-003		0.0483	0.0483		0.0483	0.0483		762.4811	762.4811	0.0146	0.0140	767.1214
Hotel	31.9191	0.3442	3.1293	2.6286	0.0188		0.2378	0.2378		0.2378	0.2378		3,755.1879	3,755.1879	0.0720	0.0689	3,778.0414
Single Family Housing	31.7063	0.3419	2.9220	1.2434	0.0187		0.2362	0.2362		0.2362	0.2362		3,730.1566	3,730.1566	0.0715	0.0684	3,752.8577
Supermarket	21.8248	0.2354	2.1397	1.7973	0.0128		0.1626	0.1626		0.1626	0.1626		2,567.6270	2,567.6270	0.0492	0.0471	2,583.2531
Apartments Low Rise	12.4652	0.1344	1.1488	0.4888	7.3300e-003		0.0929	0.0929		0.0929	0.0929		1,466.4884	1,466.4884	0.0281	0.0269	1,475.4132
Total		**1.1744**	**10.4166**	**7.0627**	**0.0641**		**0.8114**	**0.8114**		**0.8114**	**0.8114**		**12,811.6674**	**12,811.6674**	**0.2455**	**0.2349**	**12,889.6371**

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

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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	50.0694	0.7121	61.8092	3.2700e-003		1.3379	1.3379		1.3274	1.3274	0.0000	15,814.1346	15,814.1346	0.4074	0.2879	15,911.9335
Unmitigated	886.8653	17.0827	1,386.6226	1.4850		194.3385	194.3385		194.3317	194.3317	22,654.6389	10,302.7464	32,957.3853	51.4211	1.2209	34,415.7118

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	6.1613					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	38.5647					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	840.2891	16.3707	1,324.8919	1.4817		193.9951	193.9951		193.9883	193.9883	22,654.6389	10,191.1765	32,845.8154	51.3146	1.2209	34,301.9062
Landscaping	1.8502	0.7120	61.7307	3.2700e-003		0.3434	0.3434		0.3434	0.3434		111.5699	111.5699	0.1065		113.8056
Total	**886.8653**	**17.0827**	**1,386.6226**	**1.4850**		**194.3385**	**194.3385**		**194.3317**	**194.3317**	**22,654.6389**	**10,302.7464**	**32,957.3853**	**51.4211**	**1.2209**	**34,415.7118**

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	8.2151					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	38.5647					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.4394	7.0000e-005	0.0785	0.0000		0.9945	0.9945		0.9840	0.9840	0.0000	15,702.5647	15,702.5647	0.3010	0.2879	15,798.1279
Landscaping	1.8502	0.7120	61.7307	3.2700e-003		0.3434	0.3434		0.3434	0.3434		111.5699	111.5699	0.1065		113.8056
Total	**50.0694**	**0.7121**	**61.8092**	**3.2700e-003**		**1.3379**	**1.3379**		**1.3274**	**1.3274**	**0.0000**	**15,814.1347**	**15,814.1347**	**0.4074**	**0.2879**	**15,911.9335**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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 Vegetation

Sebastopol GP_AQ-GHG

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	3.65500E-002	2.40350E-001	2.05490E-001	3.30000E-004	1.90700E-002	1.90700E-002	0.00000E+000	2.80858E+001	2.80858E+001	2.97000E-003	0.00000E+000	2.81481E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	3.65500E-002	2.40350E-001	2.05490E-001	3.30000E-004	1.90700E-002	1.90700E-002	0.00000E+000	2.80858E+001	2.80858E+001	2.97000E-003	0.00000E+000	2.81480E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.06816E-006	1.06816E-006	0.00000E+000	0.00000E+000	1.06579E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.14	0.04	0.14	0.04	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	-33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	99.85	100.00	99.99	100.00	99.55	99.55	100.00	-60.32	55.99	99.51	78.19	57.72
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	17.40	17.76	20.01	20.06	18.42
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.30	0.83		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	150.00
Yes	Use Low VOC Paint (Residential Exterior)	150.00
Yes	Use Low VOC Paint (Non-residential Interior)	150.00
Yes	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Sebastopol Cumulative GP_AQ-GHG

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	137.38	1000sqft	3.15	137,375.00	0
General Light Industry	684.89	1000sqft	15.72	684,889.00	0
Hotel	173.00	Room	5.77	251,196.00	0
Apartments Low Rise	671.00	Dwelling Unit	41.94	671,000.00	1919
Single Family Housing	514.00	Dwelling Unit	166.88	925,200.00	1470
Supermarket	341.16	1000sqft	7.83	341,159.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per project description

Construction Phase - No construction proposed

Area Mitigation - Per BAAQMD guidance

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	150
tblLandUse	LandUseSquareFeet	137,380.00	137,375.00
tblLandUse	LandUseSquareFeet	684,890.00	684,889.00
tblLandUse	LandUseSquareFeet	341,160.00	341,159.00
tblProjectCharacteristics	OperationalYear	2014	2035

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					
2017	32.7373	0.4395	1.7384	3.8000e-003	0.2866	0.0248	0.3114	0.0762	0.0246	0.1009	0.0000	283.3360	283.3360	0.0166	0.0000	283.6844
2018	8.8096	0.1079	0.4250	1.0200e-003	0.0772	5.8600e-003	0.0830	0.0205	5.8200e-003	0.0263	0.0000	73.7845	73.7845	4.0900e-003	0.0000	73.8704
Total	**41.5469**	**0.5473**	**2.1633**	**4.8200e-003**	**0.3637**	**0.0307**	**0.3944**	**0.0968**	**0.0305**	**0.1272**	**0.0000**	**357.1206**	**357.1206**	**0.0207**	**0.0000**	**357.5548**

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					
2017	32.7373	0.4395	1.7384	3.8000e-003	0.2866	0.0248	0.3114	0.0762	0.0246	0.1009	0.0000	283.3360	283.3360	0.0166	0.0000	283.6844
2018	8.8096	0.1079	0.4250	1.0200e-003	0.0772	5.8600e-003	0.0830	0.0205	5.8200e-003	0.0263	0.0000	73.7845	73.7845	4.0900e-003	0.0000	73.8704
Total	**41.5469**	**0.5473**	**2.1633**	**4.8200e-003**	**0.3637**	**0.0307**	**0.3944**	**0.0968**	**0.0305**	**0.1272**	**0.0000**	**357.1205**	**357.1205**	**0.0207**	**0.0000**	**357.5547**

	ROG	NOx	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	tons/yr										MT/yr					
Area	17.8073	0.1801	15.1075	7.9000e-003		0.9778	0.9778		0.9778	0.9778	99.2219	52.0658	151.2877	0.2473	5.0500e-003	158.0464
Energy	0.3566	3.1668	2.1756	0.0195		0.2464	0.2464		0.2464	0.2464	0.0000	12,753.3522	12,753.3522	0.4848	0.1510	12,810.3393
Mobile	16.7293	26.9788	149.7878	0.4650	31.3012	0.6254	31.9266	8.4009	0.5775	8.9783	0.0000	29,835.4338	29,835.4338	0.8030	0.0000	29,852.2973
Waste						0.0000	0.0000		0.0000	0.0000	796.1184	0.0000	796.1184	47.0493	0.0000	1,784.1526
Water						0.0000	0.0000		0.0000	0.0000	97.2218	549.0046	646.2264	10.0104	0.2409	931.1302
Total	**34.8932**	**30.3257**	**167.0709**	**0.4923**	**31.3012**	**1.8495**	**33.1507**	**8.4009**	**1.8016**	**10.2024**	**992.5621**	**43,189.8564**	**44,182.4185**	**58.5947**	**0.3970**	**45,535.9658**

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	14.5098	0.1013	8.7804	4.7000e-004		0.0531	0.0531		0.0530	0.0530	0.0000	74.6975	74.6975	0.0149	1.1100e-003	75.3531
Energy	0.3566	3.1668	2.1756	0.0195		0.2464	0.2464		0.2464	0.2464	0.0000	12,753.3522	12,753.3522	0.4848	0.1510	12,810.3393
Mobile	16.7293	26.9788	149.7878	0.4650	31.3012	0.6254	31.9266	8.4009	0.5775	8.9783	0.0000	29,835.4338	29,835.4338	0.8030	0.0000	29,852.2973
Waste						0.0000	0.0000		0.0000	0.0000	796.1184	0.0000	796.1184	47.0493	0.0000	1,784.1526
Water						0.0000	0.0000		0.0000	0.0000	77.7775	448.4636	526.2410	8.0073	0.1925	754.0756
Total	**31.5957**	**30.2469**	**160.7438**	**0.4849**	**31.3012**	**0.9248**	**32.2260**	**8.4009**	**0.8768**	**9.2777**	**873.8958**	**43,111.9471**	**43,985.8429**	**56.3592**	**0.3446**	**45,276.2179**

	ROG	NOx	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	**9.45**	**0.26**	**3.79**	**1.51**	**0.00**	**50.00**	**2.79**	**0.00**	**51.33**	**9.06**	**11.96**	**0.18**	**0.44**	**3.82**	**13.19**	**0.57**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	4/6/2018	5	330	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 3,232,305; Residential Outdoor: 1,077,435; Non-Residential Indoor: 2,121,929; Non-Residential Outdoor: 707,310 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	243.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

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	32.5878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**32.6310**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

3.2 Architectural Coating - 2017

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	0.1063	0.1554	1.4955	3.4100e-003	0.2866	2.2800e-003	0.2888	0.0762	2.1000e-003	0.0783	0.0000	250.1437	250.1437	0.0131	0.0000	250.4185
Total	**0.1063**	**0.1554**	**1.4955**	**3.4100e-003**	**0.2866**	**2.2800e-003**	**0.2888**	**0.0762**	**2.1000e-003**	**0.0783**	**0.0000**	**250.1437**	**250.1437**	**0.0131**	**0.0000**	**250.4185**

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	32.5878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0432	0.2841	0.2429	3.9000e-004		0.0225	0.0225		0.0225	0.0225	0.0000	33.1923	33.1923	3.5000e-003	0.0000	33.2659
Total	**32.6310**	**0.2841**	**0.2429**	**3.9000e-004**		**0.0225**	**0.0225**		**0.0225**	**0.0225**	**0.0000**	**33.1923**	**33.1923**	**3.5000e-003**	**0.0000**	**33.2659**

3.2 Architectural Coating - 2017

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	0.1063	0.1554	1.4955	3.4100e-003	0.2866	2.2800e-003	0.2888	0.0762	2.1000e-003	0.0783	0.0000	250.1437	250.1437	0.0131	0.0000	250.4185
Total	**0.1063**	**0.1554**	**1.4955**	**3.4100e-003**	**0.2866**	**2.2800e-003**	**0.2888**	**0.0762**	**2.1000e-003**	**0.0783**	**0.0000**	**250.1437**	**250.1437**	**0.0131**	**0.0000**	**250.4185**

3.2 Architectural Coating - 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					
Archit. Coating	8.7736					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0105	0.0702	0.0649	1.0000e-004		5.2700e-003	5.2700e-003		5.2700e-003	5.2700e-003	0.0000	8.9364	8.9364	8.5000e-004	0.0000	8.9542
Total	**8.7841**	**0.0702**	**0.0649**	**1.0000e-004**		**5.2700e-003**	**5.2700e-003**		**5.2700e-003**	**5.2700e-003**	**0.0000**	**8.9364**	**8.9364**	**8.5000e-004**	**0.0000**	**8.9542**

3.2 Architectural Coating - 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	0.0255	0.0377	0.3601	9.2000e-004	0.0772	5.9000e-004	0.0777	0.0205	5.5000e-004	0.0211	0.0000	64.8481	64.8481	3.2400e-003	0.0000	64.9161
Total	**0.0255**	**0.0377**	**0.3601**	**9.2000e-004**	**0.0772**	**5.9000e-004**	**0.0777**	**0.0205**	**5.5000e-004**	**0.0211**	**0.0000**	**64.8481**	**64.8481**	**3.2400e-003**	**0.0000**	**64.9161**

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	8.7736					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0105	0.0702	0.0649	1.0000e-004		5.2700e-003	5.2700e-003		5.2700e-003	5.2700e-003	0.0000	8.9364	8.9364	8.5000e-004	0.0000	8.9542
Total	**8.7841**	**0.0702**	**0.0649**	**1.0000e-004**		**5.2700e-003**	**5.2700e-003**		**5.2700e-003**	**5.2700e-003**	**0.0000**	**8.9364**	**8.9364**	**8.5000e-004**	**0.0000**	**8.9542**

3.2 Architectural Coating - 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	0.0255	0.0377	0.3601	9.2000e-004	0.0772	5.9000e-004	0.0777	0.0205	5.5000e-004	0.0211	0.0000	64.8481	64.8481	3.2400e-003	0.0000	64.9161
Total	**0.0255**	**0.0377**	**0.3601**	**9.2000e-004**	**0.0772**	**5.9000e-004**	**0.0777**	**0.0205**	**5.5000e-004**	**0.0211**	**0.0000**	**64.8481**	**64.8481**	**3.2400e-003**	**0.0000**	**64.9161**

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					
Unmitigated	16.7293	26.9788	149.7878	0.4650	31.3012	0.6254	31.9266	8.4009	0.5775	8.9783	0.0000	29,835.4338	29,835.4338	0.8030	0.0000	29,852.2973
Mitigated	16.7293	26.9788	149.7878	0.4650	31.3012	0.6254	31.9266	8.4009	0.5775	8.9783	0.0000	29,835.4338	29,835.4338	0.8030	0.0000	29,852.2973

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	4,421.89	4,804.36	4072.97	9,881,977	9,881,977
General Light Industry	4,773.68	904.05	465.73	10,526,171	10,526,171
General Office Building	1,512.55	325.59	134.63	2,738,995	2,738,995
Hotel	1,413.41	1,416.87	1029.35	2,582,079	2,582,079
Single Family Housing	4,918.98	5,181.12	4507.78	10,933,427	10,933,427
Supermarket	34,880.20	60,586.60	56782.67	47,410,317	47,410,317
Total	51,920.72	73,218.60	66,993.13	84,072,966	84,072,966

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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.544287	0.062956	0.171756	0.119283	0.033776	0.004850	0.017325	0.031479	0.002293	0.003006	0.006870	0.000528	0.001591

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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					
NaturalGas Mitigated	0.3566	3.1668	2.1756	0.0195		0.2464	0.2464		0.2464	0.2464	0.0000	3,528.6683	3,528.6683	0.0676	0.0647	3,550.1432
NaturalGas Unmitigated	0.3566	3.1668	2.1756	0.0195		0.2464	0.2464		0.2464	0.2464	0.0000	3,528.6683	3,528.6683	0.0676	0.0647	3,550.1432
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9,224.6840	9,224.6840	0.4171	0.0863	9,260.1962
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	9,224.6840	9,224.6840	0.4171	0.0863	9,260.1962

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					
General Light Industry	1.87728e+007	0.1012	0.9202	0.7730	5.5200e-003		0.0699	0.0699		0.0699	0.0699	0.0000	1,001.7885	1,001.7885	0.0192	0.0184	1,007.8852
General Office Building	2.3656e+006	0.0128	0.1160	0.0974	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003	0.0000	126.2373	126.2373	2.4200e-003	2.3100e-003	127.0056
Hotel	1.16505e+007	0.0628	0.5711	0.4797	3.4300e-003		0.0434	0.0434		0.0434	0.0434	0.0000	621.7135	621.7135	0.0119	0.0114	625.4971
Single Family Housing	1.81354e+007	0.0978	0.8357	0.3556	5.3300e-003		0.0676	0.0676		0.0676	0.0676	0.0000	967.7762	967.7762	0.0186	0.0177	973.6659
Supermarket	7.96606e+006	0.0430	0.3905	0.3280	2.3400e-003		0.0297	0.0297		0.0297	0.0297	0.0000	425.0994	425.0994	8.1500e-003	7.7900e-003	427.6865
Apartments Low Rise	7.23437e+006	0.0390	0.3334	0.1419	2.1300e-003		0.0270	0.0270		0.0270	0.0270	0.0000	386.0533	386.0533	7.4000e-003	7.0800e-003	388.4028
Total		**0.3566**	**3.1668**	**2.1756**	**0.0195**		**0.2463**	**0.2463**		**0.2463**	**0.2463**	**0.0000**	**3,528.6683**	**3,528.6683**	**0.0676**	**0.0647**	**3,550.1432**

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					
General Office Building	2.3656e+006	0.0128	0.1160	0.0974	7.0000e-004		8.8100e-003	8.8100e-003		8.8100e-003	8.8100e-003	0.0000	126.2373	126.2373	2.4200e-003	2.3100e-003	127.0056
Hotel	1.16505e+007	0.0628	0.5711	0.4797	3.4300e-003		0.0434	0.0434		0.0434	0.0434	0.0000	621.7135	621.7135	0.0119	0.0114	625.4971
Single Family Housing	1.81354e+007	0.0978	0.8357	0.3556	5.3300e-003		0.0676	0.0676		0.0676	0.0676	0.0000	967.7762	967.7762	0.0186	0.0177	973.6659
Supermarket	7.96606e+006	0.0430	0.3905	0.3280	2.3400e-003		0.0297	0.0297		0.0297	0.0297	0.0000	425.0994	425.0994	8.1500e-003	7.7900e-003	427.6865
Apartments Low Rise	7.23437e+006	0.0390	0.3334	0.1419	2.1300e-003		0.0270	0.0270		0.0270	0.0270	0.0000	386.0533	386.0533	7.4000e-003	7.0800e-003	388.4028
General Light Industry	1.87728e+007	0.1012	0.9202	0.7730	5.5200e-003		0.0699	0.0699		0.0699	0.0699	0.0000	1,001.7885	1,001.7885	0.0192	0.0184	1,007.8852
Total		**0.3566**	**3.1668**	**2.1756**	**0.0195**		**0.2463**	**0.2463**		**0.2463**	**0.2463**	**0.0000**	**3,528.6683**	**3,528.6683**	**0.0676**	**0.0647**	**3,550.1432**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.47043e+006	718.6757	0.0325	6.7200e-003	721.4423
General Light Industry	6.18455e+006	1,799.1558	0.0814	0.0168	1,806.0820
General Office Building	2.70766e+006	787.6897	0.0356	7.3700e-003	790.7221
Hotel	2.12009e+006	616.7597	0.0279	5.7700e-003	619.1341
Single Family Housing	3.63549e+006	1,057.6061	0.0478	9.8900e-003	1,061.6775
Supermarket	1.45914e+007	4,244.7970	0.1919	0.0397	4,261.1381
Total		**9,224.6840**	**0.4171**	**0.0863**	**9,260.1962**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.47043e+006	718.6757	0.0325	6.7200e-003	721.4423
General Light Industry	6.18455e+006	1,799.1558	0.0814	0.0168	1,806.0820
General Office Building	2.70766e+006	787.6897	0.0356	7.3700e-003	790.7221
Hotel	2.12009e+006	616.7597	0.0279	5.7700e-003	619.1341
Single Family Housing	3.63549e+006	1,057.6061	0.0478	9.8900e-003	1,061.6775
Supermarket	1.45914e+007	4,244.7970	0.1919	0.0397	4,261.1381
Total		**9,224.6840**	**0.4171**	**0.0863**	**9,260.1962**

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

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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					
Unmitigated	17.8073	0.1801	15.1075	7.9000e-003		0.9778	0.9778		0.9778	0.9778	99.2219	52.0658	151.2877	0.2473	5.0500e-003	158.0464
Mitigated	14.5098	0.1013	8.7804	4.7000e-004		0.0531	0.0531		0.0530	0.0530	0.0000	74.6975	74.6975	0.0149	1.1100e-003	75.3531

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	1.8613					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	11.7588					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.9240	0.0789	6.3274	7.4400e-003		0.9289	0.9289		0.9289	0.9289	99.2219	37.6693	136.8912	0.2335	5.0500e-003	143.3613
Landscaping	0.2633	0.1013	8.7800	4.7000e-004		0.0488	0.0488		0.0488	0.0488	0.0000	14.3965	14.3965	0.0137	0.0000	14.6851
Total	**17.8073**	**0.1801**	**15.1074**	**7.9100e-003**		**0.9778**	**0.9778**		**0.9778**	**0.9778**	**99.2219**	**52.0658**	**151.2877**	**0.2473**	**5.0500e-003**	**158.0464**

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	2.4817					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	11.7588					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.0900e-003	0.0000	3.3000e-004	0.0000		4.2100e-003	4.2100e-003		4.1700e-003	4.1700e-003	0.0000	60.3010	60.3010	1.1600e-003	1.1100e-003	60.6680
Landscaping	0.2633	0.1013	8.7800	4.7000e-004		0.0488	0.0488		0.0488	0.0488	0.0000	14.3965	14.3965	0.0137	0.0000	14.6851
Total	**14.5098**	**0.1013**	**8.7804**	**4.7000e-004**		**0.0531**	**0.0531**		**0.0530**	**0.0530**	**0.0000**	**74.6975**	**74.6975**	**0.0149**	**1.1100e-003**	**75.3531**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	646.2264	10.0104	0.2409	931.1302
Mitigated	526.2410	8.0073	0.1925	754.0756

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	43.7184 / 27.5616	110.7508	1.4289	0.0345	151.4670
General Light Industry	158.381 / 0	299.5576	5.1721	0.1242	446.6713
General Office Building	24.4171 / 14.9653	61.4194	0.7981	0.0193	84.1581
Hotel	4.38845 / 0.487606	8.7967	0.1433	3.4500e-003	12.8749
Single Family Housing	33.4892 / 21.1127	84.8374	1.0946	0.0265	116.0269
Supermarket	42.0542 / 1.30064	80.8646	1.3734	0.0330	119.9321
Total		**646.2264**	**10.0104**	**0.2409**	**931.1302**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	34.9747 / 25.8803	92.5014	1.1431	0.0276	125.0717
General Light Industry	126.705 / 0	239.6461	4.1369	0.0992	357.2729
General Office Building	19.5336 / 14.0524	51.2535	0.6384	0.0154	69.4427
Hotel	3.51076 / 0.457862	7.1064	0.1147	2.7500e-003	10.3674
Single Family Housing	26.7913 / 19.8249	70.8580	0.8757	0.0212	95.8075
Supermarket	33.6433 / 1.22131	64.8757	1.0985	0.0264	96.1135
Total		**526.2410**	**8.0073**	**0.1925**	**754.0756**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	796.1184	47.0493	0.0000	1,784.1526
Unmitigated	796.1184	47.0493	0.0000	1,784.1526

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	308.66	62.6552	3.7028	0.0000	140.4143
General Light Industry	849.26	172.3921	10.1881	0.0000	386.3418
General Office Building	127.76	25.9341	1.5327	0.0000	58.1201
Hotel	94.72	19.2273	1.1363	0.0000	43.0896
Single Family Housing	617.4	125.3266	7.4066	0.0000	280.8650
Supermarket	1924.14	390.5830	23.0828	0.0000	875.3217
Total		**796.1184**	**47.0493**	**0.0000**	**1,784.1526**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	308.66	62.6552	3.7028	0.0000	140.4143
General Light Industry	849.26	172.3921	10.1881	0.0000	386.3418
General Office Building	127.76	25.9341	1.5327	0.0000	58.1201
Hotel	94.72	19.2273	1.1363	0.0000	43.0896
Single Family Housing	617.4	125.3266	7.4066	0.0000	280.8650
Supermarket	1924.14	390.5830	23.0828	0.0000	875.3217
Total		**796.1184**	**47.0493**	**0.0000**	**1,784.1526**

9.0 Operational Offroad

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

10.0 Vegetation

Sebastopol Cumulative GP_AQ-GHG

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	137.38	1000sqft	3.15	137,375.00	0
General Light Industry	684.89	1000sqft	15.72	684,889.00	0
Hotel	173.00	Room	5.77	251,196.00	0
Apartments Low Rise	671.00	Dwelling Unit	41.94	671,000.00	1919
Single Family Housing	514.00	Dwelling Unit	166.88	925,200.00	1470
Supermarket	341.16	1000sqft	7.83	341,159.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per project description

Construction Phase - No construction proposed

Area Mitigation - Per BAAQMD guidance

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	150
tblLandUse	LandUseSquareFeet	137,380.00	137,375.00
tblLandUse	LandUseSquareFeet	684,890.00	684,889.00
tblLandUse	LandUseSquareFeet	341,160.00	341,159.00
tblProjectCharacteristics	OperationalYear	2014	2035

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					
2017	251.8882	3.2417	14.1973	0.0312	2.2916	0.1909	2.4825	0.6078	0.1895	0.7973	0.0000	2,560.0716	2,560.0716	0.1407	0.0000	2,563.0256
2018	251.7646	2.9571	12.9365	0.0312	2.2916	0.1675	2.4591	0.6078	0.1662	0.7740	0.0000	2,475.7407	2,475.7407	0.1288	0.0000	2,478.4448
Total	**503.6528**	**6.1988**	**27.1339**	**0.0623**	**4.5831**	**0.3584**	**4.9415**	**1.2156**	**0.3557**	**1.5713**	**0.0000**	**5,035.8123**	**5,035.8123**	**0.2694**	**0.0000**	**5,041.4704**

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					
2017	251.8882	3.2417	14.1973	0.0312	2.2916	0.1909	2.4825	0.6078	0.1895	0.7973	0.0000	2,560.0716	2,560.0716	0.1407	0.0000	2,563.0256
2018	251.7646	2.9571	12.9365	0.0312	2.2916	0.1675	2.4591	0.6078	0.1662	0.7740	0.0000	2,475.7407	2,475.7407	0.1288	0.0000	2,478.4448
Total	**503.6528**	**6.1988**	**27.1339**	**0.0623**	**4.5831**	**0.3584**	**4.9415**	**1.2156**	**0.3557**	**1.5713**	**0.0000**	**5,035.8123**	**5,035.8123**	**0.2694**	**0.0000**	**5,041.4704**

	ROG	NOx	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	1,398.6744	26.9601	2,186.2153	2.3557		306.4909	306.4909		306.4802	306.4802	35,762.1900	16,278.3858	52,040.5758	81.5710	1.9201	54,348.7881
Energy	1.9537	17.3523	11.9211	0.1066		1.3499	1.3499		1.3499	1.3499		21,313.3750	21,313.3750	0.4085	0.3908	21,443.0847
Mobile	128.7318	188.1686	991.1614	3.5857	236.8580	4.5775	241.4355	63.3662	4.2271	67.5934		252,541.6091	252,541.6091	6.4741		252,677.5650
Total	**1,529.3599**	**232.4811**	**3,189.2977**	**6.0480**	**236.8580**	**312.4183**	**549.2763**	**63.3662**	**312.0571**	**375.4234**	**35,762.1900**	**290,133.3699**	**325,895.5599**	**88.4536**	**2.3108**	**328,469.4378**

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	83.2259	1.1253	97.6799	5.1700e-003		2.1116	2.1116		2.0950	2.0950	0.0000	24,948.6681	24,948.6681	0.6431	0.4542	25,102.9634
Energy	1.9537	17.3523	11.9211	0.1066		1.3499	1.3499		1.3499	1.3499		21,313.3750	21,313.3750	0.4085	0.3908	21,443.0847
Mobile	128.7318	188.1686	991.1614	3.5857	236.8580	4.5775	241.4355	63.3662	4.2271	67.5934		252,541.6091	252,541.6091	6.4741		252,677.5650
Total	**213.9114**	**206.6462**	**1,100.7623**	**3.6974**	**236.8580**	**8.0389**	**244.8969**	**63.3662**	**7.6720**	**71.0382**	**0.0000**	**298,803.6523**	**298,803.6523**	**7.5257**	**0.8449**	**299,223.6131**

	ROG	NOx	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	**86.01**	**11.11**	**65.49**	**38.87**	**0.00**	**97.43**	**55.41**	**0.00**	**97.54**	**81.08**	**100.00**	**-2.99**	**8.31**	**91.49**	**63.44**	**8.90**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	4/6/2018	5	330	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 3,232,305; Residential Outdoor: 1,077,435; Non-Residential Indoor: 2,121,929; Non-Residential Outdoor: 707,310 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	243.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

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	250.6755					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**251.0078**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	0.8804	1.0567	12.3293	0.0282	2.2916	0.0176	2.3091	0.6078	0.0162	0.6240		2,278.6236	2,278.6236	0.1110		2,280.9535
Total	**0.8804**	**1.0567**	**12.3293**	**0.0282**	**2.2916**	**0.0176**	**2.3091**	**0.6078**	**0.0162**	**0.6240**		**2,278.6236**	**2,278.6236**	**0.1110**		**2,280.9535**

3.2 Architectural Coating - 2017

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	250.6755					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**251.0078**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	0.8804	1.0567	12.3293	0.0282	2.2916	0.0176	2.3091	0.6078	0.0162	0.6240		2,278.6236	2,278.6236	0.1110		2,280.9535
Total	**0.8804**	**1.0567**	**12.3293**	**0.0282**	**2.2916**	**0.0176**	**2.3091**	**0.6078**	**0.0162**	**0.6240**		**2,278.6236**	**2,278.6236**	**0.1110**		**2,280.9535**

3.2 Architectural Coating - 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					
Archit. Coating	250.6755					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**250.9741**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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
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
Worker	0.7905	0.9514	11.0823	0.0282	2.2916	0.0170	2.3085	0.6078	0.0157	0.6235		2,194.2922	2,194.2922	0.1020		2,196.4347
Total	**0.7905**	**0.9514**	**11.0823**	**0.0282**	**2.2916**	**0.0170**	**2.3085**	**0.6078**	**0.0157**	**0.6235**		**2,194.2922**	**2,194.2922**	**0.1020**		**2,196.4347**

3.2 Architectural Coating - 2018

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	250.6755					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**250.9741**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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
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
Worker	0.7905	0.9514	11.0823	0.0282	2.2916	0.0170	2.3085	0.6078	0.0157	0.6235		2,194.2922	2,194.2922	0.1020		2,196.4347
Total	**0.7905**	**0.9514**	**11.0823**	**0.0282**	**2.2916**	**0.0170**	**2.3085**	**0.6078**	**0.0157**	**0.6235**		**2,194.2922**	**2,194.2922**	**0.1020**		**2,196.4347**

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					
Unmitigated	128.7318	188.1686	991.1614	3.5857	236.8580	4.5775	241.4355	63.3662	4.2271	67.5934		252,541.6091	252,541.6091	6.4741		252,677.5650
Mitigated	128.7318	188.1686	991.1614	3.5857	236.8580	4.5775	241.4355	63.3662	4.2271	67.5934		252,541.6091	252,541.6091	6.4741		252,677.5650

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	4,421.89	4,804.36	4072.97	9,881,977	9,881,977
General Light Industry	4,773.68	904.05	465.73	10,526,171	10,526,171
General Office Building	1,512.55	325.59	134.63	2,738,995	2,738,995
Hotel	1,413.41	1,416.87	1029.35	2,582,079	2,582,079
Single Family Housing	4,918.98	5,181.12	4507.78	10,933,427	10,933,427
Supermarket	34,880.20	60,586.60	56782.67	47,410,317	47,410,317
Total	51,920.72	73,218.60	66,993.13	84,072,966	84,072,966

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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.544287	0.062956	0.171756	0.119283	0.033776	0.004850	0.017325	0.031479	0.002293	0.003006	0.006870	0.000528	0.001591

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	1.9537	17.3523	11.9211	0.1066		1.3499	1.3499		1.3499	1.3499		21,313.3750	21,313.3750	0.4085	0.3908	21,443.0847
NaturalGas Unmitigated	1.9537	17.3523	11.9211	0.1066		1.3499	1.3499		1.3499	1.3499		21,313.3750	21,313.3750	0.4085	0.3908	21,443.0847

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					
General Light Industry	51432.3	0.5547	5.0424	4.2356	0.0303		0.3832	0.3832		0.3832	0.3832		6,050.8646	6,050.8646	0.1160	0.1109	6,087.6892
General Office Building	6481.09	0.0699	0.6354	0.5337	3.8100e-003		0.0483	0.0483		0.0483	0.0483		762.4811	762.4811	0.0146	0.0140	767.1214
Hotel	31919.1	0.3442	3.1293	2.6286	0.0188		0.2378	0.2378		0.2378	0.2378		3,755.1879	3,755.1879	0.0720	0.0689	3,778.0414
Single Family Housing	49686.1	0.5358	4.5789	1.9485	0.0292		0.3702	0.3702		0.3702	0.3702		5,845.4283	5,845.4283	0.1120	0.1072	5,881.0027
Supermarket	21824.8	0.2354	2.1397	1.7973	0.0128		0.1626	0.1626		0.1626	0.1626		2,567.6270	2,567.6270	0.0492	0.0471	2,583.2531
Apartments Low Rise	19820.2	0.2138	1.8266	0.7773	0.0117		0.1477	0.1477		0.1477	0.1477		2,331.7861	2,331.7861	0.0447	0.0428	2,345.9770
Total		**1.9537**	**17.3523**	**11.9211**	**0.1066**		**1.3499**	**1.3499**		**1.3499**	**1.3499**		**21,313.3750**	**21,313.3750**	**0.4085**	**0.3908**	**21,443.0847**

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					
General Office Building	6.48109	0.0699	0.6354	0.5337	3.8100e-003		0.0483	0.0483		0.0483	0.0483		762.4811	762.4811	0.0146	0.0140	767.1214
Hotel	31.9191	0.3442	3.1293	2.6286	0.0188		0.2378	0.2378		0.2378	0.2378		3,755.1879	3,755.1879	0.0720	0.0689	3,778.0414
Single Family Housing	49.6861	0.5358	4.5789	1.9485	0.0292		0.3702	0.3702		0.3702	0.3702		5,845.4283	5,845.4283	0.1120	0.1072	5,881.0027
Supermarket	21.8248	0.2354	2.1397	1.7973	0.0128		0.1626	0.1626		0.1626	0.1626		2,567.6270	2,567.6270	0.0492	0.0471	2,583.2531
Apartments Low Rise	19.8202	0.2138	1.8266	0.7773	0.0117		0.1477	0.1477		0.1477	0.1477		2,331.7861	2,331.7861	0.0447	0.0428	2,345.9770
General Light Industry	51.4323	0.5547	5.0424	4.2356	0.0303		0.3832	0.3832		0.3832	0.3832		6,050.8646	6,050.8646	0.1160	0.1109	6,087.6892
Total		**1.9537**	**17.3523**	**11.9211**	**0.1066**		**1.3499**	**1.3499**		**1.3499**	**1.3499**		**21,313.3750**	**21,313.3750**	**0.4085**	**0.3908**	**21,443.0847**

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

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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					
Unmitigated	1,398.6744	26.9601	2,186.2153	2.3557		306.4909	306.4909		306.4802	306.4802	35,762.1900	16,278.3858	52,040.5758	81.5710	1.9201	54,348.7881
Mitigated	83.2259	1.1253	97.6799	5.1700e-003		2.1116	2.1116		2.0950	2.0950	0.0000	24,948.6681	24,948.6681	0.6431	0.4542	25,102.9634

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	10.1987					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.4315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,321.1189	25.8350	2,088.6593	2.3506		305.9483	305.9483		305.9375	305.9375	35,762.1900	16,102.0588	51,864.2488	81.4027	1.9201	54,168.9263
Landscaping	2.9252	1.1252	97.5560	5.1700e-003		0.5426	0.5426		0.5426	0.5426		176.3270	176.3270	0.1683		179.8619
Total	**1,398.6744**	**26.9601**	**2,186.2153**	**2.3557**		**306.4909**	**306.4909**		**306.4802**	**306.4802**	**35,762.1900**	**16,278.3858**	**52,040.5758**	**81.5710**	**1.9201**	**54,348.7881**

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	13.5983					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.4315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.2708	1.0000e-004	0.1239	0.0000		1.5689	1.5689		1.5524	1.5524	0.0000	24,772.3412	24,772.3412	0.4748	0.4542	24,923.1015
Landscaping	2.9252	1.1252	97.5560	5.1700e-003		0.5426	0.5426		0.5426	0.5426		176.3270	176.3270	0.1683		179.8619
Total	**83.2259**	**1.1253**	**97.6799**	**5.1700e-003**		**2.1115**	**2.1115**		**2.0950**	**2.0950**	**0.0000**	**24,948.6681**	**24,948.6681**	**0.6431**	**0.4542**	**25,102.9634**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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 Vegetation

Sebastopol Cumulative GP_AQ-GHG

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	137.38	1000sqft	3.15	137,375.00	0
General Light Industry	684.89	1000sqft	15.72	684,889.00	0
Hotel	173.00	Room	5.77	251,196.00	0
Apartments Low Rise	671.00	Dwelling Unit	41.94	671,000.00	1919
Single Family Housing	514.00	Dwelling Unit	166.88	925,200.00	1470
Supermarket	341.16	1000sqft	7.83	341,159.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2035
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per project description

Construction Phase - No construction proposed

Area Mitigation - Per BAAQMD guidance

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	100	150
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	100	150
tblLandUse	LandUseSquareFeet	137,380.00	137,375.00
tblLandUse	LandUseSquareFeet	684,890.00	684,889.00
tblLandUse	LandUseSquareFeet	341,160.00	341,159.00
tblProjectCharacteristics	OperationalYear	2014	2035

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					
2017	251.8850	3.4927	13.8126	0.0290	2.2916	0.1909	2.4825	0.6078	0.1895	0.7973	0.0000	2,383.6355	2,383.6355	0.1407	0.0000	2,386.5895
2018	251.7547	3.1835	12.4953	0.0290	2.2916	0.1675	2.4591	0.6078	0.1662	0.7740	0.0000	2,305.6247	2,305.6247	0.1288	0.0000	2,308.3289
Total	**503.6397**	**6.6762**	**26.3078**	**0.0579**	**4.5831**	**0.3584**	**4.9415**	**1.2156**	**0.3557**	**1.5713**	**0.0000**	**4,689.2603**	**4,689.2603**	**0.2694**	**0.0000**	**4,694.9183**

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					
2017	251.8850	3.4927	13.8126	0.0290	2.2916	0.1909	2.4825	0.6078	0.1895	0.7973	0.0000	2,383.6355	2,383.6355	0.1407	0.0000	2,386.5895
2018	251.7547	3.1835	12.4953	0.0290	2.2916	0.1675	2.4591	0.6078	0.1662	0.7740	0.0000	2,305.6247	2,305.6247	0.1288	0.0000	2,308.3289
Total	**503.6397**	**6.6762**	**26.3078**	**0.0579**	**4.5831**	**0.3584**	**4.9415**	**1.2156**	**0.3557**	**1.5713**	**0.0000**	**4,689.2603**	**4,689.2603**	**0.2694**	**0.0000**	**4,694.9183**

	ROG	NOx	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	1,398.6744	26.9601	2,186.2153	2.3557		306.4909	306.4909		306.4802	306.4802	35,762.1900	16,278.3858	52,040.5758	81.5710	1.9201	54,348.7881
Energy	1.9537	17.3523	11.9211	0.1066		1.3499	1.3499		1.3499	1.3499		21,313.3750	21,313.3750	0.4085	0.3908	21,443.0847
Mobile	134.8181	205.9150	1,271.6537	3.3729	236.8580	4.6058	241.4638	63.3662	4.2531	67.6193		238,453.8388	238,453.8388	6.5003		238,590.3452
Total	**1,535.4462**	**250.2274**	**3,469.7901**	**5.8352**	**236.8580**	**312.4465**	**549.3045**	**63.3662**	**312.0831**	**375.4493**	**35,762.1900**	**276,045.5996**	**311,807.7896**	**88.4798**	**2.3108**	**314,382.2180**

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	83.2259	1.1253	97.6799	5.1700e-003		2.1116	2.1116		2.0950	2.0950	0.0000	24,948.6681	24,948.6681	0.6431	0.4542	25,102.9634
Energy	1.9537	17.3523	11.9211	0.1066		1.3499	1.3499		1.3499	1.3499		21,313.3750	21,313.3750	0.4085	0.3908	21,443.0847
Mobile	134.8181	205.9150	1,271.6537	3.3729	236.8580	4.6058	241.4638	63.3662	4.2531	67.6193		238,453.8388	238,453.8388	6.5003		238,590.3452
Total	**219.9977**	**224.3925**	**1,381.2547**	**3.4847**	**236.8580**	**8.0672**	**244.9252**	**63.3662**	**7.6980**	**71.0642**	**0.0000**	**284,715.8820**	**284,715.8820**	**7.5519**	**0.8449**	**285,136.3932**

	ROG	NOx	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	**85.67**	**10.32**	**60.19**	**40.28**	**0.00**	**97.42**	**55.41**	**0.00**	**97.53**	**81.07**	**100.00**	**-3.14**	**8.69**	**91.46**	**63.44**	**9.30**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	4/6/2018	5	330	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 3,232,305; Residential Outdoor: 1,077,435; Non-Residential Indoor: 2,121,929; Non-Residential Outdoor: 707,310 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

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
Architectural Coating	1	243.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

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	250.6755					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**251.0078**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	0.8772	1.3077	11.9445	0.0260	2.2916	0.0176	2.3091	0.6078	0.0162	0.6240		2,102.1875	2,102.1875	0.1110		2,104.5174
Total	**0.8772**	**1.3077**	**11.9445**	**0.0260**	**2.2916**	**0.0176**	**2.3091**	**0.6078**	**0.0162**	**0.6240**		**2,102.1875**	**2,102.1875**	**0.1110**		**2,104.5174**

3.2 Architectural Coating - 2017

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	250.6755					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**251.0078**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

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
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
Worker	0.8772	1.3077	11.9445	0.0260	2.2916	0.0176	2.3091	0.6078	0.0162	0.6240		2,102.1875	2,102.1875	0.1110		2,104.5174
Total	**0.8772**	**1.3077**	**11.9445**	**0.0260**	**2.2916**	**0.0176**	**2.3091**	**0.6078**	**0.0162**	**0.6240**		**2,102.1875**	**2,102.1875**	**0.1110**		**2,104.5174**

3.2 Architectural Coating - 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					
Archit. Coating	250.6755					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	**250.9741**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.0102**

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
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
Worker	0.7806	1.1778	10.6411	0.0260	2.2916	0.0170	2.3085	0.6078	0.0157	0.6235		2,024.1762	2,024.1762	0.1020		2,026.3187
Total	**0.7806**	**1.1778**	**10.6411**	**0.0260**	**2.2916**	**0.0170**	**2.3085**	**0.6078**	**0.0157**	**0.6235**		**2,024.1762**	**2,024.1762**	**0.1020**		**2,026.3187**

3.2 Architectural Coating - 2018

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	250.6755					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.0102
Total	**250.9741**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.0102**

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
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
Worker	0.7806	1.1778	10.6411	0.0260	2.2916	0.0170	2.3085	0.6078	0.0157	0.6235		2,024.1762	2,024.1762	0.1020		2,026.3187
Total	**0.7806**	**1.1778**	**10.6411**	**0.0260**	**2.2916**	**0.0170**	**2.3085**	**0.6078**	**0.0157**	**0.6235**		**2,024.1762**	**2,024.1762**	**0.1020**		**2,026.3187**

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					
Unmitigated	134.8181	205.9150	1,271.6537	3.3729	236.8580	4.6058	241.4638	63.3662	4.2531	67.6193		238,453.8388	238,453.8388	6.5003		238,590.3452
Mitigated	134.8181	205.9150	1,271.6537	3.3729	236.8580	4.6058	241.4638	63.3662	4.2531	67.6193		238,453.8388	238,453.8388	6.5003		238,590.3452

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	4,421.89	4,804.36	4072.97	9,881,977	9,881,977
General Light Industry	4,773.68	904.05	465.73	10,526,171	10,526,171
General Office Building	1,512.55	325.59	134.63	2,738,995	2,738,995
Hotel	1,413.41	1,416.87	1029.35	2,582,079	2,582,079
Single Family Housing	4,918.98	5,181.12	4507.78	10,933,427	10,933,427
Supermarket	34,880.20	60,586.60	56782.67	47,410,317	47,410,317
Total	51,920.72	73,218.60	66,993.13	84,072,966	84,072,966

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	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.544287	0.062956	0.171756	0.119283	0.033776	0.004850	0.017325	0.031479	0.002293	0.003006	0.006870	0.000528	0.001591

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	1.9537	17.3523	11.9211	0.1066		1.3499	1.3499		1.3499	1.3499		21,313.3750	21,313.3750	0.4085	0.3908	21,443.0847
NaturalGas Unmitigated	1.9537	17.3523	11.9211	0.1066		1.3499	1.3499		1.3499	1.3499		21,313.3750	21,313.3750	0.4085	0.3908	21,443.0847

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					
General Light Industry	51432.3	0.5547	5.0424	4.2356	0.0303		0.3832	0.3832		0.3832	0.3832		6,050.8646	6,050.8646	0.1160	0.1109	6,087.6892
General Office Building	6481.09	0.0699	0.6354	0.5337	3.8100e-003		0.0483	0.0483		0.0483	0.0483		762.4811	762.4811	0.0146	0.0140	767.1214
Hotel	31919.1	0.3442	3.1293	2.6286	0.0188		0.2378	0.2378		0.2378	0.2378		3,755.1879	3,755.1879	0.0720	0.0689	3,778.0414
Single Family Housing	49686.1	0.5358	4.5789	1.9485	0.0292		0.3702	0.3702		0.3702	0.3702		5,845.4283	5,845.4283	0.1120	0.1072	5,881.0027
Supermarket	21824.8	0.2354	2.1397	1.7973	0.0128		0.1626	0.1626		0.1626	0.1626		2,567.6270	2,567.6270	0.0492	0.0471	2,583.2531
Apartments Low Rise	19820.2	0.2138	1.8266	0.7773	0.0117		0.1477	0.1477		0.1477	0.1477		2,331.7861	2,331.7861	0.0447	0.0428	2,345.9770
Total		**1.9537**	**17.3523**	**11.9211**	**0.1066**		**1.3499**	**1.3499**		**1.3499**	**1.3499**		**21,313.3750**	**21,313.3750**	**0.4085**	**0.3908**	**21,443.0847**

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					
General Office Building	6.48109	0.0699	0.6354	0.5337	3.8100e-003		0.0483	0.0483		0.0483	0.0483		762.4811	762.4811	0.0146	0.0140	767.1214
Hotel	31.9191	0.3442	3.1293	2.6286	0.0188		0.2378	0.2378		0.2378	0.2378		3,755.1879	3,755.1879	0.0720	0.0689	3,778.0414
Single Family Housing	49.6861	0.5358	4.5789	1.9485	0.0292		0.3702	0.3702		0.3702	0.3702		5,845.4283	5,845.4283	0.1120	0.1072	5,881.0027
Supermarket	21.8248	0.2354	2.1397	1.7973	0.0128		0.1626	0.1626		0.1626	0.1626		2,567.6270	2,567.6270	0.0492	0.0471	2,583.2531
Apartments Low Rise	19.8202	0.2138	1.8266	0.7773	0.0117		0.1477	0.1477		0.1477	0.1477		2,331.7861	2,331.7861	0.0447	0.0428	2,345.9770
General Light Industry	51.4323	0.5547	5.0424	4.2356	0.0303		0.3832	0.3832		0.3832	0.3832		6,050.8646	6,050.8646	0.1160	0.1109	6,087.6892
Total		**1.9537**	**17.3523**	**11.9211**	**0.1066**		**1.3499**	**1.3499**		**1.3499**	**1.3499**		**21,313.3750**	**21,313.3750**	**0.4085**	**0.3908**	**21,443.0847**

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

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive 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					
Unmitigated	1,398.6744	26.9601	2,186.2153	2.3557		306.4909	306.4909		306.4802	306.4802	35,762.1900	16,278.3858	52,040.5758	81.5710	1.9201	54,348.7881
Mitigated	83.2259	1.1253	97.6799	5.1700e-003		2.1116	2.1116		2.0950	2.0950	0.0000	24,948.6681	24,948.6681	0.6431	0.4542	25,102.9634

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	10.1987					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.4315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1,321.1189	25.8350	2,088.6593	2.3506		305.9483	305.9483		305.9375	305.9375	35,762.1900	16,102.0588	51,864.2488	81.4027	1.9201	54,168.9263
Landscaping	2.9252	1.1252	97.5560	5.1700e-003		0.5426	0.5426		0.5426	0.5426		176.3270	176.3270	0.1683		179.8619
Total	**1,398.6744**	**26.9601**	**2,186.2153**	**2.3557**		**306.4909**	**306.4909**		**306.4802**	**306.4802**	**35,762.1900**	**16,278.3858**	**52,040.5758**	**81.5710**	**1.9201**	**54,348.7881**

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	13.5983					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	64.4315					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	2.2708	1.0000e-004	0.1239	0.0000		1.5689	1.5689		1.5524	1.5524	0.0000	24,772.3412	24,772.3412	0.4748	0.4542	24,923.1015
Landscaping	2.9252	1.1252	97.5560	5.1700e-003		0.5426	0.5426		0.5426	0.5426		176.3270	176.3270	0.1683		179.8619
Total	**83.2259**	**1.1253**	**97.6799**	**5.1700e-003**		**2.1115**	**2.1115**		**2.0950**	**2.0950**	**0.0000**	**24,948.6681**	**24,948.6681**	**0.6431**	**0.4542**	**25,102.9634**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

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 Vegetation

Sebastopol Cumulative GP_AQ-GHG

Bay Area AQMD Air District, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	5.36500E-002	3.54250E-001	3.07750E-001	4.90000E-004	2.78000E-002	2.78000E-002	0.00000E+000	4.21287E+001	4.21287E+001	4.35000E-003	0.00000E+000	4.22201E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	5.36500E-002	3.54250E-001	3.07750E-001	4.90000E-004	2.78000E-002	2.78000E-002	0.00000E+000	4.21287E+001	4.21287E+001	4.35000E-003	0.00000E+000	4.22201E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18684E-006	1.18684E-006	0.00000E+000	0.00000E+000	1.18427E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)			
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.36	0.10	0.36	0.10	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	-33.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	99.84	100.00	99.99	100.00	99.55	99.55	100.00	-60.08	55.95	99.50	78.02	57.68
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	20.00	18.31	18.57	20.01	20.09	19.02
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.30	0.88		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			

No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
Yes	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
Yes	Use Low VOC Paint (Residential Interior)	150.00
Yes	Use Low VOC Paint (Residential Exterior)	150.00
Yes	Use Low VOC Paint (Non-residential Interior)	150.00
Yes	Use Low VOC Paint (Non-residential Exterior)	150.00
No	% Electric Lawnmower	0.00
No	% Electric Leafblower	0.00
No	% Electric Chainsaw	0.00

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00

DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy	0.00	0.00
No	Use Reclaimed Water	0.00	0.00
No	Use Grey Water	0.00	
Yes	Install low-flow bathroom faucet	32.00	
Yes	Install low-flow Kitchen faucet	18.00	
Yes	Install low-flow Toilet	20.00	
Yes	Install low-flow Shower	20.00	
No	Turf Reduction	0.00	
Yes	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape	0.00	0.00

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Appendix C

Noise Modeling

Appendix A of Noise Study
Sebastopol GP Update - Noise Background Data
24hr Continuous Noise Monitoring - Site LT-A
6/10/14 - 6/11/2014

Hour	Leq	Lmax	L50	L90
10:00	64	80	62	58
11:00	63	74	62	57
12:00	64	75	63	59
13:00	64	76	63	59
14:00	63	76	63	58
15:00	64	78	63	59
16:00	65	83	64	59
17:00	64	77	63	59
18:00	63	78	62	56
19:00	62	79	61	53
20:00	61	75	59	49
21:00	59	73	57	43
22:00	58	77	51	36
23:00	54	74	44	31
0:00	51	67	33	28
1:00	48	67	27	25
2:00	46	65	27	25
3:00	50	73	28	25
4:00	52	70	34	27
5:00	57	73	51	37
6:00	61	81	57	45
7:00	62	76	61	52
8:00	64	78	62	56
9:00	63	74	62	58

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	65	59	63	61	46	55
Lmax (Maximum)	83	73	77	81	65	72
L50 (Median)	64	57	62	57	27	39
L90 (Background)	59	43	56	45	25	31

Computed Ldn, dB	64
% Daytime Energy	91%
% Nighttime Energy	9%

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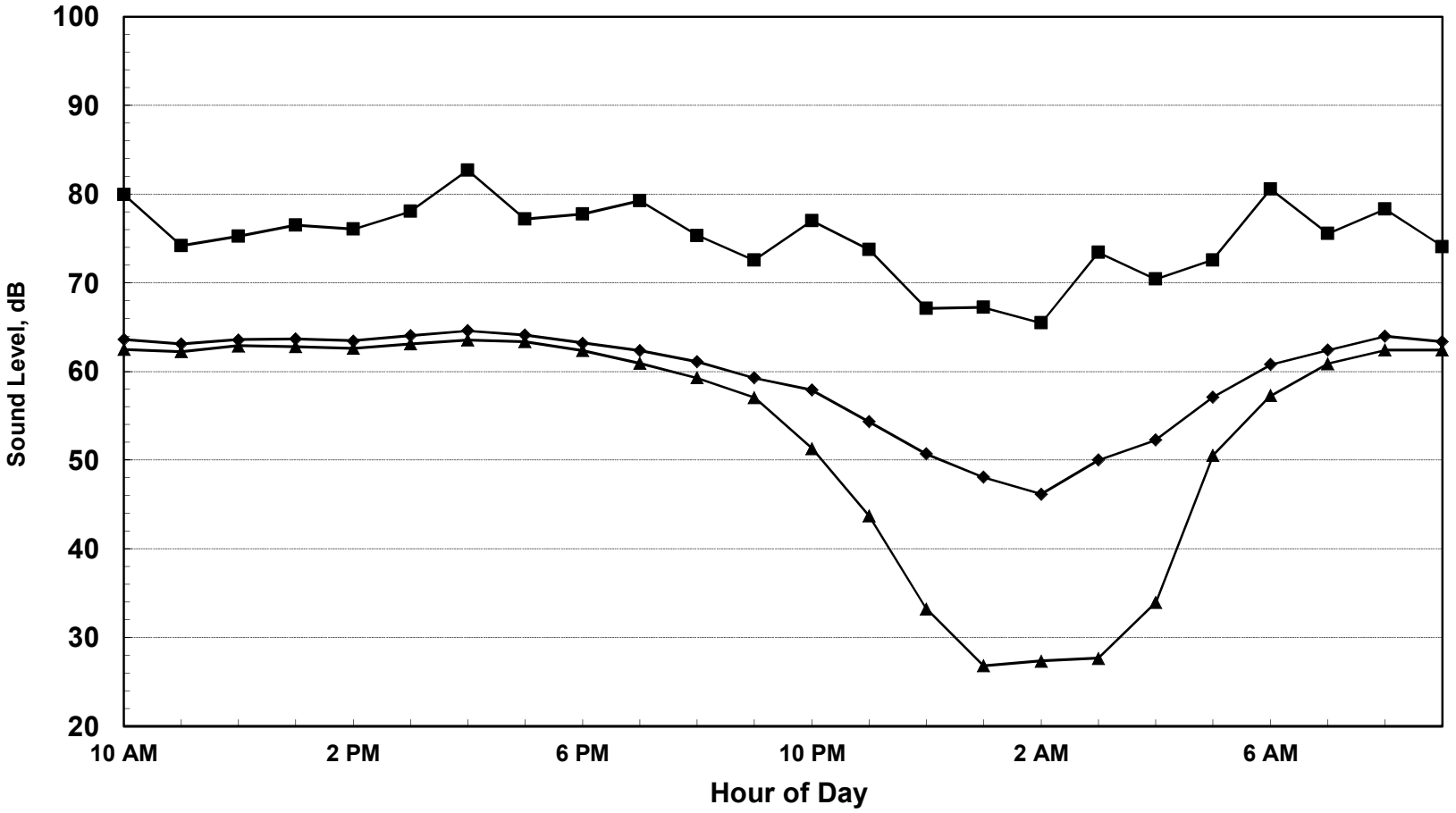
Appendix A

Sebastopol GP Update - Noise Background Data

24hr Continuous Noise Monitoring - Site LT-A

6/10/14 - 6/11/2014



Ldn = 64 dB

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Appendix A
Sebastopol GP Update - Noise Background Data
24hr Continuous Noise Monitoring - Site LT-B
6/10/14 - 6/11/2014

Hour	Leq	Lmax	L50	L90
11:00	63	83	61	55
12:00	64	80	62	55
13:00	64	82	62	56
14:00	63	80	62	55
15:00	64	80	63	57
16:00	64	81	63	57
17:00	63	78	62	56
18:00	64	79	62	54
19:00	63	85	60	51
20:00	60	76	57	46
21:00	59	76	55	41
22:00	57	75	52	36
23:00	55	72	44	31
0:00	51	70	31	28
1:00	49	69	28	26
2:00	50	75	28	26
3:00	47	65	28	26
4:00	51	70	31	27
5:00	59	80	52	37
6:00	60	77	55	44
7:00	62	79	58	49
8:00	63	80	61	54
9:00	64	85	61	54
10:00	63	78	61	55

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	64	59	63	60	47	55
Lmax (Maximum)	85	76	80	80	65	72
L50 (Median)	63	55	61	55	28	39
L90 (Background)	57	41	53	44	26	31

Computed Ldn, dB	64
% Daytime Energy	91%
% Nighttime Energy	9%

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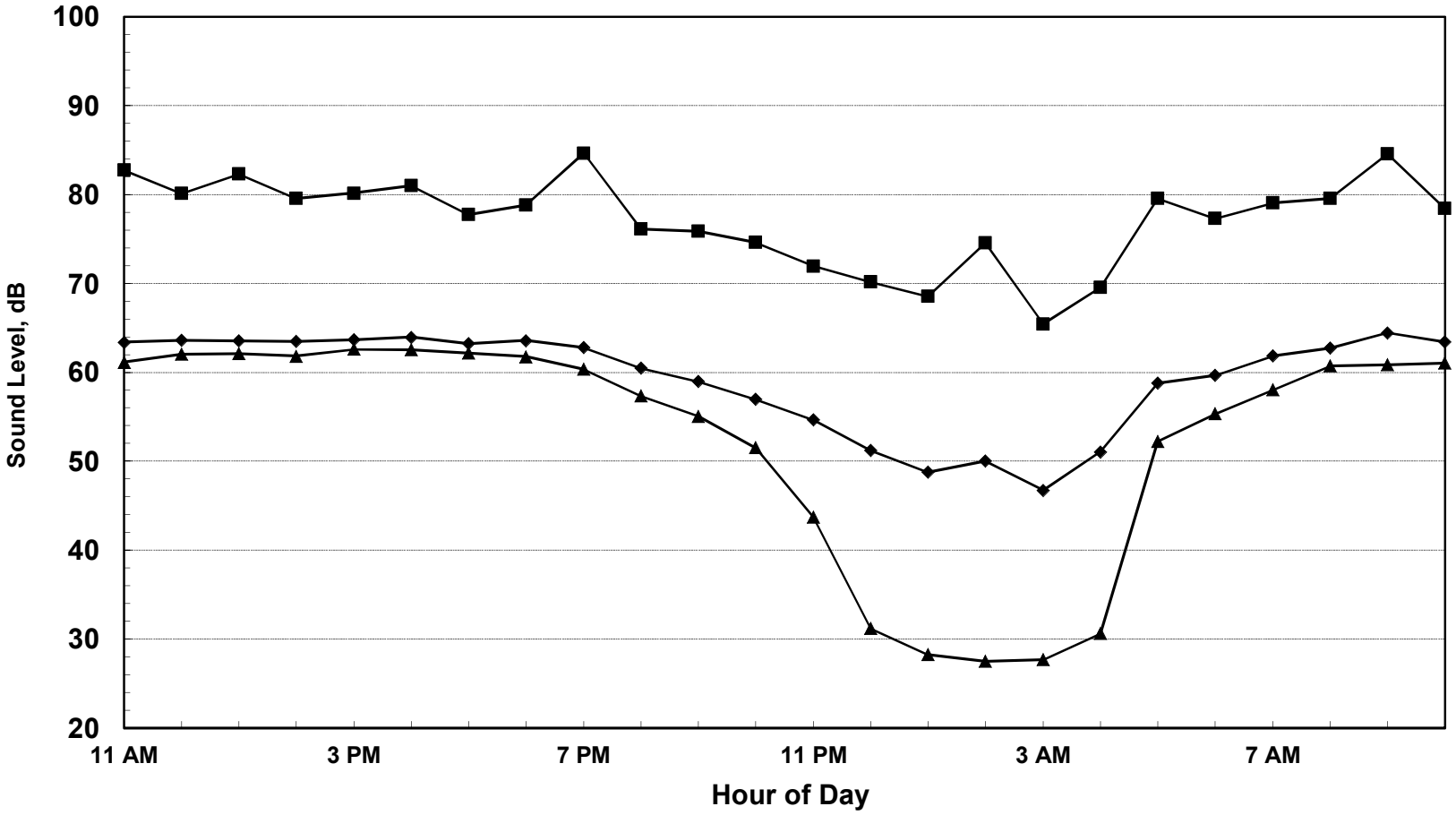
Appendix A

Sebastopol GP Update - Noise Background Data

24hr Continuous Noise Monitoring - Site LT-B

6/10/14 - 6/11/2014



Ldn = 64 dB

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Appendix A
Sebastopol GP Update - Noise Background Data
24hr Continuous Noise Monitoring - Site LT-C
6/10/14 - 6/11/2014

Hour	Leq	Lmax	L50	L90
12:00	66	86	64	56
13:00	65	84	63	55
14:00	64	76	63	56
15:00	65	84	63	57
16:00	65	79	64	57
17:00	66	86	64	57
18:00	64	77	62	52
19:00	63	78	59	48
20:00	62	87	56	44
21:00	59	77	51	41
22:00	56	72	44	38
23:00	55	71	42	36
0:00	53	71	38	34
1:00	46	70	35	34
2:00	49	73	36	34
3:00	49	71	35	34
4:00	56	79	38	35
5:00	60	82	48	39
6:00	62	79	53	42
7:00	64	81	61	49
8:00	66	89	64	56
9:00	65	76	63	53
10:00	71	101	64	55
11:00	65	83	64	55

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	71	59	65	62	46	56
Lmax (Maximum)	101	76	83	82	70	74
L50 (Median)	64	51	62	53	35	41
L90 (Background)	57	41	53	42	34	36

Computed Ldn, dB	66
% Daytime Energy	93%
% Nighttime Energy	7%

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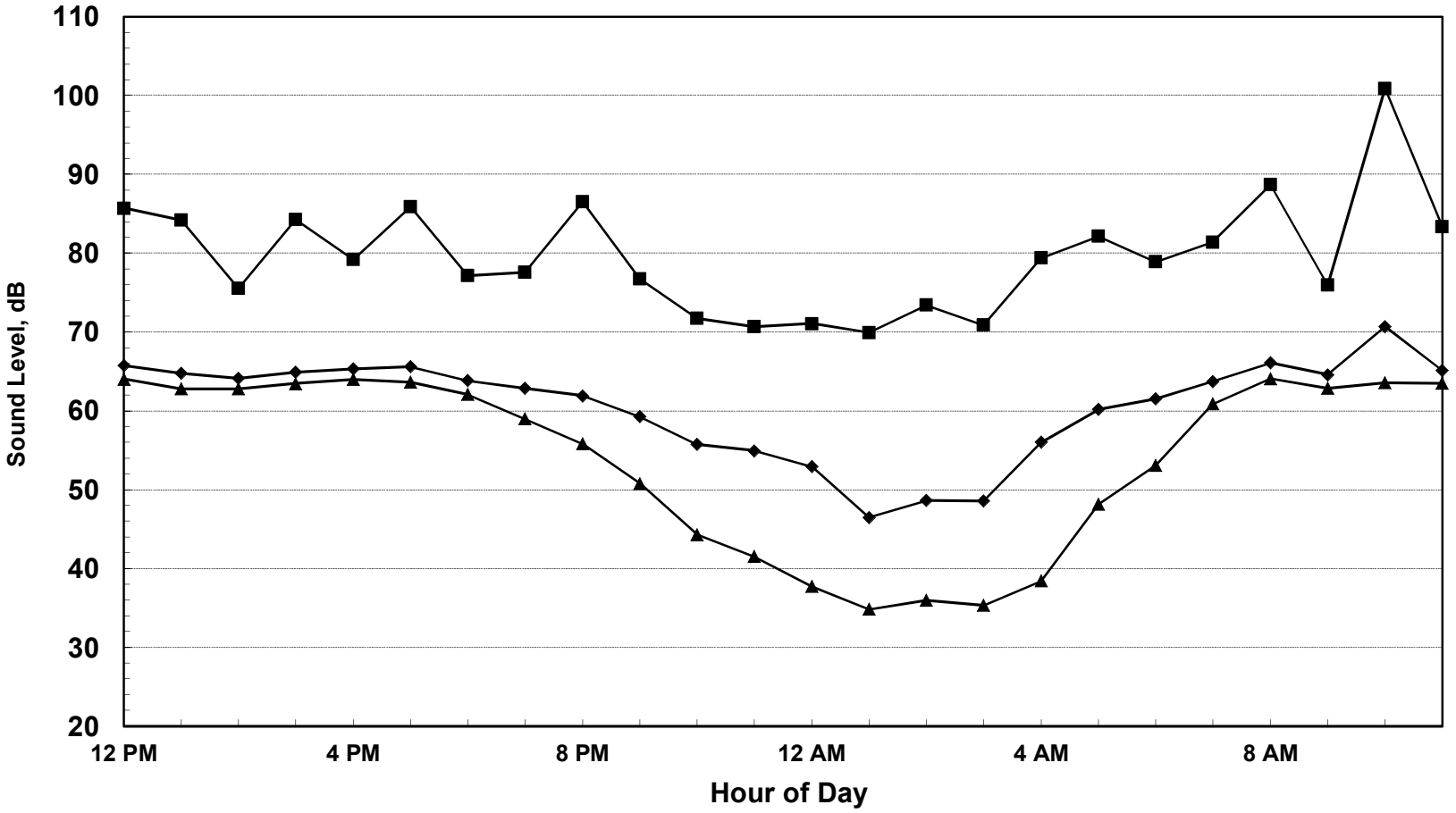
Appendix A

Sebastopol GP Update - Noise Background Data

24hr Continuous Noise Monitoring - Site LT-C

6/10/14 - 6/11/2014



Ldn = 66 dB

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Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Data Input Sheet

Project #: 2014-117 Sebastopol General Plan Noise Element Update
Description: Existing Traffic
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	SR 12 / Sebastopol Ave.	East of Main	25,365	88		12	3	1	35	50	
2	Bodega Ave.	West of Main	12,600	88		12	1	1	35	50	
3	Bodega Ave.	West Ragle	11,276	88		12	1	1	40	50	
4	SR 116	North of Covert	17,208	88		12	3	1	35	50	
5	SR 116	Covert to McKinley	20,105	88		12	3	1	35	50	
6	SR 116 South / Main St.	McKinley to Bodega	13,098	88		12	3	1	35	50	
7	SR 116 South / Main St.	Bodega to SR 116 North	14,327	88		12	3	1	35	50	
8	SR 116 North / Petaluma Ave.	Main Street to Sebasopol Ave.	11,765	88		12	3	1	35	50	
9	SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	11,111	88		12	3	1	35	50	
10	SR 116	Petaluma Ave. to Lynch Rd.	22,860	88		12	2	1	35	50	
11	SR 116	South of Lynch Rd.	22,188	88		12	2	1	35	50	

Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Predicted Levels

Project #: 2012-166 City of Brentwood General Plan Noise Element Update
Description: Existing Traffic
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	SR 12 / Sebastopol Ave.	East of Main	66.3	61.0	61.4	68.4
2	Bodega Ave.	West of Main	63.4	53.1	58.3	64.9
3	Bodega Ave.	West Ragle	64.6	53.6	58.4	65.8
4	SR 116	North of Covert	64.6	59.3	59.7	66.7
5	SR 116	Covert to McKinley	65.3	59.9	60.4	67.4
6	SR 116 South / Main St.	McKinley to Bodega	63.4	58.1	58.5	65.5
7	SR 116 South / Main St.	Bodega to SR 116 North	63.8	58.5	58.9	65.9
8	SR 116 North / Petaluma Ave.	Main Street to Sebasopol Ave.	63.0	57.6	58.0	65.1
9	SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	62.7	57.4	57.8	64.8
10	SR 116	Petaluma Ave. to Lynch Rd.	65.9	58.7	60.9	67.7
11	SR 116	South of Lynch Rd.	65.8	58.6	60.8	67.6

Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Noise Contour Output

Project #: 2012-166 City of Brentwood General Plan Noise Element Update
Description: Existing Traffic
Ldn/CNEL: Ldn
Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	SR 12 / Sebastopol Ave.	East of Main	18	39	84	181	391
2	Bodega Ave.	West of Main	11	23	49	105	227
3	Bodega Ave.	West Ragle	12	26	56	121	261
4	SR 116	North of Covert	14	30	65	140	302
5	SR 116	Covert to McKinley	16	33	72	155	335
6	SR 116 South / Main St.	McKinley to Bodega	12	25	54	117	251
7	SR 116 South / Main St.	Bodega to SR 116 North	12	27	58	124	267
8	SR 116 North / Petaluma Ave.	Main Street to Sebasopol Ave.	11	23	50	109	234
9	SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	10	23	49	105	225
10	SR 116	Petaluma Ave. to Lynch Rd.	16	35	76	163	351
11	SR 116	South of Lynch Rd.	16	34	74	160	344

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Data Input Sheet

Project #: 2014-117 Sebastopol General Plan Noise Element Update
Description: Cumulative to City Limits
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	SR 12 / Sebastopol Ave.	East of Main	30,694	88		12	3	1	35	50	
2	Bodega Ave.	West of Main	15,540	88		12	1	1	35	50	
3	Bodega Ave.	West Ragle	13,544	88		12	1	1	40	50	
4	SR 116	North of Covert	21,280	88		12	3	1	35	50	
5	SR 116	Covert to McKinley	26,308	88		12	3	1	35	50	
6	SR 116 South / Main St.	McKinley to Bodega	17,432	88		12	3	1	35	50	
7	SR 116 South / Main St.	Bodega to SR 116 North	18,128	88		12	3	1	35	50	
8	SR 116 North / Petaluma Ave.	Main Street to Sebasopol Ave.	16,082	88		12	3	1	35	50	
9	SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	15,061	88		12	3	1	35	50	
10	SR 116	Petaluma Ave. to Lynch Rd.	29,260	88		12	2	1	35	50	
11	SR 116	South of Lynch Rd.	27,254	88		12	2	1	35	50	

Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Predicted Levels

Project #: 2012-166 City of Brentwood General Plan Noise Element Update
Description: Cumulative to City Limits
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	SR 12 / Sebastopol Ave.	East of Main	67.1	61.8	62.2	69.2
2	Bodega Ave.	West of Main	64.3	54.1	59.3	65.8
3	Bodega Ave.	West Ragle	65.4	54.4	59.2	66.6
4	SR 116	North of Covert	65.6	60.2	60.6	67.6
5	SR 116	Covert to McKinley	66.5	61.1	61.5	68.6
6	SR 116 South / Main St.	McKinley to Bodega	64.7	59.3	59.8	66.8
7	SR 116 South / Main St.	Bodega to SR 116 North	64.9	59.5	59.9	66.9
8	SR 116 North / Petaluma Ave.	Main Street to Sebasopol Ave.	64.3	59.0	59.4	66.4
9	SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	64.1	58.7	59.1	66.1
10	SR 116	Petaluma Ave. to Lynch Rd.	67.0	59.8	62.0	68.8
11	SR 116	South of Lynch Rd.	66.7	59.5	61.7	68.5

Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Noise Contour Output

Project #: 2012-166 City of Brentwood General Plan Noise Element Update

Description: Cumulative to City Limits

Ldn/CNEL: Ldn

Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	SR 12 / Sebastopol Ave.	East of Main	21	44	96	206	444
2	Bodega Ave.	West of Main	12	26	56	121	261
3	Bodega Ave.	West Ragle	14	30	64	137	295
4	SR 116	North of Covert	16	35	75	161	348
5	SR 116	Covert to McKinley	19	40	86	186	400
6	SR 116 South / Main St.	McKinley to Bodega	14	30	66	141	304
7	SR 116 South / Main St.	Bodega to SR 116 North	14	31	67	145	312
8	SR 116 North / Petaluma Ave.	Main Street to Sebasopol Ave.	13	29	62	134	288
9	SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	13	28	59	128	276
10	SR 116	Petaluma Ave. to Lynch Rd.	19	41	89	192	414
11	SR 116	South of Lynch Rd.	18	40	85	183	395

Appendix B
FHWA-RD-77-108 Highway Traffic Noise Prediction Model
Data Input Sheet

Project #: 2014-117 Sebastopol General Plan Noise Element Update
Description: General Plan Cumulative to Planning Area
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	SR 12 / Sebastopol Ave.	East of Main	32,326	88		12	3	1	35	50	
2	Bodega Ave.	West of Main	16,410	88		12	1	1	35	50	
3	Bodega Ave.	West Ragle	14,244	88		12	1	1	40	50	
4	SR 116	North of Covert	22,182	88		12	3	1	35	50	
5	SR 116	Covert to McKinley	28,066	88		12	3	1	35	50	
6	SR 116 South / Main St.	McKinley to Bodega	18,606	88		12	3	1	35	50	
7	SR 116 South / Main St.	Bodega to SR 116 North	19,751	88		12	3	1	35	50	
8	SR 116 North / Petaluma Ave.	Main Street to Sebasopol Ave.	17,234	88		12	3	1	35	50	
9	SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	17,147	88		12	3	1	35	50	
10	SR 116	Petaluma Ave. to Lynch Rd.	32,903	88		12	2	1	35	50	
11	SR 116	South of Lynch Rd.	29,859	88		12	2	1	35	50	

Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Predicted Levels

Project #: 2012-166 City of Brentwood General Plan Noise Element Update
Description: General Plan Cumulative to Planning Area
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Segment Description	Autos	Medium Trucks	Heavy Trucks	Total
1	SR 12 / Sebastopol Ave.	East of Main	67.4	62.0	62.4	69.4
2	Bodega Ave.	West of Main	64.5	54.3	59.5	66.0
3	Bodega Ave.	West Ragle	65.6	54.6	59.4	66.8
4	SR 116	North of Covert	65.7	60.4	60.8	67.8
5	SR 116	Covert to McKinley	66.8	61.4	61.8	68.8
6	SR 116 South / Main St.	McKinley to Bodega	65.0	59.6	60.0	67.0
7	SR 116 South / Main St.	Bodega to SR 116 North	65.2	59.9	60.3	67.3
8	SR 116 North / Petaluma Ave.	Main Street to Sebasopol Ave.	64.6	59.3	59.7	66.7
9	SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	64.6	59.3	59.7	66.7
10	SR 116	Petaluma Ave. to Lynch Rd.	67.5	60.3	62.5	69.3
11	SR 116	South of Lynch Rd.	67.1	59.9	62.1	68.9

Appendix B

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Noise Contour Output

Project #: 2012-166 City of Brentwood General Plan Noise Element Update

Description: General Plan Cumulative to Planning Area

Ldn/CNEL: Ldn

Hard/Soft: Soft

			-------- Distances to Traffic Noise Contours --------				
Segment	Roadway Name	Segment Description	75	70	65	60	55
1	SR 12 / Sebastopol Ave.	East of Main	21	46	99	213	459
2	Bodega Ave.	West of Main	13	27	58	126	271
3	Bodega Ave.	West Ragle	14	31	66	142	305
4	SR 116	North of Covert	17	36	77	166	357
5	SR 116	Covert to McKinley	19	42	90	194	418
6	SR 116 South / Main St.	McKinley to Bodega	15	32	68	147	318
7	SR 116 South / Main St.	Bodega to SR 116 North	15	33	71	153	331
8	SR 116 North / Petaluma Ave.	Main Street to Sebasopol Ave.	14	30	65	140	302
9	SR 116 North / Petaluma Ave.	Sebastopol to SR 116 South	14	30	65	140	301
10	SR 116	Petaluma Ave. to Lynch Rd.	21	45	96	208	448
11	SR 116	South of Lynch Rd.	19	42	90	195	420

Appendix D

Traffic Modeling

LEVEL OF SERVICE CALCULATIONS

Intersection Level Of Service Report
Intersection 1: SR 116/Mill Station Rd

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

Intersection Setup

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	50.00	100.00	100.00	50.00	100.00	100.00	70.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

volumes

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Base Volume Input [veh/h]	36	383	1	7	517	131	164	7	95	1	1	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	383	1	7	517	131	164	7	95	1	1	3
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	100	0	2	135	34	43	2	25	0	0	1
Total Analysis Volume [veh/h]	38	399	1	7	539	137	171	7	99	1	1	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	9	0	9	9	0	0	9	0	0	93	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	19	0	18	5	5	0	0
g / C, Green / Cycle	0.04	0.47	0.01	0.44	0.11	0.11	0.01	0.01
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.00	0.38	0.10	0.07	0.00	0.00
s, saturation flow rate [veh/h]	1774	1862	1774	1798	1774	1599	1774	1645
c, Capacity [veh/h]	77	880	17	789	201	182	10	9
d1, Uniform Delay [s]	18.76	7.11	19.77	10.13	17.45	16.89	19.86	19.89
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.77	0.37	15.47	2.83	9.50	2.95	4.46	30.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.45	0.42	0.86	0.85	0.58	0.10	0.44
d, Delay for Lane Group [s/veh]	23.53	7.47	35.24	12.96	26.95	19.84	24.31	49.93
Lane Group LOS	C	A	D	B	C	B	C	D
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.40	1.61	0.13	4.26	1.85	0.94	0.02	0.11
50th-Percentile Queue Length [ft]	10.08	40.24	3.24	106.48	46.29	23.52	0.51	2.72
95th-Percentile Queue Length [veh]	0.73	2.90	0.23	7.64	3.33	1.69	0.04	0.20
95th-Percentile Queue Length [ft]	18.15	72.43	5.83	191.10	83.32	42.34	0.91	4.89

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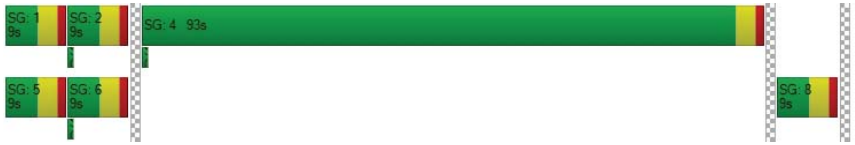
Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.53	7.47	7.47	35.24	12.96	12.96	26.95	19.84	19.84	24.31	49.93	49.93
Movement LOS	C	A	A	D	B	B	C	B	B	C	D	D
d_A, Approach Delay [s/veh]	8.87			13.19			24.23			44.81		
Approach LOS	A			B			C			D		
d_I, Intersection Delay [s/veh]	14.13											
Intersection LOS	B											
Intersection V/C	0.496											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Level Of Service Report
Intersection 2: SR 116/Hurlbut Ave

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.410

Intersection Setup

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	110.00	100.00	100.00	80.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Base Volume Input [veh/h]	40	395	35	5	563	18	13	5	37	37	10	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	395	35	5	563	18	13	5	37	37	10	19
Peak Hour Factor	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	102	9	1	146	5	3	1	10	10	3	5
Total Analysis Volume [veh/h]	41	409	36	5	583	19	13	5	38	38	10	20
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Version 4.00-00

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	54	9	0	93	48	0	0	9	0	0	9	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	15	15	0	14	14	2	3
g / C, Green / Cycle	0.05	0.42	0.42	0.01	0.38	0.38	0.06	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.12	0.12	0.00	0.31	0.01	0.03	0.04
s, saturation flow rate [veh/h]	1774	1863	1810	1774	1863	1583	1646	1725
c, Capacity [veh/h]	84	787	765	12	712	605	99	120
d1, Uniform Delay [s]	16.86	6.88	6.89	17.96	10.09	7.02	16.60	16.37
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.29	0.20	0.21	19.93	2.40	0.02	4.91	4.18
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.29	0.29	0.40	0.82	0.03	0.56	0.57
d, Delay for Lane Group [s/veh]	21.16	7.08	7.10	37.88	12.49	7.04	21.51	20.55
Lane Group LOS	C	A	A	D	B	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh]	0.38	0.79	0.78	0.10	3.30	0.07	0.52	0.60
50th-Percentile Queue Length [ft]	9.54	19.81	19.44	2.60	82.61	1.69	12.91	14.93
95th-Percentile Queue Length [veh]	0.69	1.43	1.40	0.19	5.95	0.12	0.93	1.08
95th-Percentile Queue Length [ft]	17.16	35.65	34.99	4.68	148.70	3.04	23.23	26.88

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Version 4.00-00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.16	7.09	7.10	37.88	12.49	7.04	21.51	21.51	21.51	20.55	20.55	20.55
Movement LOS	C	A	A	D	B	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.28			12.53			21.51			20.55		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	11.69											
Intersection LOS	B											
Intersection V/C	0.410											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Two-way stop	Delay (sec / veh):	27.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.366

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	88	217	567	85	153	389
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	88	217	567	85	153	389
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	56	148	22	40	101
Total Analysis Volume [veh/h]	92	226	590	88	159	405
Pedestrian Volume [ped/h]	0		0		0	

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Version 4.00-00

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.37	0.47	0.01	0.00	0.17	0.00
d_M, Delay for Movement [s/veh]	27.35	19.04	0.00	0.00	9.77	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh]	1.60	2.48	0.00	0.00	0.63	0.00
95th-Percentile Queue Length [ft]	40.04	62.10	0.00	0.00	15.69	0.00
d_A, Approach Delay [s/veh]	21.45		0.00		2.75	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	5.37					
Intersection LOS	D					

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Two-way stop	Delay (sec / veh):	26.1
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.136

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	35	106	743	51	20	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	106	743	51	20	511
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	29	201	14	5	138
Total Analysis Volume [veh/h]	38	114	802	55	22	552
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.31	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	26.08	22.88	0.00	0.00	9.73	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh]	2.20	2.20	0.00	0.00	0.09	0.00
95th-Percentile Queue Length [ft]	54.91	54.91	0.00	0.00	2.16	0.00
d_A, Approach Delay [s/veh]	23.68		0.00		0.37	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.41					
Intersection LOS	D					

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Level Of Service Report
Intersection 5: SR 116/Florence Ave

Control Type:	Two-way stop	Delay (sec / veh):	21.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.088

Intersection Setup

Name	Florence Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

volumes

Name	Florence Ave		SR 116		SR 116	
Base Volume Input [veh/h]	19	44	865	18	26	507
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	44	865	18	26	507
Peak Hour Factor	0.8990	0.8990	0.8990	0.8990	0.8990	0.8990
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	12	241	5	7	141
Total Analysis Volume [veh/h]	21	49	962	20	29	564
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.16	0.01	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	21.47	18.98	0.00	0.00	10.34	0.00
Movement LOS	C	C	A	A	B	A
95th-Percentile Queue Length [veh]	0.29	0.56	0.00	0.00	0.13	0.00
95th-Percentile Queue Length [ft]	7.13	14.04	0.00	0.00	3.22	0.00
d_A, Approach Delay [s/veh]	19.72		0.00		0.51	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.02					
Intersection LOS	C					

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Level Of Service Report
Intersection 6: N Main St/SR 116

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.530

Intersection Setup

Name	N Main St		SR 116		SR 116	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	0	0	1
Pocket Length [ft]	50.00	100.00	80.00	100.00	100.00	130.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

volumes

Name	N Main St		SR 116		SR 116	
Base Volume Input [veh/h]	211	143	200	636	383	205
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	211	143	200	636	383	205
Peak Hour Factor	0.8680	0.8680	0.8680	0.8680	0.8680	0.8680
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	41	58	183	110	59
Total Analysis Volume [veh/h]	243	165	230	733	441	236
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	4	0	1	6	2	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	100	0	100	100	100	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	102	0	9	18	9	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	1	0	0	1	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Lane Group Calculations

Lane Group	L	R	L	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	6	22	11	11
g / C, Green / Cycle	0.18	0.18	0.18	0.60	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.14	0.10	0.13	0.39	0.24	0.15
s, saturation flow rate [veh/h]	1774	1583	1774	1863	1863	1583
c, Capacity [veh/h]	312	279	312	1124	591	502
d1, Uniform Delay [s]	14.27	13.75	14.15	4.70	11.08	9.94
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.19	2.00	3.39	0.65	1.90	0.68
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.59	0.74	0.65	0.75	0.47
d, Delay for Lane Group [s/veh]	18.46	15.75	17.55	5.35	12.98	10.62
Lane Group LOS	B	B	B	A	B	B
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.88	1.15	1.72	1.53	2.61	1.20
50th-Percentile Queue Length [ft]	47.06	28.72	43.00	38.30	65.21	29.94
95th-Percentile Queue Length [veh]	3.39	2.07	3.10	2.76	4.70	2.16
95th-Percentile Queue Length [ft]	84.71	51.69	77.40	68.93	117.39	53.89

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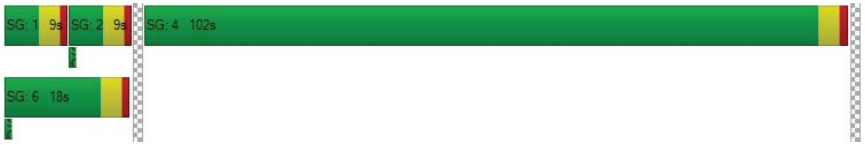
Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.46	15.75	17.55	5.35	12.98	10.62
Movement LOS	B	B	B	A	B	B
d_A, Approach Delay [s/veh]	17.36		8.26		12.16	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	11.36					
Intersection LOS	B					
Intersection V/C	0.530					

Sequence

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



Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

HCM Signalized Intersection Capacity Analysis
7: Main St & McKinley St

4/12/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	98	497	0	0	0	727
Future Volume (vph)	98	497	0	0	0	727
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0				4.0
Lane Util. Factor	1.00	1.00				0.95
Frt	1.00	0.85				1.00
Flt Protected	0.95	1.00				1.00
Satd. Flow (prot)	1805	1615				3610
Flt Permitted	0.95	1.00				1.00
Satd. Flow (perm)	1805	1615				3610
Peak-hour factor, PHF	0.93	0.93	0.90	0.90	0.90	0.93
Adj. Flow (vph)	105	534	0	0	0	782
RTOR Reduction (vph)	69	0	0	0	0	0
Lane Group Flow (vph)	36	534	0	0	0	782
Heavy Vehicles (%)	0%	0%	2%	2%	2%	0%
Turn Type	Prot	custom				NA
Protected Phases	8	2 8				6
Permitted Phases		8				
Actuated Green, G (s)	18.1	32.4				27.0
Effective Green, g (s)	18.1	32.4				27.0
Actuated g/C Ratio	0.34	0.61				0.51
Clearance Time (s)	4.0					4.0
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	615	985				1835
v/s Ratio Prot	0.02	c0.33				c0.22
v/s Ratio Perm						
v/c Ratio	0.06	0.54				0.43
Uniform Delay, d1	11.8	6.0				8.2
Progression Factor	1.00	1.00				1.00
Incremental Delay, d2	0.0	0.6				0.2
Delay (s)	11.8	6.6				8.3
Level of Service	B	A				A
Approach Delay (s)	7.5		0.0			8.3
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	53.1	Sum of lost time (s)	11.0
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

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Intersection Level Of Service Report
Intersection 8: McKinley St/Laguna Park Wy/Petaluma Ave

Control Type:	Two-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.134

Intersection Setup

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			Yes	

volumes

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Base Volume Input [veh/h]	504	54	31	0	0	62	0	0	0	0	44	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	504	54	31	0	0	62	0	0	0	0	44	1
Peak Hour Factor	0.8700	0.8700	0.8700	1.0000	1.0000	0.8700	1.0000	1.0000	1.0000	1.0000	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	16	9	0	0	18	0	0	0	0	13	0
Total Analysis Volume [veh/h]	579	62	36	0	0	71	0	0	0	0	51	1
Pedestrian Volume [ped/h]		26			62			0			20	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.04	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.13	0.00
d_M, Delay for Movement [s/veh]	0.00	7.59	0.00	0.00	0.00	15.34	0.00	0.00	0.00	0.00	15.98	15.50
Movement LOS	A	A	A			C					C	C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.47	0.47
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	15.10	0.00	0.00	0.00	0.00	11.76	11.76
d_A, Approach Delay [s/veh]	0.70			15.34			0.00			15.97		
Approach LOS	A			C			A			C		
d_I, Intersection Delay [s/veh]	2.99											
Intersection LOS	C											

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Intersection Level Of Service Report
Intersection 9: Morris St/Laguna Park Wy

Control Type:	Two-way stop	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.059

Intersection Setup

Name	Morris St		Morris St		Laguna Park Wy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	Morris St		Morris St		Laguna Park Wy	
Base Volume Input [veh/h]	37	180	119	10	15	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	180	119	10	15	23
Peak Hour Factor	0.6080	0.6080	0.6080	0.6080	0.6080	0.6080
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	74	49	4	6	9
Total Analysis Volume [veh/h]	61	296	196	16	25	38
Pedestrian Volume [ped/h]	0		0		0	

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.06	0.05
d_M, Delay for Movement [s/veh]	7.77	0.00	0.00	0.00	14.14	9.99
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh]	1.06	1.06	0.00	0.00	0.35	0.35
95th-Percentile Queue Length [ft]	26.51	26.51	0.00	0.00	8.67	8.67
d_A, Approach Delay [s/veh]	1.33		0.00		11.64	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.91					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 10: Bodega Ave/Ragle Rd

Control Type:	Two-way stop	Delay (sec / veh):	60.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	70.00	100.00	100.00	60.00	100.00	100.00	60.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	1	5	19	30	6	156	159	454	0	12	324	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	5	19	30	6	156	159	454	0	12	324	44
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	6	9	2	46	46	133	0	4	95	13
Total Analysis Volume [veh/h]	1	6	22	35	7	182	186	531	0	14	379	51
Pedestrian Volume [ped/h]	0			0			0			0		

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.05	0.04	0.34	0.06	0.28	0.16	0.01	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	60.35	36.02	13.07	57.65	36.72	13.80	8.81	0.00	0.00	8.52	0.00	0.00
Movement LOS	F	E	B	F	E	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.35	0.35	0.35	1.35	1.48	1.48	0.59	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft]	8.64	8.64	8.64	33.71	36.96	36.96	14.71	0.00	0.00	1.03	0.00	0.00
d_A, Approach Delay [s/veh]	19.45			21.37			2.29			0.27		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	5.03											
Intersection LOS	F											

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Intersection Level Of Service Report
Intersection 11: Bodega Ave/Pleasant Hill Ave

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.504

Intersection Setup

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	40.00	100.00	100.00	80.00	100.00	100.00	45.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	32	104	57	76	62	46	63	430	28	42	317	119
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	104	57	76	62	46	63	430	28	42	317	119
Peak Hour Factor	0.8820	0.8820	0.8820	0.8820	0.8820	0.8820	0.8820	0.8820	0.8820	0.8820	0.8820	0.8820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	29	16	22	18	13	18	122	8	12	90	34
Total Analysis Volume [veh/h]	36	118	65	86	70	52	71	488	32	48	359	135
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	9	0	0	9	0	93	9	0	93	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	C	L	C	L	C	L	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	4	4	3	15	2	15	15
g / C, Green / Cycle	0.17	0.10	0.10	0.07	0.34	0.05	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.12	0.05	0.07	0.04	0.28	0.03	0.19	0.09
s, saturation flow rate [veh/h]	1756	1774	1732	1774	1843	1774	1863	1583
c, Capacity [veh/h]	291	175	170	117	620	90	599	509
d1, Uniform Delay [s]	18.24	19.60	20.06	20.86	14.07	21.25	13.08	11.55
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.92	2.14	5.51	5.06	3.12	4.87	0.97	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.49	0.72	0.61	0.84	0.53	0.60	0.27
d, Delay for Lane Group [s/veh]	22.16	21.74	25.57	25.92	17.18	26.12	14.05	11.82
Lane Group LOS	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.24	0.88	1.38	0.83	4.55	0.57	2.71	0.88
50th-Percentile Queue Length [ft]	56.12	21.94	34.60	20.68	113.74	14.33	67.73	22.12
95th-Percentile Queue Length [veh]	4.04	1.58	2.49	1.49	8.05	1.03	4.88	1.59
95th-Percentile Queue Length [ft]	101.02	39.49	62.29	37.22	201.20	25.80	121.92	39.81

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.16	22.16	22.16	21.74	25.57	25.57	25.92	17.18	17.18	26.12	14.05	11.82
Movement LOS	C	C	C	C	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	22.16			23.99			18.23			14.56		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.28											
Intersection LOS	B											
Intersection V/C	0.504											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report
Intersection 12: Bodega Ave/Dutton Ave/Jewell Ave

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.500

Intersection Setup

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

volumes

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	114	27	35	41	57	19	6	410	141	40	432	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	27	35	41	57	19	6	410	141	40	432	52
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	7	9	11	15	5	2	111	38	11	117	14
Total Analysis Volume [veh/h]	123	29	38	44	62	21	6	444	153	43	468	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	0	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	9	0	0	9	0	93	51	0	51	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Version 4.00-00

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	4	0	16	2	18
g / C, Green / Cycle	0.07	0.07	0.10	0.01	0.40	0.05	0.43
(v / s)_i Volume / Saturation Flow Rate	0.07	0.04	0.07	0.00	0.33	0.02	0.29
s, saturation flow rate [veh/h]	1774	1693	1780	1774	1782	1774	1828
c, Capacity [veh/h]	124	119	173	15	706	85	796
d1, Uniform Delay [s]	19.11	18.52	18.05	20.30	11.28	19.11	9.19
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	34.85	4.15	5.92	17.68	2.91	4.63	0.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.99	0.56	0.73	0.41	0.85	0.51	0.66
d, Delay for Lane Group [s/veh]	53.96	22.67	23.97	37.97	14.19	23.74	10.12
Lane Group LOS	D	C	C	D	B	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	2.22	0.67	1.30	0.12	4.16	0.46	2.81
50th-Percentile Queue Length [ft]	55.57	16.87	32.40	3.05	103.99	11.49	70.34
95th-Percentile Queue Length [veh]	4.00	1.21	2.33	0.22	7.49	0.83	5.06
95th-Percentile Queue Length [ft]	100.03	30.36	58.32	5.49	187.18	20.69	126.61

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

HCM Signalized Intersection Capacity Analysis
13: Bodega Ave/Sebastopol Rd & Main St

4/12/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	367	54	361	481	0	0	0	0	246	515	52
Future Volume (vph)	0	367	54	361	481	0	0	0	0	246	515	52
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	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	0.99	
Flpb, ped/bikes		1.00	1.00	1.00	1.00					0.89	1.00	
Frt		1.00	0.85	1.00	1.00					1.00	0.99	
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1900	1615	1805	1900					1612	3520	
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)		1900	1615	1805	1900					1612	3520	
Peak-hour factor, PHF	0.90	0.91	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.91	0.91	0.91
Adj. Flow (vph)	0	403	59	397	529	0	0	0	0	270	566	57
RTOR Reduction (vph)	0	0	3	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	403	56	397	529	0	0	0	0	270	615	0
Confl. Peds. (#/hr)										50		50
Heavy Vehicles (%)	2%	0%	0%	0%	0%	2%	2%	2%	2%	0%	0%	0%
Turn Type		NA	Perm	Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2							4		
Actuated Green, G (s)		31.5	31.5	24.4	59.9					22.1	22.1	
Effective Green, g (s)		31.5	31.5	24.4	59.9					22.1	22.1	
Actuated g/C Ratio		0.35	0.35	0.27	0.67					0.25	0.25	
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		665	565	489	1264					395	864	
v/s Ratio Prot		c0.21		c0.22	0.28						c0.17	
v/s Ratio Perm			0.03							0.17		
v/c Ratio		0.61	0.10	0.81	0.42					0.68	0.71	
Uniform Delay, d1		24.1	19.7	30.7	7.0					30.8	31.0	
Progression Factor		1.00	1.00	1.44	1.15					1.00	1.00	
Incremental Delay, d2		4.1	0.3	6.1	0.6					4.8	2.8	
Delay (s)		28.2	20.0	50.4	8.6					35.6	33.8	
Level of Service		C	C	D	A					D	C	
Approach Delay (s)		27.2			26.5			0.0			34.4	
Approach LOS		C			C			A			C	

Intersection Summary				
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	87.4%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: Sebastopol Rd & Petaluma Ave

4/12/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	537	0	0	714	144	121	417	481	0	0	0
Future Volume (vph)	76	537	0	0	714	144	121	417	481	0	0	0
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			*0.60			0.95	1.00			
Frt	1.00	1.00			0.97			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (prot)	1805	1900			2223			3570	1615			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	1805	1900			2223			3570	1615			
Peak-hour factor, PHF	0.94	0.94	0.90	0.90	0.94	0.94	0.94	0.94	0.94	0.90	0.90	0.90
Adj. Flow (vph)	81	571	0	0	760	153	129	444	512	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	27	0	0	0
Lane Group Flow (vph)	81	571	0	0	902	0	0	573	485	0	0	0
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%	0%	0%	0%	2%	2%	2%
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	7.8	52.8			41.0			29.2	29.2			
Effective Green, g (s)	7.8	52.8			41.0			29.2	29.2			
Actuated g/C Ratio	0.09	0.59			0.46			0.32	0.32			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	156	1114			1012			1158	523			
v/s Ratio Prot	0.04	c0.30			c0.41							
v/s Ratio Perm								0.16	c0.30			
v/c Ratio	0.52	0.51			0.89			0.49	0.93			
Uniform Delay, d1	39.3	11.0			22.5			24.5	29.4			
Progression Factor	0.99	1.27			1.00			1.00	1.00			
Incremental Delay, d2	2.3	1.3			11.8			0.3	22.6			
Delay (s)	41.1	15.2			34.2			24.8	52.0			
Level of Service	D	B			C			C	D			
Approach Delay (s)		18.5			34.2			37.6			0.0	
Approach LOS		B			C			D			A	

Intersection Summary				
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	87.4%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
15: Sebastopol Rd & Morris St

4/12/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	936	3	1	841	168	3	0	3	57	0	31
Future Volume (vph)	44	936	3	1	841	168	3	0	3	57	0	31
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	
Frt	1.00	1.00		1.00	1.00	0.85		0.93		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (prot)	1805	1899		1805	1900	1615		1729		1805	1615	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (perm)	1805	1899		1805	1900	1615		1729		1805	1615	
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)	46	975	3	1	876	175	3	0	3	59	0	32
RTOR Reduction (vph)	0	0	0	0	0	23	0	6	0	0	0	0
Lane Group Flow (vph)	46	978	0	1	876	152	0	0	0	59	32	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6						
Actuated Green, G (s)	4.0	38.4		0.8	35.2	35.2		5.5		22.0	22.0	
Effective Green, g (s)	4.0	38.4		0.8	35.2	35.2		5.5		22.0	22.0	
Actuated g/C Ratio	0.05	0.46		0.01	0.43	0.43		0.07		0.27	0.27	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	87	881		17	808	687		114		480	429	
v/s Ratio Prot	c0.03	c0.51		0.00	0.46			c0.00		c0.03	0.02	
v/s Ratio Perm						0.09						
v/c Ratio	0.53	1.11		0.06	1.08	0.22		0.00		0.12	0.07	
Uniform Delay, d1	38.4	22.2		40.6	23.8	15.1		36.0		23.0	22.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	5.7	65.2		1.5	57.0	0.2		0.0		0.1	0.1	
Delay (s)	44.1	87.3		42.0	80.7	15.2		36.1		23.1	22.8	
Level of Service	D	F		D	F	B		D		C	C	
Approach Delay (s)		85.4			69.8			36.1			23.0	
Approach LOS		F			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	75.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	82.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	61.7%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.96	22.67	22.67	23.97	23.97	23.97	37.97	14.19	14.19	23.74	10.12	10.12
Movement LOS	D	C	C	C	C	C	D	B	B	C	B	B
d_A, Approach Delay [s/veh]	42.92			23.97			14.43			11.15		
Approach LOS	D			C			B			B		
d_I, Intersection Delay [s/veh]	17.64											
Intersection LOS	B											
Intersection V/C	0.500											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 16: SR 12/Llano Rd

Control Type:	Signalized	Delay (sec / veh):	26.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.783

Intersection Setup

Name	Llano Rd		SR 12		SR 12	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	1	0
Pocket Length [ft]	210.00	100.00	100.00	320.00	140.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

volumes

Name	Llano Rd		SR 12		SR 12	
Base Volume Input [veh/h]	102	303	917	99	165	881
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	102	303	917	99	165	881
Peak Hour Factor	0.9430	0.9430	0.9430	0.9430	0.9430	0.9430
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	80	243	26	44	234
Total Analysis Volume [veh/h]	108	321	972	105	175	934
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Overlap	Permissive	Permissive	Protected	Permissive
Signal group	4	1	2	0	1	6
Auxiliary Signal Groups		1,4				
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	100	100	100	0	100	100
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	9	9	102	0	9	111
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	1	0	1	0	0	1
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Lane Group Calculations

Lane Group	L	R	C	R	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	23	49	68	68	23	95
g / C, Green / Cycle	0.18	0.39	0.54	0.54	0.18	0.76
(v / s)_i Volume / Saturation Flow Rate	0.06	0.20	0.52	0.07	0.10	0.50
s, saturation flow rate [veh/h]	1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]	319	622	1012	860	322	1409
d1, Uniform Delay [s]	44.99	29.03	27.42	14.04	46.73	7.48
k, delay calibration	0.11	0.11	0.22	0.11	0.11	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.62	0.66	11.55	0.06	1.43	1.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.52	0.96	0.12	0.54	0.66
d, Delay for Lane Group [s/veh]	45.61	29.69	38.97	14.10	48.16	8.48
Lane Group LOS	D	C	D	B	D	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	3.01	7.48	29.77	1.48	5.11	10.91
50th-Percentile Queue Length [ft]	75.31	186.90	744.25	37.06	127.80	272.73
95th-Percentile Queue Length [veh]	5.42	11.96	38.72	2.67	8.82	16.33
95th-Percentile Queue Length [ft]	135.56	299.00	967.95	66.71	220.50	408.15

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Version 4.00-00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.61	29.69	38.97	14.10	48.16	8.48
Movement LOS	D	C	D	B	D	A
d_A, Approach Delay [s/veh]	33.70		36.54		14.74	
Approach LOS	C		D		B	
d_I, Intersection Delay [s/veh]	26.83					
Intersection LOS	C					
Intersection V/C	0.783					

Sequence

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

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Two-way stop	Delay (sec / veh):	23.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.015

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	23	967	721	7	3	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	967	721	7	3	35
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	261	195	2	1	9
Total Analysis Volume [veh/h]	25	1044	779	8	3	38
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		1	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		1	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.01	0.00	0.02	0.10
d_M, Delay for Movement [s/veh]	9.46	0.00	0.00	0.00	23.34	15.12
Movement LOS	A	A	A	A	C	C
95th-Percentile Queue Length [veh]	0.09	0.00	0.00	0.00	0.05	0.32
95th-Percentile Queue Length [ft]	2.32	0.00	0.00	0.00	1.14	7.95
d_A, Approach Delay [s/veh]	0.22		0.00		15.72	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	C					

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Level Of Service Report
Intersection 18: SR 116/Lynch Rd

Control Type:	Signalized	Delay (sec / veh):	13.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Pocket Length [ft]	130.00	100.00	100.00	90.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Base Volume Input [veh/h]	57	895	4	5	689	26	86	0	83	2	0	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	895	4	5	689	26	86	0	83	2	0	11
Peak Hour Factor	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090	0.9090
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	246	1	1	189	7	24	0	23	1	0	3
Total Analysis Volume [veh/h]	63	985	4	6	758	29	95	0	91	2	0	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	21	9	0	102	90	0	0	9	0	0	9	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Lane Group Calculations

Lane Group	L	C	L	C	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	29	0	27	9	9	9
g / C, Green / Cycle	0.06	0.58	0.01	0.53	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.04	0.53	0.00	0.43	0.14	0.00	0.01
s, saturation flow rate [veh/h]	1774	1861	1774	1851	1346	1000	1583
c, Capacity [veh/h]	104	1082	14	982	339	315	271
d1, Uniform Delay [s]	23.02	9.38	24.74	9.61	20.28	17.25	17.34
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.51	3.51	17.99	1.57	1.38	0.01	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.91	0.42	0.80	0.55	0.01	0.04
d, Delay for Lane Group [s/veh]	28.53	12.89	42.73	11.18	21.67	17.25	17.41
Lane Group LOS	C	B	D	B	C	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.83	7.29	0.14	5.44	2.02	0.02	0.11
50th-Percentile Queue Length [ft]	20.69	182.34	3.45	135.98	50.42	0.45	2.74
95th-Percentile Queue Length [veh]	1.49	11.72	0.25	9.26	3.63	0.03	0.20
95th-Percentile Queue Length [ft]	37.24	293.07	6.20	231.60	90.76	0.81	4.93

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.53	12.89	12.89	42.73	11.18	11.18	21.67	21.67	21.67	17.25	17.25	17.41
Movement LOS	C	B	B	D	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	13.83			11.42			21.67			17.39		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	13.63											
Intersection LOS	B											
Intersection V/C	0.673											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan W-Trans
Scenario 1: 1: AM Existing

Intersection Level Of Service Report
Intersection 1: SR 116/Mill Station Rd

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.574

Intersection Setup

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	50.00	100.00	100.00	50.00	100.00	100.00	70.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Base Volume Input [veh/h]	77	605	0	2	581	165	101	1	87	12	5	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	77	605	0	2	581	165	101	1	87	12	5	25
Peak Hour Factor	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330	0.9330
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	162	0	1	156	44	27	0	23	3	1	7
Total Analysis Volume [veh/h]	83	648	0	2	623	177	108	1	93	13	5	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	32	86	0	9	63	0	0	16	0	0	9	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	28	0	25	4	4	2	2
g / C, Green / Cycle	0.07	0.56	0.00	0.50	0.08	0.08	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.05	0.35	0.00	0.45	0.06	0.06	0.01	0.02
s, saturation flow rate [veh/h]	1774	1863	1774	1793	1774	1586	1774	1621
c, Capacity [veh/h]	122	1048	5	890	143	128	64	59
d1, Uniform Delay [s]	22.89	7.39	25.04	11.51	22.64	22.60	23.54	23.84
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.56	0.60	46.37	3.59	7.82	7.91	1.54	7.71
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.62	0.41	0.90	0.75	0.74	0.20	0.55
d, Delay for Lane Group [s/veh]	29.45	7.99	71.41	15.10	30.46	30.51	25.08	31.55
Lane Group LOS	C	A	E	B	C	C	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.10	3.38	0.09	6.87	1.45	1.27	0.17	0.47
50th-Percentile Queue Length [ft]	27.54	84.42	2.13	171.72	36.34	31.86	4.14	11.75
95th-Percentile Queue Length [veh]	1.98	6.08	0.15	11.17	2.62	2.29	0.30	0.85
95th-Percentile Queue Length [ft]	49.57	151.96	3.84	279.18	65.42	57.34	7.45	21.15

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.45	7.99	7.99	71.41	15.10	15.10	30.46	30.51	30.51	25.08	31.55	31.55
Movement LOS	C	A	A	E	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.42			15.24			30.48			29.68		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.36											
Intersection LOS	B											
Intersection V/C	0.574											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Intersection Level Of Service Report
Intersection 2: SR 116/Hurlbut Ave

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

Intersection Setup

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	110.00	100.00	100.00	80.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Base Volume Input [veh/h]	87	505	34	13	574	59	84	22	105	32	14	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	505	34	13	574	59	84	22	105	32	14	13
Peak Hour Factor	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650	0.9650
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	131	9	3	149	15	22	6	27	8	4	3
Total Analysis Volume [veh/h]	90	523	35	13	595	61	87	23	109	33	15	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	77	0	9	74	0	0	24	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	21	21	1	18	18	8	3
g / C, Green / Cycle	0.07	0.43	0.43	0.02	0.37	0.37	0.17	0.06
(v / s)_i Volume / Saturation Flow Rate	0.05	0.15	0.15	0.01	0.32	0.04	0.13	0.03
s, saturation flow rate [veh/h]	1774	1863	1822	1774	1863	1583	1682	1750
c, Capacity [veh/h]	129	799	781	30	695	590	285	102
d1, Uniform Delay [s]	22.16	9.41	9.41	23.83	14.14	10.01	19.40	22.49
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.66	0.27	0.27	9.78	3.19	0.08	4.35	5.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.35	0.35	0.44	0.86	0.10	0.77	0.60
d, Delay for Lane Group [s/veh]	28.82	9.67	9.68	33.60	17.33	10.08	23.76	28.06
Lane Group LOS	C	A	A	C	B	B	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh]	1.16	1.67	1.64	0.22	5.53	0.37	2.45	0.78
50th-Percentile Queue Length [ft]	28.91	41.83	41.07	5.44	138.23	9.23	61.34	19.54
95th-Percentile Queue Length [veh]	2.08	3.01	2.96	0.39	9.39	0.66	4.42	1.41
95th-Percentile Queue Length [ft]	52.04	75.30	73.92	9.79	234.65	16.61	110.42	35.18

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.82	9.68	9.68	33.60	17.33	10.08	23.76	23.76	23.76	28.06	28.06	28.06
Movement LOS	C	A	A	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	12.34			16.98			23.76			28.06		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.45											
Intersection LOS	B											
Intersection V/C	0.535											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Two-way stop	Delay (sec / veh):	40.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.422

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	71	155	619	130	178	675
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	155	619	130	178	675
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	40	159	33	46	174
Total Analysis Volume [veh/h]	73	159	637	134	183	694
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.42	0.36	0.01	0.00	0.22	0.01
d_M, Delay for Movement [s/veh]	40.14	17.87	0.00	0.00	10.44	0.00
Movement LOS	E	C	A	A	B	A
95th-Percentile Queue Length [veh]	1.90	1.64	0.00	0.00	0.82	0.00
95th-Percentile Queue Length [ft]	47.46	40.97	0.00	0.00	20.57	0.00
d_A, Approach Delay [s/veh]	24.88		0.00		2.18	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	4.09					
Intersection LOS	E					

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Two-way stop	Delay (sec / veh):	25.4
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.126

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	28	57	755	30	45	822
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	57	755	30	45	822
Peak Hour Factor	0.9890	0.9890	0.9890	0.9890	0.9890	0.9890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	14	191	8	11	208
Total Analysis Volume [veh/h]	28	58	763	30	46	831
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.15	0.01	0.00	0.06	0.01
d_M, Delay for Movement [s/veh]	25.35	18.28	0.00	0.00	9.60	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh]	1.08	1.08	0.00	0.00	0.18	0.00
95th-Percentile Queue Length [ft]	27.00	27.00	0.00	0.00	4.40	0.00
d_A, Approach Delay [s/veh]	20.58		0.00		0.50	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.26					
Intersection LOS	D					

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Intersection Level Of Service Report
Intersection 5: SR 116/Florence Ave

Control Type:	Two-way stop	Delay (sec / veh):	25.2
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.198

Intersection Setup

Name	Florence Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

volumes

Name	Florence Ave		SR 116		SR 116	
Base Volume Input [veh/h]	43	39	754	51	34	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	43	39	754	51	34	844
Peak Hour Factor	0.9810	0.9810	0.9810	0.9810	0.9810	0.9810
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	10	192	13	9	215
Total Analysis Volume [veh/h]	44	40	769	52	35	860
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.10	0.01	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	25.15	15.36	0.00	0.00	9.66	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh]	0.72	0.34	0.00	0.00	0.14	0.00
95th-Percentile Queue Length [ft]	17.94	8.56	0.00	0.00	3.39	0.00
d_A, Approach Delay [s/veh]	20.49		0.00		0.38	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.14					
Intersection LOS	D					

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Intersection Level Of Service Report
Intersection 6: N Main St/SR 116

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.526

Intersection Setup

Name	N Main St		SR 116		SR 116	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	0	0	1
Pocket Length [ft]	50.00	100.00	80.00	100.00	100.00	130.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	N Main St		SR 116		SR 116	
Base Volume Input [veh/h]	160	129	87	598	680	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	160	129	87	598	680	93
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	34	23	156	177	24
Total Analysis Volume [veh/h]	167	134	91	623	708	97
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	4	0	1	6	2	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	100	0	100	100	100	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	22	0	13	98	85	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	1	0	0	1	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	R	L	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	3	23	16	16
g / C, Green / Cycle	0.12	0.12	0.08	0.65	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.09	0.08	0.05	0.33	0.38	0.06
s, saturation flow rate [veh/h]	1774	1583	1774	1863	1863	1583
c, Capacity [veh/h]	222	199	149	1213	848	721
d1, Uniform Delay [s]	15.11	14.96	15.83	3.27	8.56	5.66
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.04	3.96	4.00	0.34	2.25	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.67	0.61	0.51	0.83	0.13
d, Delay for Lane Group [s/veh]	20.15	18.92	19.83	3.61	10.81	5.74
Lane Group LOS	C	B	B	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	1.38	1.07	0.76	0.65	3.40	0.28
50th-Percentile Queue Length [ft]	34.46	26.64	19.00	16.32	85.12	6.92
95th-Percentile Queue Length [veh]	2.48	1.92	1.37	1.17	6.13	0.50
95th-Percentile Queue Length [ft]	62.02	47.95	34.19	29.37	153.22	12.46

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.15	18.92	19.83	3.61	10.81	5.74
Movement LOS	C	B	B	A	B	A
d_A, Approach Delay [s/veh]	19.60		5.68		10.20	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	9.98					
Intersection LOS	A					
Intersection V/C	0.526					

Sequence

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

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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	183	744	0	0	0	819
Future Volume (vph)	183	744	0	0	0	819
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0				4.0
Lane Util. Factor	1.00	1.00				0.95
Frt	1.00	0.85				1.00
Flt Protected	0.95	1.00				1.00
Satd. Flow (prot)	1770	1583				3539
Flt Permitted	0.95	1.00				1.00
Satd. Flow (perm)	1770	1583				3539
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	195	791	0	0	0	871
RTOR Reduction (vph)	71	0	0	0	0	0
Lane Group Flow (vph)	124	791	0	0	0	871
Turn Type	Prot	custom				NA
Protected Phases	8	2 8				6
Permitted Phases		8				
Actuated Green, G (s)	19.2	33.6				27.4
Effective Green, g (s)	19.2	33.6				27.4
Actuated g/C Ratio	0.35	0.62				0.50
Clearance Time (s)	4.0					4.0
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	622	974				1775
v/s Ratio Prot	0.07	c0.50				c0.25
v/s Ratio Perm						
v/c Ratio	0.20	0.81				0.49
Uniform Delay, d1	12.3	8.1				9.0
Progression Factor	1.00	1.00				1.00
Incremental Delay, d2	0.2	5.2				0.2
Delay (s)	12.5	13.3				9.2
Level of Service	B	B				A
Approach Delay (s)	13.1		0.0			9.2
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	54.6	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

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Intersection Level Of Service Report
Intersection 8: McKinley St/Laguna Park Wy/Petaluma Ave

Control Type:	Two-way stop	Delay (sec / veh):	20.8
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.325

Intersection Setup

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			Yes	

volumes

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Base Volume Input [veh/h]	733	58	26	0	0	106	0	0	0	0	61	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	733	58	26	0	0	106	0	0	0	0	61	2
Peak Hour Factor	0.9740	0.9740	0.9740	1.0000	1.0000	0.9740	1.0000	1.0000	1.0000	1.0000	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	188	15	7	0	0	27	0	0	0	0	16	1
Total Analysis Volume [veh/h]	753	60	27	0	0	109	0	0	0	0	63	2
Pedestrian Volume [ped/h]		26			62			0			20	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.04	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.21	0.01
d_M, Delay for Movement [s/veh]	0.00	7.59	0.00	0.00	0.00	20.83	0.00	0.00	0.00	0.00	20.09	19.46
Movement LOS	A	A	A			C					C	C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	1.38	0.00	0.00	0.00	0.00	0.80	0.80
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	34.46	0.00	0.00	0.00	0.00	19.91	19.91
d_A, Approach Delay [s/veh]	0.54			20.83			0.00			20.07		
Approach LOS	A			C			A			C		
d_I, Intersection Delay [s/veh]	3.97											
Intersection LOS	C											

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Intersection Level Of Service Report
Intersection 9: Morris St/Laguna Park Wy

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.033

Intersection Setup

Name	Morris St		Morris St		Laguna Park Wy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	Morris St		Morris St		Laguna Park Wy	
Base Volume Input [veh/h]	56	106	130	19	17	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	56	106	130	19	17	32
Peak Hour Factor	0.8910	0.8910	0.8910	0.8910	0.8910	0.8910
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	30	36	5	5	9
Total Analysis Volume [veh/h]	63	119	146	21	19	36
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.03	0.04
d_M, Delay for Movement [s/veh]	7.67	0.00	0.00	0.00	11.64	9.43
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh]	0.44	0.44	0.00	0.00	0.24	0.24
95th-Percentile Queue Length [ft]	11.08	11.08	0.00	0.00	5.93	5.93
d_A, Approach Delay [s/veh]	2.66		0.00		10.19	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.58					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 10: Bodega Ave/Ragle Rd

Control Type:	Two-way stop	Delay (sec / veh):	29.6
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	70.00	100.00	100.00	60.00	100.00	100.00	60.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	0	0	10	35	5	132	70	312	2	29	368	61
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	10	35	5	132	70	312	2	29	368	61
Peak Hour Factor	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	3	9	1	35	19	83	1	8	98	16
Total Analysis Volume [veh/h]	0	0	11	37	5	141	75	333	2	31	392	65
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.18	0.02	0.22	0.07	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	29.55	21.45	10.17	25.67	22.65	12.68	8.50	0.00	0.00	8.02	0.00	0.00
Movement LOS	D	C	B	D	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.05	0.05	0.05	0.62	0.96	0.96	0.22	0.00	0.00	0.08	0.00	0.00
95th-Percentile Queue Length [ft]	1.18	1.18	1.18	15.52	24.02	24.02	5.46	0.00	0.00	1.95	0.00	0.00
d_A, Approach Delay [s/veh]	10.17			15.58			1.55			0.51		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	3.52											
Intersection LOS	D											

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Intersection Level Of Service Report
Intersection 11: Bodega Ave/Pleasant Hill Ave

Control Type:	Signalized	Delay (sec / veh):	15.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	40.00	100.00	100.00	80.00	100.00	100.00	45.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	42	76	44	54	73	40	37	346	36	54	360	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	76	44	54	73	40	37	346	36	54	360	83
Peak Hour Factor	0.9850	0.9850	0.9850	0.9850	0.9850	0.9850	0.9850	0.9850	0.9850	0.9850	0.9850	0.9850
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	19	11	14	19	10	9	88	9	14	91	21
Total Analysis Volume [veh/h]	43	77	45	55	74	41	38	351	37	55	365	84
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Scenario 1: 1: PM Existing

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	22	0	10	59	0	12	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Version 4.00-00

Lane Group Calculations

Lane Group	C	L	C	L	C	L	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	3	3	2	10	2	10	10
g / C, Green / Cycle	0.13	0.10	0.10	0.04	0.27	0.06	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.09	0.03	0.07	0.02	0.21	0.03	0.20	0.05
s, saturation flow rate [veh/h]	1755	1774	1752	1774	1832	1774	1863	1583
c, Capacity [veh/h]	226	170	168	79	502	106	538	457
d1, Uniform Delay [s]	15.17	15.28	15.85	16.89	12.11	16.53	11.39	9.67
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.46	1.09	4.87	4.45	2.58	3.92	1.51	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.32	0.69	0.48	0.77	0.52	0.68	0.18
d, Delay for Lane Group [s/veh]	19.63	16.37	20.72	21.34	14.69	20.44	12.90	9.86
Lane Group LOS	B	B	C	C	B	C	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.35	0.40	0.99	0.36	2.52	0.49	2.15	0.40
50th-Percentile Queue Length [ft]	33.65	10.06	24.69	8.94	63.11	12.16	53.86	10.03
95th-Percentile Queue Length [veh]	2.42	0.72	1.78	0.64	4.54	0.88	3.88	0.72
95th-Percentile Queue Length [ft]	60.57	18.10	44.44	16.09	113.61	21.88	96.94	18.05

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.63	19.63	19.63	16.37	20.72	20.72	21.34	14.69	14.69	20.44	12.90	9.86
Movement LOS	B	B	B	B	C	C	C	B	B	C	B	A
d_A, Approach Delay [s/veh]	19.63			19.31			15.28			13.22		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	15.57											
Intersection LOS	B											
Intersection V/C	0.402											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Version 4.00-00

Intersection Level Of Service Report
Intersection 12: Bodega Ave/Dutton Ave/Jewell Ave

Control Type:	Signalized	Delay (sec / veh):	13.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.406

Intersection Setup

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	82	33	43	14	18	1	5	389	84	55	563	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	33	43	14	18	1	5	389	84	55	563	10
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	9	12	4	5	0	1	105	23	15	152	3
Total Analysis Volume [veh/h]	89	36	47	15	19	1	5	421	91	60	609	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	0	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	12	0	0	15	0	10	45	0	48	83	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Version 4.00-00

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	1	0	12	2	14
g / C, Green / Cycle	0.08	0.08	0.04	0.01	0.35	0.06	0.41
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.02	0.00	0.28	0.03	0.33
s, saturation flow rate [veh/h]	1774	1694	1815	1774	1806	1774	1857
c, Capacity [veh/h]	143	136	76	12	638	114	762
d1, Uniform Delay [s]	15.48	15.46	16.27	17.19	10.16	15.75	9.08
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.39	4.33	4.24	19.84	2.42	3.72	2.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.61	0.46	0.40	0.80	0.53	0.81
d, Delay for Lane Group [s/veh]	19.87	19.79	20.51	37.03	12.58	19.47	11.25
Lane Group LOS	B	B	C	D	B	B	B
Critical Lane Group	Yes	No	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.73	0.68	0.32	0.10	2.82	0.50	3.07
50th-Percentile Queue Length [ft]	18.33	17.12	7.90	2.54	70.57	12.45	76.67
95th-Percentile Queue Length [veh]	1.32	1.23	0.57	0.18	5.08	0.90	5.52
95th-Percentile Queue Length [ft]	33.00	30.82	14.22	4.57	127.03	22.41	138.00

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	19.87	19.79	19.79	20.51	20.51	20.51	37.03	12.58	12.58	19.47	11.25	11.25
Movement LOS	B	B	B	C	C	C	D	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.83			20.51			12.82			11.97		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	13.46											
Intersection LOS	B											
Intersection V/C	0.406											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

HCM Signalized Intersection Capacity Analysis
13: Bodega Ave/Sebastopol Rd & Main St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	327	63	393	521	0	0	0	0	249	640	101
Future Volume (vph)	0	327	63	393	521	0	0	0	0	249	640	101
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	0.95	
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	0.98	
Flpb, ped/bikes		1.00	1.00	1.00	1.00					0.89	1.00	
Frt		1.00	0.85	1.00	1.00					1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1863	1583	1770	1863					1580	3407	
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)		1863	1583	1770	1863					1580	3407	
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	352	68	423	560	0	0	0	0	268	688	109
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	352	68	423	560	0	0	0	0	268	797	0
Confl. Peds. (#/hr)										50		50
Turn Type		NA	Perm	Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2							4		
Actuated Green, G (s)		27.4	27.4	25.1	56.5					25.5	25.5	
Effective Green, g (s)		27.4	27.4	25.1	56.5					25.5	25.5	
Actuated g/C Ratio		0.30	0.30	0.28	0.63					0.28	0.28	
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		567	481	493	1169					447	965	
v/s Ratio Prot		c0.19		c0.24	0.30						c0.23	
v/s Ratio Perm			0.04							0.17		
v/c Ratio		0.62	0.14	0.86	0.48					0.60	0.83	
Uniform Delay, d1		26.8	22.8	30.8	8.9					27.8	30.2	
Progression Factor		1.00	1.00	0.57	0.37					1.00	1.00	
Incremental Delay, d2		5.0	0.6	5.5	0.5					2.2	5.9	
Delay (s)		31.9	23.4	23.1	3.8					30.0	36.0	
Level of Service		C	C	C	A					C	D	
Approach Delay (s)		30.5			12.1			0.0			34.5	
Approach LOS		C			B			A			C	

Intersection Summary				
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	70.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
14: Sebastopol Rd & Petaluma Ave

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	496	0	0	723	196	163	556	380	0	0	0
Future Volume (vph)	98	496	0	0	723	196	163	556	380	0	0	0
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			*0.60			0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00			1.00	0.95			
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			0.99	1.00			
Satd. Flow (prot)	1770	1863			2164			3487	1510			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	1770	1863			2164			3487	1510			
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)	108	545	0	0	795	215	179	611	418	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	33	0	0	0
Lane Group Flow (vph)	108	545	0	0	999	0	0	790	385	0	0	0
Confl. Peds. (#/hr)							15		15			
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	7.8	52.0			40.2			30.0	30.0			
Effective Green, g (s)	7.8	52.0			40.2			30.0	30.0			
Actuated g/C Ratio	0.09	0.58			0.45			0.33	0.33			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	153	1076			966			1162	503			
v/s Ratio Prot	c0.06	0.29			c0.46							
v/s Ratio Perm								0.23	c0.25			
v/c Ratio	0.71	0.51			1.03			0.68	0.76			
Uniform Delay, d1	40.0	11.3			24.9			25.9	26.8			
Progression Factor	0.97	0.87			1.00			1.00	1.00			
Incremental Delay, d2	11.6	1.4			38.1			1.6	6.8			
Delay (s)	50.4	11.3			63.0			27.5	33.7			
Level of Service	D	B			E			C	C			
Approach Delay (s)		17.8			63.0			29.6			0.0	
Approach LOS		B			E			C			A	

Intersection Summary				
HCM 2000 Control Delay	38.7	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	70.4%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
15: Sebastopol Rd & Morris St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	818	5	3	813	119	4	5	5	136	3	65
Future Volume (vph)	42	818	5	3	813	119	4	5	5	136	3	65
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	
Frt	1.00	1.00		1.00	1.00	0.85		0.95		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)	1770	1861		1770	1863	1583		1748		1770	1595	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (perm)	1770	1861		1770	1863	1583		1748		1770	1595	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	861	5	3	856	125	4	5	5	143	3	68
RTOR Reduction (vph)	0	0	0	0	0	11	0	5	0	0	0	0
Lane Group Flow (vph)	44	866	0	3	856	114	0	9	0	143	71	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6						
Actuated Green, G (s)	4.0	46.4		0.8	43.2	43.2		6.1		22.0	22.0	
Effective Green, g (s)	4.0	46.4		0.8	43.2	43.2		6.1		22.0	22.0	
Actuated g/C Ratio	0.04	0.51		0.01	0.47	0.47		0.07		0.24	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	77	945		15	881	749		116		426	384	
v/s Ratio Prot	c0.02	c0.47		0.00	c0.46			c0.01		c0.08	0.04	
v/s Ratio Perm						0.07						
v/c Ratio	0.57	0.92		0.20	0.97	0.15		0.08		0.34	0.18	
Uniform Delay, d1	42.8	20.7		44.9	23.5	13.7		40.0		28.6	27.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	9.8	13.2		6.5	23.5	0.1		0.3		0.5	0.2	
Delay (s)	52.7	33.9		51.4	46.9	13.8		40.3		29.1	27.8	
Level of Service	D	C		D	D	B		D		C	C	
Approach Delay (s)		34.8			42.7			40.3			28.6	
Approach LOS		C			D			D			C	

Intersection Summary				
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	91.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	64.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Intersection Level Of Service Report
Intersection 16: SR 12/Llano Rd

Control Type:	Signalized	Delay (sec / veh):	16.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.749

Intersection Setup

Name	Llano Rd		SR 12		SR 12	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	1	0
Pocket Length [ft]	210.00	100.00	100.00	320.00	140.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Llano Rd		SR 12		SR 12	
Base Volume Input [veh/h]	114	211	957	89	167	820
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	211	957	89	167	820
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	55	249	23	44	214
Total Analysis Volume [veh/h]	119	220	998	93	174	855
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Overlap	Permissive	Permissive	Protected	Permissive
Signal group	4	1	2	0	1	6
Auxiliary Signal Groups		1,4				
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	100	100	100	0	100	100
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	14	11	95	0	11	106
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	1	0	1	0	0	1
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Lane Group Calculations

Lane Group	L	R	C	R	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	27	47	47	12	63
g / C, Green / Cycle	0.14	0.33	0.57	0.57	0.14	0.76
(v / s)_i Volume / Saturation Flow Rate	0.07	0.14	0.54	0.06	0.10	0.46
s, saturation flow rate [veh/h]	1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]	252	529	1059	900	255	1417
d1, Uniform Delay [s]	32.47	21.18	16.51	8.14	33.46	4.35
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.37	0.52	5.04	0.05	3.21	0.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.42	0.94	0.10	0.68	0.60
d, Delay for Lane Group [s/veh]	33.84	21.70	21.55	8.19	36.67	4.77
Lane Group LOS	C	C	C	A	D	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	2.23	3.22	16.47	0.70	3.44	4.24
50th-Percentile Queue Length [ft]	55.67	80.56	411.72	17.53	86.06	106.05
95th-Percentile Queue Length [veh]	4.01	5.80	23.12	1.26	6.20	7.62
95th-Percentile Queue Length [ft]	100.20	145.01	578.11	31.55	154.91	190.49

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.84	21.70	21.55	8.19	36.67	4.77
Movement LOS	C	C	C	A	D	A
d_A, Approach Delay [s/veh]	25.96		20.41		10.16	
Approach LOS	C		C		B	
d_I, Intersection Delay [s/veh]	16.89					
Intersection LOS	B					
Intersection V/C	0.749					

Sequence

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

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Two-way stop	Delay (sec / veh):	39.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.341

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	82	844	951	13	50	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	844	951	13	50	56
Peak Hour Factor	0.9350	0.9350	0.9350	0.9350	0.9350	0.9350
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	226	254	3	13	15
Total Analysis Volume [veh/h]	88	903	1017	14	53	60
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		1	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		1	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.01	0.01	0.00	0.34	0.21
d_M, Delay for Movement [s/veh]	11.14	0.00	0.00	0.00	39.67	20.92
Movement LOS	B	A	A	A	E	C
95th-Percentile Queue Length [veh]	0.45	0.00	0.00	0.00	1.40	0.78
95th-Percentile Queue Length [ft]	11.20	0.00	0.00	0.00	34.96	19.40
d_A, Approach Delay [s/veh]	0.99		0.00		29.71	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	2.03					
Intersection LOS	E					

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Scenario 1: 1: PM Existing

Intersection Level Of Service Report
Intersection 18: SR 116/Lynch Rd

Control Type:	Signalized	Delay (sec / veh):	13.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.715

Intersection Setup

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Pocket Length [ft]	130.00	100.00	100.00	90.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Base Volume Input [veh/h]	66	840	3	12	924	63	47	0	66	3	1	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	840	3	12	924	63	47	0	66	3	1	6
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	228	1	3	251	17	13	0	18	1	0	2
Total Analysis Volume [veh/h]	72	913	3	13	1004	68	51	0	72	3	1	7
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	84	0	23	96	0	0	13	0	0	13	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Scenario 1: 1: PM Existing

Lane Group Calculations

Lane Group	L	C	L	C	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	40	1	37	7	7	7
g / C, Green / Cycle	0.06	0.67	0.02	0.62	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.49	0.01	0.58	0.09	0.00	0.00
s, saturation flow rate [veh/h]	1774	1862	1774	1842	1331	1163	1583
c, Capacity [veh/h]	104	1241	29	1150	239	240	182
d1, Uniform Delay [s]	27.46	6.50	28.99	10.04	25.90	23.34	23.39
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.84	0.88	10.33	4.09	1.72	0.03	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.69	0.74	0.45	0.93	0.52	0.02	0.04
d, Delay for Lane Group [s/veh]	35.30	7.38	39.32	14.13	27.62	23.37	23.48
Lane Group LOS	D	A	D	B	C	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.18	5.03	0.26	9.82	1.71	0.05	0.09
50th-Percentile Queue Length [ft]	29.41	125.65	6.46	245.45	42.82	1.22	2.17
95th-Percentile Queue Length [veh]	2.12	8.70	0.47	14.96	3.08	0.09	0.16
95th-Percentile Queue Length [ft]	52.94	217.57	11.63	373.92	77.07	2.20	3.90

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.30	7.38	7.38	39.32	14.13	14.13	27.62	27.62	27.62	23.37	23.37	23.48
Movement LOS	D	A	A	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	9.41			14.43			27.62			23.44		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	12.97											
Intersection LOS	B											
Intersection V/C	0.715											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan Update W-Trans
Scenario 1: 1: PM Existing

Intersection Level Of Service Report
Intersection 1: SR 116/Mill Station Rd

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.530

Intersection Setup

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	50.00	100.00	100.00	50.00	100.00	100.00	70.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Base Volume Input [veh/h]	36	383	1	7	517	131	164	7	95	1	1	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	58	51	9	74	4	16	0	2	10	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	441	52	16	591	135	180	7	97	11	1	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	110	13	4	148	34	45	2	24	3	0	1
Total Analysis Volume [veh/h]	36	441	52	16	591	135	180	7	97	11	1	5
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	33	80	0	9	56	0	0	17	0	0	14	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	21	1	20	5	5	0	0
g / C, Green / Cycle	0.04	0.48	0.02	0.46	0.12	0.12	0.01	0.01
(v / s)_i Volume / Saturation Flow Rate	0.02	0.27	0.01	0.40	0.10	0.07	0.01	0.00
s, saturation flow rate [veh/h]	1774	1829	1774	1804	1774	1599	1774	1624
c, Capacity [veh/h]	73	882	36	832	208	187	14	13
d1, Uniform Delay [s]	20.18	7.89	20.81	10.43	18.65	17.92	21.28	21.23
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.09	0.56	8.15	3.03	10.34	2.56	56.10	22.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.56	0.44	0.87	0.87	0.56	0.76	0.45
d, Delay for Lane Group [s/veh]	25.27	8.45	28.96	13.47	28.99	20.48	77.38	43.53
Lane Group LOS	C	A	C	B	C	C	E	D
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.42	2.36	0.22	5.00	2.13	0.98	0.32	0.14
50th-Percentile Queue Length [ft]	10.42	58.92	5.60	124.88	53.16	24.56	8.11	3.40
95th-Percentile Queue Length [veh]	0.75	4.24	0.40	8.66	3.83	1.77	0.58	0.24
95th-Percentile Queue Length [ft]	18.75	106.06	10.08	216.52	95.70	44.21	14.59	6.11

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.27	8.45	8.45	28.96	13.47	13.47	28.99	20.48	20.48	77.38	43.53	43.53
Movement LOS	C	A	A	C	B	B	C	C	C	E	D	D
d_A, Approach Delay [s/veh]	9.60			13.80			25.88			65.43		
Approach LOS	A			B			C			E		
d_I, Intersection Delay [s/veh]	15.13											
Intersection LOS	B											
Intersection V/C	0.530											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: SR 116/Hurlbut Ave

Control Type:	Signalized	Delay (sec / veh):	11.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.455

Intersection Setup

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	110.00	100.00	100.00	80.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Base Volume Input [veh/h]	40	395	35	5	563	18	13	5	37	37	10	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	167	0	2	104	0	0	0	0	0	0	5
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	562	35	7	667	18	13	5	37	37	10	24
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	141	9	2	167	5	3	1	9	9	3	6
Total Analysis Volume [veh/h]	40	562	35	7	667	18	13	5	37	37	10	24
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	37	86	0	10	59	0	0	9	0	0	15	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	18	18	0	17	17	2	3
g / C, Green / Cycle	0.05	0.46	0.46	0.01	0.42	0.42	0.06	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.16	0.16	0.00	0.36	0.01	0.03	0.04
s, saturation flow rate [veh/h]	1774	1863	1825	1774	1863	1583	1648	1716
c, Capacity [veh/h]	81	853	836	17	786	668	96	119
d1, Uniform Delay [s]	18.41	6.92	6.92	19.45	10.27	6.67	18.13	17.85
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.63	0.25	0.25	15.40	2.66	0.02	5.36	4.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.35	0.35	0.41	0.85	0.03	0.58	0.60
d, Delay for Lane Group [s/veh]	23.03	7.17	7.17	34.85	12.94	6.69	23.49	22.59
Lane Group LOS	C	A	A	C	B	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh]	0.41	1.16	1.14	0.13	4.16	0.07	0.56	0.70
50th-Percentile Queue Length [ft]	10.33	28.89	28.41	3.20	104.03	1.64	14.12	17.43
95th-Percentile Queue Length [veh]	0.74	2.08	2.05	0.23	7.49	0.12	1.02	1.26
95th-Percentile Queue Length [ft]	18.60	52.00	51.14	5.77	187.25	2.96	25.42	31.38

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.03	7.17	7.17	34.85	12.94	6.69	23.49	23.49	23.49	22.59	22.59	22.59
Movement LOS	C	A	A	C	B	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.17			12.99			23.49			22.59		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	11.75											
Intersection LOS	B											
Intersection V/C	0.455											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Two-way stop	Delay (sec / veh):	38.7
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	88	217	567	85	153	389
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	11	96	8	2	142
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	228	663	93	155	531
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	57	166	23	39	133
Total Analysis Volume [veh/h]	113	228	663	93	155	531
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.52	0.53	0.01	0.00	0.18	0.01
d_M, Delay for Movement [s/veh]	38.71	22.12	0.00	0.00	10.14	0.00
Movement LOS	E	C	A	A	B	A
95th-Percentile Queue Length [veh]	2.72	2.98	0.00	0.00	0.66	0.00
95th-Percentile Queue Length [ft]	68.09	74.46	0.00	0.00	16.49	0.00
d_A, Approach Delay [s/veh]	27.62		0.00		2.29	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	6.16					
Intersection LOS	E					

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Two-way stop	Delay (sec / veh):	30.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.178

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	35	106	743	51	20	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	5	104	3	2	134
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	111	847	54	22	645
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	28	212	14	6	161
Total Analysis Volume [veh/h]	45	111	847	54	22	645
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.18	0.32	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	30.02	26.08	0.00	0.00	9.92	0.00
Movement LOS	D	D	A	A	A	A
95th-Percentile Queue Length [veh]	2.61	2.61	0.00	0.00	0.09	0.00
95th-Percentile Queue Length [ft]	65.27	65.27	0.00	0.00	2.25	0.00
d_A, Approach Delay [s/veh]	27.22		0.00		0.33	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	2.59					
Intersection LOS	D					

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Intersection Level Of Service Report
Intersection 5: SR 116/Florence Ave

Control Type:	Two-way stop	Delay (sec / veh):	22.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.122

Intersection Setup

Name	Florence Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

volumes

Name	Florence Ave		SR 116		SR 116	
Base Volume Input [veh/h]	19	44	865	18	26	507
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	4	109	2	1	128
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	48	974	20	27	635
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	12	244	5	7	159
Total Analysis Volume [veh/h]	28	48	974	20	27	635
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.16	0.01	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	22.93	19.19	0.00	0.00	10.38	0.00
Movement LOS	C	C	A	A	B	A
95th-Percentile Queue Length [veh]	0.41	0.56	0.00	0.00	0.12	0.00
95th-Percentile Queue Length [ft]	10.30	13.96	0.00	0.00	3.02	0.00
d_A, Approach Delay [s/veh]	20.57		0.00		0.42	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.06					
Intersection LOS	C					

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Intersection Level Of Service Report
Intersection 6: N Main St/SR 116

Control Type:	Signalized	Delay (sec / veh):	11.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

Intersection Setup

Name	N Main St		SR 116		SR 116	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	0	0	1
Pocket Length [ft]	50.00	100.00	80.00	100.00	100.00	130.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	N Main St		SR 116		SR 116	
Base Volume Input [veh/h]	211	143	200	636	383	205
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	2	5	125	154	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	226	145	205	761	537	216
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	36	51	190	134	54
Total Analysis Volume [veh/h]	226	145	205	761	537	216
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	4	0	1	6	2	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	100	0	100	100	100	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	30	0	28	90	62	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	1	0	0	1	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	R	L	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	6	24	14	14
g / C, Green / Cycle	0.16	0.16	0.16	0.63	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.13	0.09	0.12	0.41	0.29	0.14
s, saturation flow rate [veh/h]	1774	1583	1774	1863	1863	1583
c, Capacity [veh/h]	282	251	279	1171	681	579
d1, Uniform Delay [s]	15.27	14.67	15.12	4.39	10.65	8.78
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.30	2.09	3.75	0.61	2.09	0.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.58	0.74	0.65	0.79	0.37
d, Delay for Lane Group [s/veh]	20.57	16.76	18.88	5.00	12.74	9.18
Lane Group LOS	C	B	B	A	B	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	1.94	1.09	1.66	1.47	3.21	1.00
50th-Percentile Queue Length [ft]	48.51	27.15	41.49	36.76	80.30	24.95
95th-Percentile Queue Length [veh]	3.49	1.95	2.99	2.65	5.78	1.80
95th-Percentile Queue Length [ft]	87.32	48.87	74.68	66.17	144.53	44.92

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	20.57	16.76	18.88	5.00	12.74	9.18
Movement LOS	C	B	B	A	B	A
d_A, Approach Delay [s/veh]	19.08		7.94		11.72	
Approach LOS	B		A		B	
d_I, Intersection Delay [s/veh]	11.28					
Intersection LOS	B					
Intersection V/C	0.536					

Sequence

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

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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	129	669	0	0	0	864
Future Volume (vph)	129	669	0	0	0	864
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0				4.0
Lane Util. Factor	1.00	1.00				0.95
Frt	1.00	0.85				1.00
Flt Protected	0.95	1.00				1.00
Satd. Flow (prot)	1770	1583				3539
Flt Permitted	0.95	1.00				1.00
Satd. Flow (perm)	1770	1583				3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	129	669	0	0	0	864
RTOR Reduction (vph)	73	0	0	0	0	0
Lane Group Flow (vph)	56	669	0	0	0	864
Turn Type	Prot	custom				NA
Protected Phases	8	2 8				6
Permitted Phases		8				
Actuated Green, G (s)	18.2	32.9				27.5
Effective Green, g (s)	18.2	32.9				27.5
Actuated g/C Ratio	0.34	0.61				0.51
Clearance Time (s)	4.0					4.0
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	599	969				1812
v/s Ratio Prot	0.03	c0.42				c0.24
v/s Ratio Perm						
v/c Ratio	0.09	0.69				0.48
Uniform Delay, d1	12.1	7.0				8.5
Progression Factor	1.00	1.00				1.00
Incremental Delay, d2	0.1	2.1				0.2
Delay (s)	12.2	9.1				8.7
Level of Service	B	A				A
Approach Delay (s)	9.6		0.0			8.7
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	53.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

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Intersection Level Of Service Report
Intersection 8: McKinley St/Laguna Park Wy/Petaluma Ave

Control Type:	Two-way stop	Delay (sec / veh):	18.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.277

Intersection Setup

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			Yes	

volumes

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Base Volume Input [veh/h]	504	54	31	0	0	62	0	0	0	0	44	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	148	49	27	0	0	39	0	0	0	0	16	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	652	103	58	0	0	101	0	0	0	0	60	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	163	26	15	0	0	25	0	0	0	0	15	0
Total Analysis Volume [veh/h]	652	103	58	0	0	101	0	0	0	0	60	1
Pedestrian Volume [ped/h]		26			62			0			20	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.07	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.18	0.00
d_M, Delay for Movement [s/veh]	0.00	7.67	0.00	0.00	0.00	18.60	0.00	0.00	0.00	0.00	18.35	17.79
Movement LOS	A	A	A			C					C	C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	1.11	0.00	0.00	0.00	0.00	0.67	0.67
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	27.77	0.00	0.00	0.00	0.00	16.64	16.64
d_A, Approach Delay [s/veh]	0.97			18.60			0.00			18.34		
Approach LOS	A			C			A			C		
d_I, Intersection Delay [s/veh]	3.88											
Intersection LOS	C											

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Intersection Level Of Service Report
Intersection 9: Morris St/Laguna Park Wy

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name	Morris St		Morris St		Laguna Park Wy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	Morris St		Morris St		Laguna Park Wy	
Base Volume Input [veh/h]	37	180	119	10	15	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	0	0	0	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	180	119	10	15	37
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	45	30	3	4	9
Total Analysis Volume [veh/h]	54	180	119	10	15	37
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.03	0.04
d_M, Delay for Movement [s/veh]	7.57	0.00	0.00	0.00	11.62	9.21
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh]	0.57	0.57	0.00	0.00	0.21	0.21
95th-Percentile Queue Length [ft]	14.30	14.30	0.00	0.00	5.30	5.30
d_A, Approach Delay [s/veh]	1.75		0.00		9.91	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.23					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 10: Bodega Ave/Ragle Rd

Control Type:	Two-way stop	Delay (sec / veh):	48.1
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	70.00	100.00	100.00	60.00	100.00	100.00	60.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	1	5	19	30	6	156	159	454	0	12	324	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	3	0	4	1	53	0	0	43	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	5	19	33	6	160	160	507	0	12	367	55
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	5	8	2	40	40	127	0	3	92	14
Total Analysis Volume [veh/h]	1	5	19	33	6	160	160	507	0	12	367	55
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.04	0.03	0.27	0.04	0.24	0.14	0.01	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	48.10	31.35	12.38	44.67	31.84	12.95	8.68	0.00	0.00	8.44	0.00	0.00
Movement LOS	E	D	B	E	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.26	0.26	0.26	1.01	1.17	1.17	0.49	0.00	0.00	0.03	0.00	0.00
95th-Percentile Queue Length [ft]	6.52	6.52	6.52	25.24	29.25	29.25	12.23	0.00	0.00	0.86	0.00	0.00
d_A, Approach Delay [s/veh]	17.60			18.78			2.08			0.23		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	4.28											
Intersection LOS	E											

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Intersection Level Of Service Report
Intersection 11: Bodega Ave/Pleasant Hill Ave

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

Intersection Setup

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	40.00	100.00	100.00	80.00	100.00	100.00	45.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	32	104	57	76	62	46	63	430	28	42	317	119
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	8	9	4	1	2	11	43	2	4	45	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	112	66	80	63	48	74	473	30	46	362	123
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	28	17	20	16	12	19	118	8	12	91	31
Total Analysis Volume [veh/h]	39	112	66	80	63	48	74	473	30	46	362	123
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	9	0	0	9	0	93	9	0	93	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	C	L	C	L	C	L	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	4	4	3	14	2	13	13
g / C, Green / Cycle	0.16	0.09	0.09	0.07	0.33	0.05	0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.12	0.05	0.06	0.04	0.27	0.03	0.19	0.08
s, saturation flow rate [veh/h]	1753	1774	1731	1774	1843	1774	1863	1583
c, Capacity [veh/h]	290	158	154	122	607	88	578	491
d1, Uniform Delay [s]	17.36	18.97	19.36	19.77	13.51	20.25	12.89	11.26
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.85	2.48	6.15	4.82	2.98	4.72	1.12	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.51	0.72	0.61	0.83	0.52	0.63	0.25
d, Delay for Lane Group [s/veh]	21.21	21.46	25.50	24.58	16.49	24.97	14.01	11.52
Lane Group LOS	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.09	0.79	1.23	0.81	4.12	0.52	2.63	0.76
50th-Percentile Queue Length [ft]	52.35	19.74	30.67	20.22	102.90	13.04	65.75	19.08
95th-Percentile Queue Length [veh]	3.77	1.42	2.21	1.46	7.41	0.94	4.73	1.37
95th-Percentile Queue Length [ft]	94.23	35.53	55.21	36.40	185.22	23.46	118.34	34.35

Sebastopol General Plan W-Trans
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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.21	21.21	21.21	21.46	25.50	25.50	24.58	16.49	16.49	24.97	14.01	11.52
Movement LOS	C	C	C	C	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.21			23.81			17.53			14.38		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	17.75											
Intersection LOS	B											
Intersection V/C	0.487											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report
Intersection 12: Bodega Ave/Dutton Ave/Jewell Ave

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

Intersection Setup

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	114	27	35	41	57	19	6	410	141	40	432	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	11	20	1	8	1	0	68	30	7	39	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	38	55	42	65	20	6	478	171	47	471	53
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	10	14	11	16	5	2	120	43	12	118	13
Total Analysis Volume [veh/h]	129	38	55	42	65	20	6	478	171	47	471	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	0	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	9	0	0	9	0	93	51	0	51	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	C	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
I1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	4	0	19	2	21
g / C, Green / Cycle	0.09	0.09	0.10	0.01	0.42	0.05	0.46
(v / s)_i Volume / Saturation Flow Rate	0.07	0.06	0.07	0.00	0.36	0.03	0.29
s, saturation flow rate [veh/h]	1774	1687	1784	1774	1780	1774	1830
c, Capacity [veh/h]	158	150	172	14	746	88	843
d1, Uniform Delay [s]	20.71	20.33	20.33	22.85	12.29	21.48	9.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.80	4.11	6.00	18.02	3.30	5.00	0.76
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.62	0.74	0.42	0.87	0.54	0.62
d, Delay for Lane Group [s/veh]	30.51	24.44	26.34	40.86	15.58	26.48	10.19
Lane Group LOS	C	C	C	D	B	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.65	1.04	1.48	0.13	5.35	0.57	3.14
50th-Percentile Queue Length [ft]	41.35	25.94	36.93	3.28	133.67	14.27	78.52
95th-Percentile Queue Length [veh]	2.98	1.87	2.66	0.24	9.14	1.03	5.65
95th-Percentile Queue Length [ft]	74.42	46.68	66.47	5.91	228.48	25.69	141.33

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.51	24.44	24.44	26.34	26.34	26.34	40.86	15.58	15.58	26.48	10.19	10.19
Movement LOS	C	C	C	C	C	C	D	B	B	C	B	B
d_A, Approach Delay [s/veh]	27.97			26.34			15.82			11.53		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	16.82											
Intersection LOS	B											
Intersection V/C	0.535											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

HCM Signalized Intersection Capacity Analysis
13: Bodega Ave/Sebastopol Rd & Main St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	438	70	411	518	0	0	0	0	316	604	61
Future Volume (vph)	0	438	70	411	518	0	0	0	0	316	604	61
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	0.95	
Frt		1.00	0.85	1.00	1.00					1.00	0.99	
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1863	1583	1770	1863					1770	3491	
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)		1863	1583	1770	1863					1770	3491	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	438	70	411	518	0	0	0	0	316	604	61
RTOR Reduction (vph)	0	0	3	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	438	67	411	518	0	0	0	0	316	658	0
Turn Type		NA	Perm	Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2							4		
Actuated Green, G (s)		31.1	31.1	24.4	59.5					22.5	22.5	
Effective Green, g (s)		31.1	31.1	24.4	59.5					22.5	22.5	
Actuated g/C Ratio		0.35	0.35	0.27	0.66					0.25	0.25	
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		643	547	479	1231					442	872	
v/s Ratio Prot		c0.24		c0.23	0.28						c0.19	
v/s Ratio Perm			0.04							0.18		
v/c Ratio		0.68	0.12	0.86	0.42					0.71	0.75	
Uniform Delay, d1		25.2	20.1	31.2	7.2					30.8	31.2	
Progression Factor		1.00	1.00	0.60	0.56					1.00	1.00	
Incremental Delay, d2		5.8	0.5	6.7	0.5					5.4	3.7	
Delay (s)		31.0	20.6	25.3	4.4					36.2	34.9	
Level of Service		C	C	C	A					D	C	
Approach Delay (s)		29.5			13.7			0.0			35.4	
Approach LOS		C			B			A			D	

Intersection Summary					
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.76				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	99.8%	ICU Level of Service	F		
Analysis Period (min)	15				

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: Sebastopol Rd & Petaluma Ave

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	626	0	0	781	192	141	541	547	0	0	0
Future Volume (vph)	128	626	0	0	781	192	141	541	547	0	0	0
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			*0.60			0.95	1.00			
Frt	1.00	1.00			0.97			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (prot)	1770	1863			2169			3503	1583			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	1770	1863			2169			3503	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	626	0	0	781	192	141	541	547	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	27	0	0	0
Lane Group Flow (vph)	128	626	0	0	962	0	0	682	520	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	7.0	52.7			41.7			29.3	29.3			
Effective Green, g (s)	7.0	52.7			41.7			29.3	29.3			
Actuated g/C Ratio	0.08	0.59			0.46			0.33	0.33			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	137	1090			1004			1140	515			
v/s Ratio Prot	c0.07	0.34			c0.44							
v/s Ratio Perm								0.19	c0.33			
v/c Ratio	0.93	0.57			0.96			0.60	1.01			
Uniform Delay, d1	41.3	11.6			23.3			25.4	30.4			
Progression Factor	0.96	0.87			1.00			1.00	1.00			
Incremental Delay, d2	46.3	1.6			20.0			0.9	42.1			
Delay (s)	85.9	11.7			43.3			26.3	72.5			
Level of Service	F	B			D			C	E			
Approach Delay (s)		24.3			43.3			46.8			0.0	
Approach LOS		C			D			D			A	

Intersection Summary				
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.97			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	99.8%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
15: Sebastopol Rd & Morris St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	1029	3	1	953	185	3	0	3	71	0	31
Future Volume (vph)	44	1029	3	1	953	185	3	0	3	71	0	31
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	
Frt	1.00	1.00		1.00	1.00	0.85		0.93		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (prot)	1770	1862		1770	1863	1583		1695		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (perm)	1770	1862		1770	1863	1583		1695		1770	1583	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	44	1029	3	1	953	185	3	0	3	71	0	31
RTOR Reduction (vph)	0	0	0	0	0	23	0	6	0	0	0	0
Lane Group Flow (vph)	44	1032	0	1	953	162	0	0	0	71	31	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	0%	2%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6						
Actuated Green, G (s)	4.0	38.4		0.8	35.2	35.2		5.5		22.0	22.0	
Effective Green, g (s)	4.0	38.4		0.8	35.2	35.2		5.5		22.0	22.0	
Actuated g/C Ratio	0.05	0.46		0.01	0.43	0.43		0.07		0.27	0.27	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	85	864		17	792	673		112		470	421	
v/s Ratio Prot	c0.02	c0.55		0.00	0.51			c0.00		c0.04	0.02	
v/s Ratio Perm						0.10						
v/c Ratio	0.52	1.19		0.06	1.20	0.24		0.00		0.15	0.07	
Uniform Delay, d1	38.4	22.2		40.6	23.8	15.2		36.0		23.2	22.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	5.2	98.8		1.5	103.4	0.2		0.0		0.1	0.1	
Delay (s)	43.6	121.0		42.0	127.1	15.4		36.1		23.4	22.8	
Level of Service	D	F		D	F	B		D		C	C	
Approach Delay (s)		117.8			108.9			36.1			23.2	
Approach LOS		F			F			D			C	

Intersection Summary				
HCM 2000 Control Delay	109.1	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	82.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	67.9%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Intersection Level Of Service Report
Intersection 16: SR 12/Llano Rd

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.798

Intersection Setup

Name	Llano Rd		SR 12		SR 12	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	1	0
Pocket Length [ft]	210.00	100.00	100.00	320.00	140.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Llano Rd		SR 12		SR 12	
Base Volume Input [veh/h]	102	303	917	99	165	881
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	107	0	0	129
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	102	303	1024	99	165	1010
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	76	256	25	41	253
Total Analysis Volume [veh/h]	102	303	1024	99	165	1010
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Version 4.00-00

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Overlap	Permissive	Permissive	Protected	Permissive
Signal group	4	1	2	0	1	6
Auxiliary Signal Groups		1,4				
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	100	100	100	0	100	100
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	9	9	102	0	9	111
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	1	0	1	0	0	1
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Lane Group Calculations

Lane Group	L	R	C	R	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	51	78	78	24	106
g / C, Green / Cycle	0.17	0.37	0.57	0.57	0.17	0.77
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.55	0.06	0.09	0.54
s, saturation flow rate [veh/h]	1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]	304	590	1060	901	306	1435
d1, Uniform Delay [s]	50.07	33.42	28.36	13.62	51.89	7.91
k, delay calibration	0.11	0.11	0.30	0.11	0.11	0.29
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.64	0.69	14.68	0.05	1.48	1.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.51	0.97	0.11	0.54	0.70
d, Delay for Lane Group [s/veh]	50.72	34.12	43.05	13.68	53.37	9.61
Lane Group LOS	D	C	D	B	D	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	3.16	8.00	35.17	1.45	5.34	13.64
50th-Percentile Queue Length [ft]	79.09	199.92	879.13	36.14	133.60	340.88
95th-Percentile Queue Length [veh]	5.69	12.63	44.89	2.60	9.14	19.69
95th-Percentile Queue Length [ft]	142.36	315.87	1122.26	65.05	228.38	492.27

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.72	34.12	43.05	13.68	53.37	9.61
Movement LOS	D	C	D	B	D	A
d_A, Approach Delay [s/veh]	38.30		40.46		15.75	
Approach LOS	D		D		B	
d_I, Intersection Delay [s/veh]	29.40					
Intersection LOS	C					
Intersection V/C	0.798					

Sequence

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

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Two-way stop	Delay (sec / veh):	26.0
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	23	967	721	7	3	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	168	124	1	1	7
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1135	845	8	4	42
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	284	211	2	1	11
Total Analysis Volume [veh/h]	30	1135	845	8	4	42
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		1	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		1	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	0.02	0.12
d_M, Delay for Movement [s/veh]	9.76	0.00	0.00	0.00	26.03	16.29
Movement LOS	A	A	A	A	D	C
95th-Percentile Queue Length [veh]	0.12	0.00	0.00	0.00	0.07	0.39
95th-Percentile Queue Length [ft]	2.97	0.00	0.00	0.00	1.75	9.78
d_A, Approach Delay [s/veh]	0.25		0.00		17.14	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.52					
Intersection LOS	D					

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Intersection Level Of Service Report
Intersection 18: SR 116/Lynch Rd

Control Type:	Signalized	Delay (sec / veh):	13.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Pocket Length [ft]	130.00	100.00	100.00	90.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Base Volume Input [veh/h]	57	895	4	5	689	26	86	0	83	2	0	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	105	0	0	107	0	2	0	4	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	1000	4	5	796	26	88	0	87	2	0	11
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	250	1	1	199	7	22	0	22	1	0	3
Total Analysis Volume [veh/h]	59	1000	4	5	796	26	88	0	87	2	0	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	21	9	0	102	90	0	0	9	0	0	9	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Lane Group Calculations

Lane Group	L	C	L	C	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	29	0	27	8	8	8
g / C, Green / Cycle	0.06	0.59	0.01	0.54	0.16	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.03	0.54	0.00	0.44	0.13	0.00	0.01
s, saturation flow rate [veh/h]	1774	1861	1774	1852	1338	1000	1583
c, Capacity [veh/h]	101	1099	12	1002	325	306	256
d1, Uniform Delay [s]	22.94	9.07	24.66	9.46	20.46	17.55	17.64
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.26	3.42	20.30	1.74	1.39	0.01	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.91	0.41	0.82	0.54	0.01	0.04
d, Delay for Lane Group [s/veh]	28.20	12.49	44.96	11.20	21.84	17.56	17.71
Lane Group LOS	C	B	D	B	C	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.77	7.14	0.12	5.63	1.90	0.02	0.10
50th-Percentile Queue Length [ft]	19.21	178.53	3.09	140.85	47.39	0.45	2.53
95th-Percentile Queue Length [veh]	1.38	11.52	0.22	9.53	3.41	0.03	0.18
95th-Percentile Queue Length [ft]	34.58	288.10	5.56	238.16	85.30	0.82	4.55

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.20	12.49	12.49	44.96	11.20	11.20	21.84	21.84	21.84	17.56	17.56	17.71
Movement LOS	C	B	B	D	B	B	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	13.36			11.40			21.84			17.69		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	13.32											
Intersection LOS	B											
Intersection V/C	0.673											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan W-Trans
Scenario 2: 2: AM General Plan Buildout

Intersection Level Of Service Report
Intersection 1: SR 116/Mill Station Rd

Control Type:	Signalized	Delay (sec / veh):	18.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.631

Intersection Setup

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	50.00	100.00	100.00	50.00	100.00	100.00	70.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Base Volume Input [veh/h]	77	605	0	2	581	165	101	1	87	12	5	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	119	23	4	110	11	10	0	1	62	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	724	23	6	691	176	111	1	88	74	5	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	181	6	2	173	44	28	0	22	19	1	9
Total Analysis Volume [veh/h]	79	724	23	6	691	176	111	1	88	74	5	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	32	86	0	9	63	0	0	16	0	0	9	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan Update W-Trans
Scenario 2: 2: PM General Plan Buildout

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	33	0	29	4	4	2	2
g / C, Green / Cycle	0.06	0.58	0.01	0.53	0.08	0.08	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.04	0.40	0.00	0.48	0.06	0.06	0.04	0.03
s, saturation flow rate [veh/h]	1774	1853	1774	1798	1774	1586	1774	1613
c, Capacity [veh/h]	113	1081	14	949	142	127	75	68
d1, Uniform Delay [s]	25.66	8.14	27.60	12.04	25.23	25.06	26.75	26.30
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.65	0.80	18.52	3.93	8.93	6.80	44.17	8.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.69	0.42	0.91	0.78	0.70	0.98	0.60
d, Delay for Lane Group [s/veh]	33.31	8.94	46.12	15.97	34.16	31.86	70.92	34.43
Lane Group LOS	C	A	D	B	C	C	E	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	1.20	4.72	0.15	8.47	1.70	1.31	1.85	0.66
50th-Percentile Queue Length [ft]	30.03	118.03	3.71	211.74	42.49	32.82	46.17	16.44
95th-Percentile Queue Length [veh]	2.16	8.28	0.27	13.24	3.06	2.36	3.32	1.18
95th-Percentile Queue Length [ft]	54.05	207.12	6.68	331.06	76.47	59.07	83.10	29.59

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.31	8.94	8.94	46.12	15.97	15.97	34.16	31.86	31.86	70.92	34.43	34.43
Movement LOS	C	A	A	D	B	B	C	C	C	E	C	C
d_A, Approach Delay [s/veh]	11.27			16.18			33.14			57.91		
Approach LOS	B			B			C			E		
d_I, Intersection Delay [s/veh]	18.23											
Intersection LOS	B											
Intersection V/C	0.631											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan Update W-Trans
Scenario 2: 2: PM General Plan Buildout

Intersection Level Of Service Report
Intersection 2: SR 116/Hurlbut Ave

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.651

Intersection Setup

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	110.00	100.00	100.00	80.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Base Volume Input [veh/h]	87	505	34	13	574	59	84	22	105	32	14	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	184	0	6	248	0	0	0	0	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	689	34	19	822	59	84	22	105	32	14	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	172	9	5	206	15	21	6	26	8	4	4
Total Analysis Volume [veh/h]	87	689	34	19	822	59	84	22	105	32	14	16
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	77	0	9	74	0	0	24	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	34	34	1	31	31	10	3
g / C, Green / Cycle	0.07	0.52	0.52	0.02	0.48	0.48	0.16	0.05
(v / s)_i Volume / Saturation Flow Rate	0.05	0.20	0.20	0.01	0.44	0.04	0.13	0.04
s, saturation flow rate [veh/h]	1774	1863	1832	1774	1863	1583	1682	1739
c, Capacity [veh/h]	116	977	961	40	897	762	264	90
d1, Uniform Delay [s]	30.10	9.21	9.21	31.65	15.76	9.15	26.62	30.55
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.28	0.24	0.24	8.60	4.27	0.04	5.51	8.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.37	0.37	0.48	0.92	0.08	0.80	0.69
d, Delay for Lane Group [s/veh]	39.38	9.45	9.45	40.25	20.03	9.19	32.13	39.50
Lane Group LOS	D	A	A	D	C	A	C	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh]	1.59	2.67	2.63	0.38	10.69	0.41	3.40	1.15
50th-Percentile Queue Length [ft]	39.72	66.85	65.82	9.52	267.13	10.25	85.10	28.66
95th-Percentile Queue Length [veh]	2.86	4.81	4.74	0.69	16.05	0.74	6.13	2.06
95th-Percentile Queue Length [ft]	71.50	120.33	118.47	17.14	401.15	18.44	153.19	51.58

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.38	9.45	9.45	40.25	20.03	9.19	32.13	32.13	32.13	39.50	39.50	39.50
Movement LOS	D	A	A	D	C	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	12.66			19.75			32.13			39.50		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	18.79											
Intersection LOS	B											
Intersection V/C	0.651											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Two-way stop	Delay (sec / veh):	78.7
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.667

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	71	155	619	130	178	675
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	7	211	37	12	172
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	162	830	167	190	847
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	41	208	42	48	212
Total Analysis Volume [veh/h]	83	162	830	167	190	847
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.67	0.49	0.01	0.00	0.27	0.01
d_M, Delay for Movement [s/veh]	78.67	25.85	0.00	0.00	12.13	0.00
Movement LOS	F	D	A	A	B	A
95th-Percentile Queue Length [veh]	3.56	2.56	0.00	0.00	1.11	0.00
95th-Percentile Queue Length [ft]	89.09	64.06	0.00	0.00	27.78	0.00
d_A, Approach Delay [s/veh]	43.74		0.00		2.22	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	5.71					
Intersection LOS	F					

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Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Two-way stop	Delay (sec / veh):	37.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.211

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	28	57	755	30	45	822
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	5	209	9	8	177
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	62	964	39	53	999
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	16	241	10	13	250
Total Analysis Volume [veh/h]	35	62	964	39	53	999
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.21	0.01	0.00	0.08	0.01
d_M, Delay for Movement [s/veh]	37.26	27.52	0.00	0.00	10.65	0.00
Movement LOS	E	D	A	A	B	A
95th-Percentile Queue Length [veh]	1.92	1.92	0.00	0.00	0.25	0.00
95th-Percentile Queue Length [ft]	48.05	48.05	0.00	0.00	6.22	0.00
d_A, Approach Delay [s/veh]	31.04		0.00		0.54	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	1.66					
Intersection LOS	E					

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Intersection Level Of Service Report
Intersection 5: SR 116/Florence Ave

Control Type:	Two-way stop	Delay (sec / veh):	34.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.290

Intersection Setup

Name	Florence Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

volumes

Name	Florence Ave		SR 116		SR 116	
Base Volume Input [veh/h]	43	39	754	51	34	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	3	208	8	6	182
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	42	962	59	40	1026
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	11	241	15	10	257
Total Analysis Volume [veh/h]	49	42	962	59	40	1026
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.29	0.14	0.01	0.00	0.06	0.01
d_M, Delay for Movement [s/veh]	34.83	19.03	0.00	0.00	10.63	0.00
Movement LOS	D	C	A	A	B	A
95th-Percentile Queue Length [veh]	1.14	0.48	0.00	0.00	0.19	0.00
95th-Percentile Queue Length [ft]	28.51	12.10	0.00	0.00	4.68	0.00
d_A, Approach Delay [s/veh]	27.54		0.00		0.40	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	1.35					
Intersection LOS	D					

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Intersection Level Of Service Report
Intersection 6: N Main St/SR 116

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.638

Intersection Setup

Name	N Main St		SR 116		SR 116	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	0	0	1
Pocket Length [ft]	50.00	100.00	80.00	100.00	100.00	130.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	N Main St		SR 116		SR 116	
Base Volume Input [veh/h]	160	129	87	598	680	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	7	7	249	218	27
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	136	94	847	898	120
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	34	24	212	225	30
Total Analysis Volume [veh/h]	183	136	94	847	898	120
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	4	0	1	6	2	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	100	0	100	100	100	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	22	0	13	98	85	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	1	0	0	1	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	R	L	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	6	4	33	26	26
g / C, Green / Cycle	0.13	0.13	0.08	0.70	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.10	0.09	0.05	0.45	0.48	0.08
s, saturation flow rate [veh/h]	1774	1583	1774	1863	1863	1583
c, Capacity [veh/h]	237	211	133	1301	1005	854
d1, Uniform Delay [s]	19.95	19.57	21.52	3.97	9.75	5.46
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.33	3.26	6.67	0.55	3.05	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.64	0.71	0.65	0.89	0.14
d, Delay for Lane Group [s/veh]	25.28	22.83	28.19	4.52	12.79	5.54
Lane Group LOS	C	C	C	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	2.10	1.47	1.17	1.90	6.39	0.43
50th-Percentile Queue Length [ft]	52.43	36.63	29.31	47.55	159.87	10.82
95th-Percentile Queue Length [veh]	3.77	2.64	2.11	3.42	10.54	0.78
95th-Percentile Queue Length [ft]	94.37	65.93	52.76	85.59	263.55	19.48

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.28	22.83	28.19	4.52	12.79	5.54
Movement LOS	C	C	C	A	B	A
d_A, Approach Delay [s/veh]	24.24		6.88		11.94	
Approach LOS	C		A		B	
d_I, Intersection Delay [s/veh]	11.57					
Intersection LOS	B					
Intersection V/C	0.638					

Sequence

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

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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	254	988	0	0	0	1096
Future Volume (vph)	254	988	0	0	0	1096
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0				4.0
Lane Util. Factor	1.00	1.00				0.95
Frt	1.00	0.85				1.00
Flt Protected	0.95	1.00				1.00
Satd. Flow (prot)	1770	1583				3539
Flt Permitted	0.95	1.00				1.00
Satd. Flow (perm)	1770	1583				3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	254	988	0	0	0	1096
RTOR Reduction (vph)	36	0	0	0	0	0
Lane Group Flow (vph)	218	988	0	0	0	1096
Turn Type	Prot	custom				NA
Protected Phases	8	2 8				6
Permitted Phases		8				
Actuated Green, G (s)	22.2	36.4				27.9
Effective Green, g (s)	22.2	36.4				27.9
Actuated g/C Ratio	0.38	0.63				0.48
Clearance Time (s)	4.0					4.0
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	676	991				1699
v/s Ratio Prot	0.12	c0.62				c0.31
v/s Ratio Perm						
v/c Ratio	0.32	1.00				0.65
Uniform Delay, d1	12.7	10.8				11.4
Progression Factor	1.00	1.00				1.00
Incremental Delay, d2	0.3	27.6				0.9
Delay (s)	12.9	38.4				12.2
Level of Service	B	D				B
Approach Delay (s)	33.2		0.0			12.2
Approach LOS	C		A			B

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	58.1	Sum of lost time (s)	11.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

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Intersection Level Of Service Report
Intersection 8: McKinley St/Laguna Park Wy/Petaluma Ave

Control Type:	Two-way stop	Delay (sec / veh):	51.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

Intersection Setup

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

volumes

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Base Volume Input [veh/h]	733	58	26	0	0	106	0	0	0	0	61	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	204	70	30	0	0	75	0	0	0	0	36	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	937	128	56	0	0	181	0	0	0	0	97	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	234	32	14	0	0	45	0	0	0	0	24	1
Total Analysis Volume [veh/h]	937	128	56	0	0	181	0	0	0	0	97	2
Pedestrian Volume [ped/h]	26			62			0			20		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.09	0.00	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.44	0.01
d_M, Delay for Movement [s/veh]	0.00	7.72	0.00	0.00	0.00	51.84	0.00	0.00	0.00	0.00	33.82	32.89
Movement LOS	A	A	A			F					D	D
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	5.13	0.00	0.00	0.00	0.00	2.13	2.13
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	128.27	0.00	0.00	0.00	0.00	53.29	53.29
d_A, Approach Delay [s/veh]	0.88			51.84			0.00			33.81		
Approach LOS	A			F			A			D		
d_I, Intersection Delay [s/veh]	9.79											
Intersection LOS	F											

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Intersection Level Of Service Report
Intersection 9: Morris St/Laguna Park Wy

Control Type:	Two-way stop	Delay (sec / veh):	11.8
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name	Morris St		Morris St		Laguna Park Wy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	Morris St		Morris St		Laguna Park Wy	
Base Volume Input [veh/h]	56	106	130	19	17	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	24	0	0	0	0	23
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	106	130	19	17	55
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	27	33	5	4	14
Total Analysis Volume [veh/h]	80	106	130	19	17	55
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.03	0.06
d_M, Delay for Movement [s/veh]	7.66	0.00	0.00	0.00	11.82	9.41
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh]	0.45	0.45	0.00	0.00	0.30	0.30
95th-Percentile Queue Length [ft]	11.16	11.16	0.00	0.00	7.45	7.45
d_A, Approach Delay [s/veh]	3.30		0.00		9.98	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.27					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 10: Bodega Ave/Ragle Rd

Control Type:	Two-way stop	Delay (sec / veh):	34.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	70.00	100.00	100.00	60.00	100.00	100.00	60.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	0	0	10	35	5	132	70	312	2	29	368	61
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	2	4	76	0	0	89	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	10	40	5	134	74	388	2	29	457	70
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	3	10	1	34	19	97	1	7	114	18
Total Analysis Volume [veh/h]	0	0	10	40	5	134	74	388	2	29	457	70
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.23	0.03	0.23	0.07	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	34.80	24.39	10.54	31.48	25.74	13.55	8.73	0.00	0.00	8.16	0.00	0.00
Movement LOS	D	C	B	D	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.05	0.05	0.05	0.84	1.02	1.02	0.23	0.00	0.00	0.08	0.00	0.00
95th-Percentile Queue Length [ft]	1.15	1.15	1.15	21.10	25.55	25.55	5.73	0.00	0.00	1.91	0.00	0.00
d_A, Approach Delay [s/veh]	10.54			17.89			1.39			0.43		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	3.47											
Intersection LOS	D											

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Intersection Level Of Service Report
Intersection 11: Bodega Ave/Pleasant Hill Ave

Control Type:	Signalized	Delay (sec / veh):	17.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.468

Intersection Setup

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	40.00	100.00	100.00	80.00	100.00	100.00	45.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	42	76	44	54	73	40	37	346	36	54	360	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	4	6	11	10	14	5	70	6	10	75	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	51	80	50	65	83	54	42	416	42	64	435	85
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	20	13	16	21	14	11	104	11	16	109	21
Total Analysis Volume [veh/h]	51	80	50	65	83	54	42	416	42	64	435	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	22	0	10	59	0	12	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	C	L	C	L	C	L	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	5	5	2	13	3	14	14
g / C, Green / Cycle	0.14	0.11	0.11	0.05	0.31	0.06	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.10	0.04	0.08	0.02	0.25	0.04	0.23	0.05
s, saturation flow rate [veh/h]	1753	1774	1742	1774	1833	1774	1863	1583
c, Capacity [veh/h]	246	194	191	83	563	112	603	513
d1, Uniform Delay [s]	17.37	17.34	18.13	19.61	13.48	19.18	12.57	10.18
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.28	1.00	5.00	4.70	2.90	4.47	1.64	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.33	0.72	0.51	0.81	0.57	0.72	0.17
d, Delay for Lane Group [s/veh]	21.65	18.35	23.14	24.31	16.38	23.64	14.21	10.33
Lane Group LOS	C	B	C	C	B	C	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.73	0.56	1.38	0.46	3.63	0.67	3.11	0.47
50th-Percentile Queue Length [ft]	43.34	14.00	34.50	11.55	90.65	16.82	77.85	11.77
95th-Percentile Queue Length [veh]	3.12	1.01	2.48	0.83	6.53	1.21	5.61	0.85
95th-Percentile Queue Length [ft]	78.02	25.20	62.10	20.80	163.17	30.27	140.13	21.18

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.65	21.65	21.65	18.35	23.14	23.14	24.31	16.38	16.38	23.64	14.21	10.33
Movement LOS	C	C	C	B	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.65			21.60			17.05			14.68		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	17.30											
Intersection LOS	B											
Intersection V/C	0.468											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report
Intersection 12: Bodega Ave/Dutton Ave/Jewell Ave

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.459

Intersection Setup

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	82	33	43	14	18	1	5	389	84	55	563	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	12	18	3	15	1	1	69	30	23	102	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	45	61	17	33	2	6	458	114	78	665	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	11	15	4	8	1	2	115	29	20	166	3
Total Analysis Volume [veh/h]	105	45	61	17	33	2	6	458	114	78	665	12
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Sebastopol General Plan Update W-Trans
Scenario 2: 2: PM General Plan Buildout

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	0	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	12	0	0	15	0	10	45	0	48	83	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	C	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	3	2	0	15	3	18
g / C, Green / Cycle	0.09	0.09	0.06	0.01	0.38	0.07	0.44
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.03	0.00	0.32	0.04	0.36
s, saturation flow rate [veh/h]	1774	1691	1821	1774	1799	1774	1857
c, Capacity [veh/h]	156	149	102	15	685	130	828
d1, Uniform Delay [s]	17.59	17.65	18.25	19.63	11.19	17.86	9.61
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.97	6.21	3.95	17.38	2.77	4.33	2.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.67	0.71	0.51	0.41	0.84	0.60	0.82
d, Delay for Lane Group [s/veh]	22.56	23.86	22.21	37.01	13.96	22.19	11.67
Lane Group LOS	C	C	C	D	B	C	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.01	1.07	0.51	0.12	3.83	0.75	3.91
50th-Percentile Queue Length [ft]	25.37	26.65	12.84	2.97	95.87	18.85	97.76
95th-Percentile Queue Length [veh]	1.83	1.92	0.92	0.21	6.90	1.36	7.04
95th-Percentile Queue Length [ft]	45.66	47.97	23.12	5.35	172.57	33.93	175.97

Sebastopol General Plan Update W-Trans
Scenario 2: 2: PM General Plan Buildout

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.56	23.86	23.86	22.21	22.21	22.21	37.01	13.96	13.96	22.19	11.67	11.67
Movement LOS	C	C	C	C	C	C	D	B	B	C	B	B
d_A, Approach Delay [s/veh]	23.21			22.21			14.20			12.75		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	14.97											
Intersection LOS	B											
Intersection V/C	0.459											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

HCM Signalized Intersection Capacity Analysis
13: Bodega Ave/Sebastopol Rd & Main St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	390	87	515	614	0	0	0	0	373	831	134
Future Volume (vph)	0	390	87	515	614	0	0	0	0	373	831	134
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	0.95	
Frt		1.00	0.85	1.00	1.00					1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1863	1583	1770	1863					1770	3465	
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)		1863	1583	1770	1863					1770	3465	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	390	87	515	614	0	0	0	0	373	831	134
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	390	87	515	614	0	0	0	0	373	965	0
Turn Type		NA	Perm	Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2							4		
Actuated Green, G (s)		22.7	22.7	27.6	54.3					27.7	27.7	
Effective Green, g (s)		22.7	22.7	27.6	54.3					27.7	27.7	
Actuated g/C Ratio		0.25	0.25	0.31	0.60					0.31	0.31	
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		469	399	542	1124					544	1066	
v/s Ratio Prot		c0.21		c0.29	0.33						c0.28	
v/s Ratio Perm			0.05							0.21		
v/c Ratio		0.83	0.22	0.95	0.55					0.69	0.91	
Uniform Delay, d1		31.8	26.6	30.5	10.6					27.3	29.9	
Progression Factor		1.00	1.00	0.62	0.61					1.00	1.00	
Incremental Delay, d2		15.7	1.3	4.4	0.2					3.6	10.8	
Delay (s)		47.5	27.9	23.2	6.6					30.9	40.7	
Level of Service		D	C	C	A					C	D	
Approach Delay (s)		44.0			14.2			0.0			38.0	
Approach LOS		D			B			A			D	

Intersection Summary					
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.90				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	109.3%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: Sebastopol Rd & Petaluma Ave

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	619	0	0	901	279	200	713	491	0	0	0
Future Volume (vph)	162	619	0	0	901	279	200	713	491	0	0	0
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			*0.60			0.95	1.00			
Frpb, ped/bikes	1.00	1.00			1.00			1.00	0.95			
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			0.99	1.00			
Satd. Flow (prot)	1770	1863			2156			3488	1510			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	1770	1863			2156			3488	1510			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	162	619	0	0	901	279	200	713	491	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	0	36	0	0	0
Lane Group Flow (vph)	162	619	0	0	1170	0	0	913	455	0	0	0
Confl. Peds. (#/hr)							15		15			
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	8.0	57.0			45.0			25.0	25.0			
Effective Green, g (s)	8.0	57.0			45.0			25.0	25.0			
Actuated g/C Ratio	0.09	0.63			0.50			0.28	0.28			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	157	1179			1078			968	419			
v/s Ratio Prot	c0.09	0.33			c0.54							
v/s Ratio Perm								0.26	c0.30			
v/c Ratio	1.03	0.53			1.09			0.94	1.09			
Uniform Delay, d1	41.0	9.1			22.5			31.8	32.5			
Progression Factor	1.00	0.50			1.00			1.00	1.00			
Incremental Delay, d2	66.8	1.1			53.6			16.8	69.0			
Delay (s)	107.9	5.6			76.1			48.6	101.5			
Level of Service	F	A			E			D	F			
Approach Delay (s)		26.8			76.1			67.1			0.0	
Approach LOS		C			E			E			A	

Intersection Summary				
HCM 2000 Control Delay	60.9	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.08			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	109.3%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Signalized Intersection Capacity Analysis
15: Sebastopol Rd & Morris St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1013	5	3	972	143	4	5	5	159	3	65
Future Volume (vph)	42	1013	5	3	972	143	4	5	5	159	3	65
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	
Frt	1.00	1.00		1.00	1.00	0.85		0.95		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)	1770	1861		1770	1863	1583		1748		1770	1596	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (perm)	1770	1861		1770	1863	1583		1748		1770	1596	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	1013	5	3	972	143	4	5	5	159	3	65
RTOR Reduction (vph)	0	0	0	0	0	11	0	5	0	0	0	0
Lane Group Flow (vph)	42	1018	0	3	972	132	0	9	0	159	68	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6						
Actuated Green, G (s)	4.0	46.4		0.8	43.2	43.2		6.1		22.0	22.0	
Effective Green, g (s)	4.0	46.4		0.8	43.2	43.2		6.1		22.0	22.0	
Actuated g/C Ratio	0.04	0.51		0.01	0.47	0.47		0.07		0.24	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	77	945		15	881	749		116		426	384	
v/s Ratio Prot	c0.02	c0.55		0.00	0.52			c0.01		c0.09	0.04	
v/s Ratio Perm						0.08						
v/c Ratio	0.55	1.08		0.20	1.10	0.18		0.08		0.37	0.18	
Uniform Delay, d1	42.8	22.4		44.9	24.0	13.8		40.0		28.9	27.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	7.7	52.4		6.5	62.7	0.1		0.3		0.6	0.2	
Delay (s)	50.4	74.8		51.4	86.7	13.9		40.3		29.5	27.7	
Level of Service	D	E		D	F	B		D		C	C	
Approach Delay (s)		73.9			77.3			40.3			28.9	
Approach LOS		E			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	71.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	91.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	75.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Intersection Level Of Service Report
Intersection 16: SR 12/Llano Rd

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.839

Intersection Setup

Name	Llano Rd		SR 12		SR 12	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	1	0
Pocket Length [ft]	210.00	100.00	100.00	320.00	140.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Llano Rd		SR 12		SR 12	
Base Volume Input [veh/h]	114	211	957	89	167	820
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	218	0	0	183
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	211	1175	89	167	1003
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	53	294	22	42	251
Total Analysis Volume [veh/h]	114	211	1175	89	167	1003
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Version 4.00-00

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Overlap	Permissive	Permissive	Protected	Permissive
Signal group	4	1	2	0	1	6
Auxiliary Signal Groups		1,4				
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	100	100	100	0	100	100
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	14	11	95	0	11	106
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	1	0	1	0	0	1
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	R	C	R	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	17	39	87	87	18	109
g / C, Green / Cycle	0.13	0.29	0.65	0.65	0.13	0.81
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.63	0.06	0.09	0.54
s, saturation flow rate [veh/h]	1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]	231	462	1209	1027	233	1509
d1, Uniform Delay [s]	54.20	38.84	22.40	8.76	55.87	5.25
k, delay calibration	0.11	0.11	0.37	0.11	0.11	0.27
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.62	0.71	16.48	0.04	4.09	1.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.46	0.97	0.09	0.72	0.66
d, Delay for Lane Group [s/veh]	55.82	39.54	38.88	8.80	59.96	6.52
Lane Group LOS	E	D	D	A	E	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	3.70	5.81	37.96	0.97	5.69	9.64
50th-Percentile Queue Length [ft]	92.42	145.23	949.10	24.28	142.37	241.02
95th-Percentile Queue Length [veh]	6.65	9.76	48.07	1.75	9.61	14.73
95th-Percentile Queue Length [ft]	166.36	244.05	1201.72	43.71	240.21	368.33

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.82	39.54	38.88	8.80	59.96	6.52
Movement LOS	E	D	D	A	E	A
d_A, Approach Delay [s/veh]	45.26		36.76		14.15	
Approach LOS	D		D		B	
d_I, Intersection Delay [s/veh]	28.17					
Intersection LOS	C					
Intersection V/C	0.839					

Sequence

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

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Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Two-way stop	Delay (sec / veh):	60.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.456

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	82	844	951	13	50	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	226	265	3	2	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	1070	1216	16	52	64
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	268	304	4	13	16
Total Analysis Volume [veh/h]	97	1070	1216	16	52	64
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane						
Storage Area [veh]	0		0		1	
Two-Stage Gap Acceptance					Yes	
Number of Storage Spaces in Median	0		0		1	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.01	0.01	0.00	0.46	0.29
d_M, Delay for Movement [s/veh]	12.68	0.00	0.00	0.00	60.64	28.18
Movement LOS	B	A	A	A	F	D
95th-Percentile Queue Length [veh]	0.61	0.00	0.00	0.00	2.00	1.17
95th-Percentile Queue Length [ft]	15.37	0.00	0.00	0.00	49.97	29.32
d_A, Approach Delay [s/veh]	1.05		0.00		42.73	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	2.46					
Intersection LOS	F					

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Intersection Level Of Service Report
Intersection 18: SR 116/Lynch Rd

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.763

Intersection Setup

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Pocket Length [ft]	130.00	100.00	100.00	90.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Base Volume Input [veh/h]	66	840	3	12	924	63	47	0	66	3	1	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	178	0	0	186	0	1	0	3	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	1018	3	12	1110	63	48	0	69	3	1	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	255	1	3	278	16	12	0	17	1	0	2
Total Analysis Volume [veh/h]	74	1018	3	12	1110	63	48	0	69	3	1	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	84	0	23	96	0	0	13	0	0	13	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	C	L	C	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	51	1	48	8	8	8
g / C, Green / Cycle	0.06	0.71	0.01	0.67	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.04	0.55	0.01	0.64	0.09	0.00	0.00
s, saturation flow rate [veh/h]	1774	1862	1774	1845	1375	1115	1583
c, Capacity [veh/h]	98	1324	26	1238	217	207	168
d1, Uniform Delay [s]	33.31	6.61	34.94	10.65	31.43	28.63	28.68
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.05	0.98	11.66	4.75	2.08	0.04	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.77	0.45	0.95	0.54	0.02	0.04
d, Delay for Lane Group [s/veh]	44.35	7.59	46.60	15.39	33.51	28.67	28.76
Lane Group LOS	D	A	D	B	C	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.53	6.81	0.29	13.39	2.03	0.06	0.09
50th-Percentile Queue Length [ft]	38.15	170.26	7.17	334.86	50.81	1.54	2.34
95th-Percentile Queue Length [veh]	2.75	11.09	0.52	19.40	3.66	0.11	0.17
95th-Percentile Queue Length [ft]	68.67	277.25	12.91	484.91	91.46	2.77	4.20

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.35	7.59	7.59	46.60	15.39	15.39	33.51	33.51	33.51	28.67	28.67	28.76
Movement LOS	D	A	A	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	10.08			15.71			33.51			28.73		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	14.07											
Intersection LOS	B											
Intersection V/C	0.763											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report
Intersection 1: SR 116/Mill Station Rd

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

Intersection Setup

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	50.00	100.00	100.00	50.00	100.00	100.00	70.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Base Volume Input [veh/h]	36	383	1	7	517	131	164	7	95	1	1	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	83	51	9	150	9	33	0	7	10	0	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	466	52	16	667	140	197	7	102	11	1	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	117	13	4	167	35	49	2	26	3	0	1
Total Analysis Volume [veh/h]	39	466	52	16	667	140	197	7	102	11	1	5
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	33	80	0	9	56	0	0	17	0	0	14	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	26	1	25	6	6	0	0
g / C, Green / Cycle	0.04	0.52	0.02	0.50	0.13	0.13	0.01	0.01
(v / s)_i Volume / Saturation Flow Rate	0.02	0.28	0.01	0.45	0.11	0.07	0.01	0.00
s, saturation flow rate [veh/h]	1774	1830	1774	1807	1774	1599	1774	1624
c, Capacity [veh/h]	75	952	36	900	229	207	14	13
d1, Uniform Delay [s]	23.27	7.97	24.04	11.30	21.16	20.19	24.56	24.50
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.48	0.49	8.51	3.49	9.07	2.08	57.40	22.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.54	0.45	0.90	0.86	0.53	0.77	0.46
d, Delay for Lane Group [s/veh]	28.74	8.46	32.55	14.78	30.23	22.27	81.97	47.24
Lane Group LOS	C	A	C	B	C	C	F	D
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	0.52	2.81	0.26	6.74	2.59	1.18	0.35	0.15
50th-Percentile Queue Length [ft]	13.10	70.37	6.39	168.39	64.80	29.57	8.70	3.69
95th-Percentile Queue Length [veh]	0.94	5.07	0.46	10.99	4.67	2.13	0.63	0.27
95th-Percentile Queue Length [ft]	23.58	126.67	11.50	274.79	116.65	53.23	15.66	6.65

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.74	8.46	8.46	32.55	14.78	14.78	30.23	22.27	22.27	81.97	47.24	47.24
Movement LOS	C	A	A	C	B	B	C	C	C	F	D	D
d_A, Approach Delay [s/veh]	9.88			15.13			27.40			69.71		
Approach LOS	A			B			C			E		
d_I, Intersection Delay [s/veh]	16.16											
Intersection LOS	B											
Intersection V/C	0.586											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 2: SR 116/Hurlbut Ave

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.517

Intersection Setup

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	110.00	100.00	100.00	80.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Base Volume Input [veh/h]	40	395	35	5	563	18	13	5	37	37	10	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	207	2	4	203	0	0	0	0	11	1	8
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	602	37	9	766	18	13	5	37	48	11	27
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	151	9	2	192	5	3	1	9	12	3	7
Total Analysis Volume [veh/h]	40	602	37	9	766	18	13	5	37	48	11	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	48	86	0	10	54	0	0	9	0	0	15	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	22	22	1	21	21	2	3
g / C, Green / Cycle	0.04	0.50	0.50	0.01	0.47	0.47	0.06	0.07
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.01	0.41	0.01	0.03	0.05
s, saturation flow rate [veh/h]	1774	1863	1825	1774	1863	1583	1648	1719
c, Capacity [veh/h]	78	932	913	21	872	741	92	127
d1, Uniform Delay [s]	20.90	6.75	6.75	21.94	10.74	6.39	20.62	20.19
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.05	0.22	0.23	12.82	3.04	0.01	6.08	6.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.51	0.35	0.35	0.42	0.88	0.02	0.60	0.68
d, Delay for Lane Group [s/veh]	25.94	6.97	6.98	34.76	13.78	6.41	26.70	26.33
Lane Group LOS	C	A	A	C	B	A	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh]	0.48	1.35	1.33	0.16	5.57	0.07	0.66	1.00
50th-Percentile Queue Length [ft]	11.92	33.73	33.16	4.01	139.19	1.76	16.43	24.88
95th-Percentile Queue Length [veh]	0.86	2.43	2.39	0.29	9.44	0.13	1.18	1.79
95th-Percentile Queue Length [ft]	21.46	60.72	59.68	7.22	235.93	3.16	29.58	44.78

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.94	6.97	6.98	34.76	13.78	6.41	26.70	26.70	26.70	26.33	26.33	26.33
Movement LOS	C	A	A	C	B	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	8.09			13.85			26.70			26.33		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	12.53											
Intersection LOS	B											
Intersection V/C	0.517											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Two-way stop	Delay (sec / veh):	54.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	88	217	567	85	153	389
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	40	204	10	13	178
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	257	771	95	166	567
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	64	193	24	42	142
Total Analysis Volume [veh/h]	119	257	771	95	166	567
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.65	0.68	0.01	0.00	0.21	0.01
d_M, Delay for Movement [s/veh]	54.60	32.96	0.00	0.00	10.88	0.00
Movement LOS	F	D	A	A	B	A
95th-Percentile Queue Length [veh]	3.75	4.89	0.00	0.00	0.81	0.00
95th-Percentile Queue Length [ft]	93.80	122.17	0.00	0.00	20.15	0.00
d_A, Approach Delay [s/veh]	39.81		0.00		2.46	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	8.49					
Intersection LOS	F					

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Two-way stop	Delay (sec / veh):	39.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.206

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	35	106	743	51	20	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	5	239	5	2	181
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	111	982	56	22	692
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	28	246	14	6	173
Total Analysis Volume [veh/h]	45	111	982	56	22	692
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.38	0.01	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	39.02	34.94	0.00	0.00	10.56	0.00
Movement LOS	E	D	A	A	B	A
95th-Percentile Queue Length [veh]	3.41	3.41	0.00	0.00	0.10	0.00
95th-Percentile Queue Length [ft]	85.32	85.32	0.00	0.00	2.54	0.00
d_A, Approach Delay [s/veh]	36.12		0.00		0.33	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	3.07					
Intersection LOS	E					

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 5: SR 116/Florence Ave

Control Type:	Two-way stop	Delay (sec / veh):	27.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.191

Intersection Setup

Name	Florence Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

volumes

Name	Florence Ave		SR 116		SR 116	
Base Volume Input [veh/h]	19	44	865	18	26	507
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	19	9	242	4	1	165
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	53	1107	22	27	672
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	13	277	6	7	168
Total Analysis Volume [veh/h]	38	53	1107	22	27	672
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane						
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.21	0.01	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	27.31	23.06	0.00	0.00	11.08	0.00
Movement LOS	D	C	A	A	B	A
95th-Percentile Queue Length [veh]	0.68	0.78	0.00	0.00	0.14	0.00
95th-Percentile Queue Length [ft]	17.12	19.38	0.00	0.00	3.42	0.00
d_A, Approach Delay [s/veh]	24.83		0.00		0.43	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.33					
Intersection LOS	D					

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Intersection Level Of Service Report
Intersection 6: N Main St/SR 116

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.626

Intersection Setup

Name	N Main St		SR 116		SR 116	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	0	0	1
Pocket Length [ft]	50.00	100.00	80.00	100.00	100.00	130.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	N Main St		SR 116		SR 116	
Base Volume Input [veh/h]	211	143	200	636	383	205
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	35	3	10	271	195	16
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	246	146	210	907	578	221
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	37	53	227	145	55
Total Analysis Volume [veh/h]	246	146	210	907	578	221
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	4	0	1	6	2	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	100	0	100	100	100	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	9	0	102	111	62	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	1	0	0	1	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	R	L	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	7	7	26	16	16
g / C, Green / Cycle	0.17	0.17	0.16	0.64	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.14	0.09	0.12	0.49	0.31	0.14
s, saturation flow rate [veh/h]	1774	1583	1774	1863	1863	1583
c, Capacity [veh/h]	301	268	283	1187	710	604
d1, Uniform Delay [s]	16.56	15.72	16.58	5.31	11.48	9.20
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.47	1.72	3.85	1.05	2.33	0.37
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.54	0.74	0.76	0.81	0.37
d, Delay for Lane Group [s/veh]	22.03	17.43	20.44	6.36	13.82	9.58
Lane Group LOS	C	B	C	A	B	A
Critical Lane Group	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh]	2.35	1.19	1.91	2.60	3.98	1.14
50th-Percentile Queue Length [ft]	58.76	29.86	47.74	64.94	99.60	28.56
95th-Percentile Queue Length [veh]	4.23	2.15	3.44	4.68	7.17	2.06
95th-Percentile Queue Length [ft]	105.77	53.75	85.93	116.89	179.28	51.41

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.03	17.43	20.44	6.36	13.82	9.58
Movement LOS	C	B	C	A	B	A
d_A, Approach Delay [s/veh]	20.32		9.00		12.64	
Approach LOS	C		A		B	
d_I, Intersection Delay [s/veh]	12.19					
Intersection LOS	B					
Intersection V/C	0.626					

Sequence

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

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

HCM Signalized Intersection Capacity Analysis
7: Main St & McKinley St

4/22/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	155	720	0	0	0	1031
Future Volume (vph)	155	720	0	0	0	1031
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0				4.0
Lane Util. Factor	1.00	1.00				0.95
Frt	1.00	0.85				1.00
Flt Protected	0.95	1.00				1.00
Satd. Flow (prot)	1770	1583				3539
Flt Permitted	0.95	1.00				1.00
Satd. Flow (perm)	1770	1583				3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	155	720	0	0	0	1031
RTOR Reduction (vph)	46	0	0	0	0	0
Lane Group Flow (vph)	109	720	0	0	0	1031
Turn Type	Prot	custom				NA
Protected Phases	8	2 8				6
Permitted Phases		8				
Actuated Green, G (s)	18.5	33.8				28.3
Effective Green, g (s)	18.5	33.8				28.3
Actuated g/C Ratio	0.34	0.62				0.52
Clearance Time (s)	4.0					4.0
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	597	976				1827
v/s Ratio Prot	0.06	c0.45				c0.29
v/s Ratio Perm						
v/c Ratio	0.18	0.74				0.56
Uniform Delay, d1	12.8	7.4				9.0
Progression Factor	1.00	1.00				1.00
Incremental Delay, d2	0.1	2.9				0.4
Delay (s)	13.0	10.3				9.4
Level of Service	B	B				A
Approach Delay (s)	10.8		0.0			9.4
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	54.8	Sum of lost time (s)	11.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

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Intersection Level Of Service Report
Intersection 8: McKinley St/Laguna Park Wy/Petaluma Ave

Control Type:	Two-way stop	Delay (sec / veh):	21.0
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.267

Intersection Setup

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			Yes	

volumes

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Base Volume Input [veh/h]	504	54	31	0	0	62	0	0	0	0	44	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	194	50	44	0	0	48	0	0	0	0	38	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	698	104	75	0	0	110	0	0	0	0	82	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	175	26	19	0	0	28	0	0	0	0	21	0
Total Analysis Volume [veh/h]	698	104	75	0	0	110	0	0	0	0	82	1
Pedestrian Volume [ped/h]		26			62			0			20	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.07	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.27	0.00
d_M, Delay for Movement [s/veh]	0.00	7.67	0.00	0.00	0.00	20.62	0.00	0.00	0.00	0.00	21.02	20.41
Movement LOS	A	A	A			C					C	C
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	1.37	0.00	0.00	0.00	0.00	1.07	1.07
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	34.34	0.00	0.00	0.00	0.00	26.77	26.77
d_A, Approach Delay [s/veh]	0.91			20.62			0.00			21.02		
Approach LOS	A			C			A			C		
d_I, Intersection Delay [s/veh]	4.50											
Intersection LOS	C											

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Intersection Level Of Service Report
Intersection 9: Morris St/Laguna Park Wy

Control Type:	Two-way stop	Delay (sec / veh):	11.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.026

Intersection Setup

Name	Morris St		Morris St		Laguna Park Wy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	Morris St		Morris St		Laguna Park Wy	
Base Volume Input [veh/h]	37	180	119	10	15	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	0	0	0	0	14
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	54	180	119	10	15	37
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	45	30	3	4	9
Total Analysis Volume [veh/h]	54	180	119	10	15	37
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.03	0.04
d_M, Delay for Movement [s/veh]	7.57	0.00	0.00	0.00	11.62	9.21
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh]	0.57	0.57	0.00	0.00	0.21	0.21
95th-Percentile Queue Length [ft]	14.30	14.30	0.00	0.00	5.30	5.30
d_A, Approach Delay [s/veh]	1.75		0.00		9.91	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.23					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 10: Bodega Ave/Ragle Rd

Control Type:	Two-way stop	Delay (sec / veh):	57.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.368

Intersection Setup

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	70.00	100.00	100.00	60.00	100.00	100.00	60.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	1	5	19	30	6	156	159	454	0	12	324	44
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	9	0	7	3	104	0	0	67	26
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	5	19	39	6	163	162	558	0	12	391	70
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	5	10	2	41	41	140	0	3	98	18
Total Analysis Volume [veh/h]	1	5	19	39	6	163	162	558	0	12	391	70
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.04	0.04	0.37	0.05	0.26	0.15	0.01	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	56.21	35.40	13.09	57.64	35.57	13.57	8.84	0.00	0.00	8.60	0.00	0.00
Movement LOS	F	E	B	F	E	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.29	0.29	0.29	1.49	1.29	1.29	0.52	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft]	7.37	7.37	7.37	37.15	32.15	32.15	12.90	0.00	0.00	0.90	0.00	0.00
d_A, Approach Delay [s/veh]	19.27			22.47			1.99			0.22		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	4.69											
Intersection LOS	F											

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Intersection Level Of Service Report
Intersection 11: Bodega Ave/Pleasant Hill Ave

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.558

Intersection Setup

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	40.00	100.00	100.00	80.00	100.00	100.00	45.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	32	104	57	76	62	46	63	430	28	42	317	119
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	33	14	34	4	3	2	11	91	11	13	58	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	118	91	80	65	48	74	521	39	55	375	123
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	30	23	20	16	12	19	130	10	14	94	31
Total Analysis Volume [veh/h]	65	118	91	80	65	48	74	521	39	55	375	123
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	9	0	0	9	0	93	12	0	90	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	C	L	C	L	C	L	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	5	5	3	18	3	18	18
g / C, Green / Cycle	0.20	0.09	0.09	0.06	0.35	0.05	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.16	0.05	0.07	0.04	0.30	0.03	0.20	0.08
s, saturation flow rate [veh/h]	1740	1774	1733	1774	1840	1774	1863	1583
c, Capacity [veh/h]	346	160	156	113	648	94	636	541
d1, Uniform Delay [s]	19.90	22.67	23.15	23.92	15.78	24.19	14.19	12.29
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.08	2.42	6.25	6.37	3.62	5.64	0.87	0.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.50	0.72	0.66	0.86	0.58	0.59	0.23
d, Delay for Lane Group [s/veh]	23.99	25.09	29.41	30.30	19.40	29.83	15.06	12.50
Lane Group LOS	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.23	0.97	1.51	1.02	5.89	0.76	3.28	0.92
50th-Percentile Queue Length [ft]	80.67	24.24	37.87	25.58	147.14	19.05	81.95	22.97
95th-Percentile Queue Length [veh]	5.81	1.75	2.73	1.84	9.86	1.37	5.90	1.65
95th-Percentile Queue Length [ft]	145.21	43.63	68.17	46.05	246.61	34.28	147.50	41.35

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.99	23.99	23.99	25.09	29.41	29.41	30.30	19.40	19.40	29.83	15.06	12.50
Movement LOS	C	C	C	C	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	23.99			27.62			20.67			15.96		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	20.46											
Intersection LOS	C											
Intersection V/C	0.558											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report
Intersection 12: Bodega Ave/Dutton Ave/Jewell Ave

Control Type:	Signalized	Delay (sec / veh):	18.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.596

Intersection Setup

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	114	27	35	41	57	19	6	410	141	40	432	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	20	12	34	4	8	2	0	106	85	8	61	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	134	39	69	45	65	21	6	516	226	48	493	53
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	10	17	11	16	5	2	129	57	12	123	13
Total Analysis Volume [veh/h]	134	39	69	45	65	21	6	516	226	48	493	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	0	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	9	0	0	9	0	93	12	0	90	9	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Version 4.00-00

Lane Group Calculations

Lane Group	L	C	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	5	5	0	26	3	28
g / C, Green / Cycle	0.10	0.10	0.10	0.01	0.47	0.05	0.50
(v / s)_i Volume / Saturation Flow Rate	0.08	0.06	0.07	0.00	0.42	0.03	0.30
s, saturation flow rate [veh/h]	1774	1674	1782	1774	1768	1774	1831
c, Capacity [veh/h]	174	165	176	14	823	84	925
d1, Uniform Delay [s]	24.30	24.01	24.21	27.27	13.58	25.76	9.63
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.95	4.39	6.10	18.51	3.95	5.93	0.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.66	0.74	0.42	0.90	0.57	0.59
d, Delay for Lane Group [s/veh]	31.24	28.40	30.31	45.79	17.54	31.69	10.24
Lane Group LOS	C	C	C	D	B	C	B
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.92	1.46	1.84	0.15	7.68	0.72	3.81
50th-Percentile Queue Length [ft]	47.99	36.54	46.04	3.68	191.96	17.90	95.17
95th-Percentile Queue Length [veh]	3.46	2.63	3.31	0.27	12.22	1.29	6.85
95th-Percentile Queue Length [ft]	86.38	65.78	82.87	6.63	305.58	32.22	171.30

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

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Version 4.00-00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.24	28.40	28.40	30.31	30.31	30.31	45.79	17.54	17.54	31.69	10.24	10.24
Movement LOS	C	C	C	C	C	C	D	B	B	C	B	B
d_A, Approach Delay [s/veh]	29.98			30.31			17.76			11.97		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	18.44											
Intersection LOS	B											
Intersection V/C	0.596											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

HCM Signalized Intersection Capacity Analysis
13: Bodega Ave/Sebastopol Rd & Main St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	466	84	520	534	0	0	0	0	333	774	67
Future Volume (vph)	0	466	84	520	534	0	0	0	0	333	774	67
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	0.95	
Frt		1.00	0.85	1.00	1.00					1.00	0.99	
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1863	1583	1770	1863					1770	3497	
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)		1863	1583	1770	1863					1770	3497	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	466	84	520	534	0	0	0	0	333	774	67
RTOR Reduction (vph)	0	0	4	0	0	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	466	80	520	534	0	0	0	0	333	834	0
Turn Type		NA	Perm	Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2							4		
Actuated Green, G (s)		26.7	26.7	28.2	58.9					23.1	23.1	
Effective Green, g (s)		26.7	26.7	28.2	58.9					23.1	23.1	
Actuated g/C Ratio		0.30	0.30	0.31	0.65					0.26	0.26	
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		552	469	554	1219					454	897	
v/s Ratio Prot		c0.25		c0.29	0.29						c0.24	
v/s Ratio Perm			0.05							0.19		
v/c Ratio		0.84	0.17	0.94	0.44					0.73	0.93	
Uniform Delay, d1		29.7	23.5	30.1	7.5					30.6	32.7	
Progression Factor		1.00	1.00	0.52	0.55					1.00	1.00	
Incremental Delay, d2		14.6	0.8	8.8	0.3					6.0	15.5	
Delay (s)		44.3	24.2	24.6	4.4					36.7	48.1	
Level of Service		D	C	C	A					D	D	
Approach Delay (s)		41.3			14.4			0.0			44.9	
Approach LOS		D			B			A			D	

Intersection Summary					
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.90				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	111.5%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: Sebastopol Rd & Petaluma Ave

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	656	0	0	895	196	152	586	580	0	0	0
Future Volume (vph)	143	656	0	0	895	196	152	586	580	0	0	0
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			*0.60			0.95	1.00			
Frt	1.00	1.00			0.97			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (prot)	1770	1863			2175			3503	1583			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	1770	1863			2175			3503	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	143	656	0	0	895	196	152	586	580	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	0	28	0	0	0
Lane Group Flow (vph)	143	656	0	0	1081	0	0	738	552	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	7.0	54.0			43.0			28.0	28.0			
Effective Green, g (s)	7.0	54.0			43.0			28.0	28.0			
Actuated g/C Ratio	0.08	0.60			0.48			0.31	0.31			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	137	1117			1039			1089	492			
v/s Ratio Prot	c0.08	0.35			c0.50							
v/s Ratio Perm								0.21	c0.35			
v/c Ratio	1.04	0.59			1.04			0.68	1.12			
Uniform Delay, d1	41.5	11.1			23.5			27.1	31.0			
Progression Factor	0.96	0.66			1.00			1.00	1.00			
Incremental Delay, d2	70.8	1.3			38.9			1.7	78.8			
Delay (s)	110.4	8.7			62.4			28.8	109.8			
Level of Service	F	A			E			C	F			
Approach Delay (s)		26.9			62.4			64.4			0.0	
Approach LOS		C			E			E			A	

Intersection Summary				
HCM 2000 Control Delay	54.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.07			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	111.5%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
15: Sebastopol Rd & Morris St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	1092	3	1	1071	185	3	0	3	71	0	31
Future Volume (vph)	44	1092	3	1	1071	185	3	0	3	71	0	31
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	
Frt	1.00	1.00		1.00	1.00	0.85		0.93		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (prot)	1770	1862		1770	1863	1583		1695		1770	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98		0.95	1.00	
Satd. Flow (perm)	1770	1862		1770	1863	1583		1695		1770	1583	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	44	1092	3	1	1071	185	3	0	3	71	0	31
RTOR Reduction (vph)	0	0	0	0	0	23	0	6	0	0	0	0
Lane Group Flow (vph)	44	1095	0	1	1071	162	0	0	0	71	31	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	0%	2%	2%	0%	2%
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6						
Actuated Green, G (s)	4.0	38.4		0.8	35.2	35.2		5.5		22.0	22.0	
Effective Green, g (s)	4.0	38.4		0.8	35.2	35.2		5.5		22.0	22.0	
Actuated g/C Ratio	0.05	0.46		0.01	0.43	0.43		0.07		0.27	0.27	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	85	864		17	792	673		112		470	421	
v/s Ratio Prot	c0.02	c0.59		0.00	0.57			c0.00		c0.04	0.02	
v/s Ratio Perm						0.10						
v/c Ratio	0.52	1.27		0.06	1.35	0.24		0.00		0.15	0.07	
Uniform Delay, d1	38.4	22.2		40.6	23.8	15.2		36.0		23.2	22.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	5.2	129.5		1.5	166.8	0.2		0.0		0.1	0.1	
Delay (s)	43.6	151.6		42.0	190.6	15.4		36.1		23.4	22.8	
Level of Service	D	F		D	F	B		D		C	C	
Approach Delay (s)		147.5			164.7			36.1			23.2	
Approach LOS		F			F			D			C	

Intersection Summary				
HCM 2000 Control Delay	150.8	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	0.80			
Actuated Cycle Length (s)	82.7	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	71.3%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Intersection Level Of Service Report
Intersection 16: SR 12/Llano Rd

Control Type:	Signalized	Delay (sec / veh):	38.3
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.833

Intersection Setup

Name	Llano Rd		SR 12		SR 12	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	1	0
Pocket Length [ft]	210.00	100.00	100.00	320.00	140.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Llano Rd		SR 12		SR 12	
Base Volume Input [veh/h]	102	303	917	99	165	881
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	170	0	0	247
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	102	303	1087	99	165	1128
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	76	272	25	41	282
Total Analysis Volume [veh/h]	102	303	1087	99	165	1128
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Overlap	Permissive	Permissive	Protected	Permissive
Signal group	4	1	2	0	1	6
Auxiliary Signal Groups		1,4				
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	100	100	100	0	100	100
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	9	9	102	0	9	111
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	1	0	1	0	0	1
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Lane Group Calculations

Lane Group	L	R	C	R	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	28	61	99	99	29	132
g / C, Green / Cycle	0.17	0.36	0.59	0.59	0.17	0.78
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.58	0.06	0.09	0.61
s, saturation flow rate [veh/h]	1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]	300	574	1099	934	301	1459
d1, Uniform Delay [s]	61.66	42.27	34.00	15.11	63.93	10.00
k, delay calibration	0.11	0.11	0.47	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.67	0.75	23.94	0.05	1.55	4.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.53	0.99	0.11	0.55	0.77
d, Delay for Lane Group [s/veh]	62.33	43.02	57.94	15.15	65.48	14.04
Lane Group LOS	E	D	E	B	E	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	3.95	10.21	49.87	1.73	6.67	22.36
50th-Percentile Queue Length [ft]	98.76	255.26	1246.71	43.37	166.73	558.88
95th-Percentile Queue Length [veh]	7.11	15.45	61.45	3.12	10.90	30.11
95th-Percentile Queue Length [ft]	177.77	386.27	1536.24	78.07	272.61	752.73

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.33	43.02	57.94	15.15	65.48	14.04
Movement LOS	E	D	E	B	E	B
d_A, Approach Delay [s/veh]	47.89		54.37		20.60	
Approach LOS	D		D		C	
d_I, Intersection Delay [s/veh]	38.32					
Intersection LOS	D					
Intersection V/C	0.833					

Sequence

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

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Two-way stop	Delay (sec / veh):	33.8
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	23	967	721	7	3	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	250	484	1	3	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1217	1205	8	6	48
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	304	301	2	2	12
Total Analysis Volume [veh/h]	30	1217	1205	8	6	48
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	1
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.05	0.22
d_M, Delay for Movement [s/veh]	11.61	0.00	0.00	0.00	33.79	25.54
Movement LOS	B	A	A	A	D	D
95th-Percentile Queue Length [veh]	0.16	0.00	0.00	0.00	0.14	0.79
95th-Percentile Queue Length [ft]	4.12	0.00	0.00	0.00	3.57	19.87
d_A, Approach Delay [s/veh]	0.28		0.00		26.46	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.71					
Intersection LOS	D					

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 18: SR 116/Lynch Rd

Control Type:	Signalized	Delay (sec / veh):	17.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.750

Intersection Setup

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Pocket Length [ft]	130.00	100.00	100.00	90.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

volumes

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Base Volume Input [veh/h]	57	895	4	5	689	26	86	0	83	2	0	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	177	0	0	343	5	15	0	11	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	1072	4	5	1032	31	101	0	94	2	0	11
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	268	1	1	258	8	25	0	24	1	0	3
Total Analysis Volume [veh/h]	66	1072	4	5	1032	31	101	0	94	2	0	11
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	9	0	102	102	0	0	9	0	0	9	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Scenario 3: 3: AM General Plan Cumulative Buildout

Lane Group Calculations

Lane Group	L	C	L	C	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	46	0	43	12	12	12
g / C, Green / Cycle	0.05	0.65	0.01	0.61	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.04	0.58	0.00	0.57	0.14	0.00	0.01
s, saturation flow rate [veh/h]	1774	1862	1774	1853	1397	986	1583
c, Capacity [veh/h]	92	1218	12	1129	313	268	267
d1, Uniform Delay [s]	32.96	9.99	34.92	12.62	28.64	24.43	24.55
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.10	2.31	22.11	4.68	2.02	0.01	0.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.88	0.42	0.94	0.62	0.01	0.04
d, Delay for Lane Group [s/veh]	43.06	12.30	57.03	17.31	30.66	24.44	24.61
Lane Group LOS	D	B	E	B	C	C	C
Critical Lane Group	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.33	10.70	0.16	13.36	3.23	0.03	0.15
50th-Percentile Queue Length [ft]	33.31	267.49	3.90	333.97	80.65	0.69	3.82
95th-Percentile Queue Length [veh]	2.40	16.06	0.28	19.35	5.81	0.05	0.28
95th-Percentile Queue Length [ft]	59.97	401.60	7.01	483.82	145.16	1.24	6.88

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.06	12.30	12.30	57.03	17.31	17.31	30.66	30.66	30.66	24.44	24.44	24.61
Movement LOS	D	B	B	E	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	14.08			17.49			30.66			24.58		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.98											
Intersection LOS	B											
Intersection V/C	0.750											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan W-Trans
Scenario 3: 3: AM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 1: SR 116/Mill Station Rd

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.664

Intersection Setup

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	50.00	100.00	100.00	50.00	100.00	100.00	70.00	100.00	100.00	80.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Mill Station Rd			Mill Station Rd		
Base Volume Input [veh/h]	77	605	0	2	581	165	101	1	87	12	5	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	201	23	4	134	28	20	0	4	62	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	806	23	6	715	193	121	1	91	74	5	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	202	6	2	179	48	30	0	23	19	1	9
Total Analysis Volume [veh/h]	85	806	23	6	715	193	121	1	91	74	5	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	32	86	0	9	63	0	0	16	0	0	9	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan Update W-Trans
Scenario 3: 3: PM General Plan Cumulative Buildout

Lane Group Calculations

Lane Group	L	C	L	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	37	0	33	5	5	3	3
g / C, Green / Cycle	0.06	0.60	0.01	0.55	0.09	0.09	0.04	0.04
(v / s)_i Volume / Saturation Flow Rate	0.05	0.45	0.00	0.51	0.07	0.06	0.04	0.03
s, saturation flow rate [veh/h]	1774	1854	1774	1795	1774	1586	1774	1613
c, Capacity [veh/h]	113	1118	14	982	153	136	73	66
d1, Uniform Delay [s]	28.14	8.71	30.18	12.68	27.40	27.11	29.31	28.83
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.55	0.99	18.87	4.29	8.88	5.67	52.00	8.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.74	0.42	0.92	0.79	0.67	1.01	0.62
d, Delay for Lane Group [s/veh]	37.69	9.70	49.06	16.97	36.28	32.78	81.31	37.78
Lane Group LOS	D	A	D	B	D	C	F	D
Critical Lane Group	Yes	No	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	1.46	6.08	0.16	9.98	2.01	1.45	2.08	0.73
50th-Percentile Queue Length [ft]	36.49	152.04	3.95	249.49	50.36	36.17	51.89	18.19
95th-Percentile Queue Length [veh]	2.63	10.13	0.28	15.16	3.63	2.60	3.74	1.31
95th-Percentile Queue Length [ft]	65.69	253.15	7.11	379.01	90.65	65.10	93.41	32.75

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	37.69	9.70	9.70	49.06	16.97	16.97	36.28	32.78	32.78	81.31	37.78	37.78
Movement LOS	D	A	A	D	B	B	D	C	C	F	D	D
d_A, Approach Delay [s/veh]	12.31			17.18			34.77			65.79		
Approach LOS	B			B			C			E		
d_I, Intersection Delay [s/veh]	19.44											
Intersection LOS	B											
Intersection V/C	0.664											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan Update W-Trans
Scenario 3: 3: PM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 2: SR 116/Hurlbut Ave

Control Type:	Signalized	Delay (sec / veh):	19.6
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.678

Intersection Setup

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Pocket Length [ft]	110.00	100.00	100.00	80.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Shopping Center			Hurlbut Ave		
Base Volume Input [veh/h]	87	505	34	13	574	59	84	22	105	32	14	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	294	10	9	285	0	0	1	0	6	1	6
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	799	44	22	859	59	84	23	105	38	15	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	200	11	6	215	15	21	6	26	10	4	5
Total Analysis Volume [veh/h]	87	799	44	22	859	59	84	23	105	38	15	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	77	0	9	74	0	0	24	0	0	10	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan Update W-Trans
Scenario 3: 3: PM General Plan Cumulative Buildout

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5	38	38	2	35	35	11	4
g / C, Green / Cycle	0.07	0.54	0.54	0.02	0.50	0.50	0.16	0.05
(v / s)_i Volume / Saturation Flow Rate	0.05	0.23	0.23	0.01	0.46	0.04	0.13	0.04
s, saturation flow rate [veh/h]	1774	1863	1829	1774	1863	1583	1682	1736
c, Capacity [veh/h]	116	1004	985	44	928	789	262	95
d1, Uniform Delay [s]	32.54	9.76	9.76	34.10	16.54	9.26	28.88	33.04
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.34	0.28	0.29	8.40	4.56	0.04	5.86	11.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.42	0.42	0.50	0.93	0.07	0.81	0.76
d, Delay for Lane Group [s/veh]	41.88	10.05	10.05	42.50	21.10	9.30	34.74	44.82
Lane Group LOS	D	B	B	D	C	A	C	D
Critical Lane Group	Yes	No	No	No	Yes	No	Yes	Yes
50th-Percentile Queue Length [veh]	1.72	3.49	3.42	0.47	12.29	0.44	3.75	1.49
50th-Percentile Queue Length [ft]	42.91	87.14	85.59	11.64	307.21	10.90	93.74	37.21
95th-Percentile Queue Length [veh]	3.09	6.27	6.16	0.84	18.04	0.78	6.75	2.68
95th-Percentile Queue Length [ft]	77.25	156.85	154.06	20.95	450.94	19.62	168.73	66.97

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.88	10.05	10.05	42.50	21.10	9.30	34.74	34.74	34.74	44.82	44.82	44.82
Movement LOS	D	B	B	D	C	A	C	C	C	D	D	D
d_A, Approach Delay [s/veh]	13.03			20.86			34.74			44.82		
Approach LOS	B			C			C			D		
d_I, Intersection Delay [s/veh]	19.64											
Intersection LOS	B											
Intersection V/C	0.678											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Two-way stop	Delay (sec / veh):	145.5
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.902

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	71	155	619	130	178	675
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	25	248	43	44	288
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	180	867	173	222	963
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	45	217	43	56	241
Total Analysis Volume [veh/h]	87	180	867	173	222	963
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.90	0.57	0.01	0.00	0.33	0.01
d_M, Delay for Movement [s/veh]	145.48	30.80	0.00	0.00	13.04	0.00
Movement LOS	F	D	A	A	B	A
95th-Percentile Queue Length [veh]	5.15	3.36	0.00	0.00	1.45	0.00
95th-Percentile Queue Length [ft]	128.85	83.94	0.00	0.00	36.34	0.00
d_A, Approach Delay [s/veh]	68.17		0.00		2.44	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	8.47					
Intersection LOS	F					

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Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Two-way stop	Delay (sec / veh):	44.4
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.245

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	28	57	755	30	45	822
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	5	259	14	8	325
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	62	1014	44	53	1147
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	16	254	11	13	287
Total Analysis Volume [veh/h]	35	62	1014	44	53	1147
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.24	0.22	0.01	0.00	0.08	0.01
d_M, Delay for Movement [s/veh]	44.35	31.98	0.00	0.00	10.95	0.00
Movement LOS	E	D	A	A	B	A
95th-Percentile Queue Length [veh]	2.25	2.25	0.00	0.00	0.26	0.00
95th-Percentile Queue Length [ft]	56.18	56.18	0.00	0.00	6.55	0.00
d_A, Approach Delay [s/veh]	36.45		0.00		0.48	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	1.75					
Intersection LOS	E					

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Intersection Level Of Service Report
Intersection 5: SR 116/Florence Ave

Control Type:	Two-way stop	Delay (sec / veh):	44.0
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.378

Intersection Setup

Name	Florence Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	40.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

volumes

Name	Florence Ave		SR 116		SR 116	
Base Volume Input [veh/h]	43	39	754	51	34	844
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	6	255	11	9	324
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	45	1009	62	43	1168
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	11	252	16	11	292
Total Analysis Volume [veh/h]	55	45	1009	62	43	1168
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.38	0.16	0.01	0.00	0.07	0.01
d_M, Delay for Movement [s/veh]	44.02	20.32	0.00	0.00	10.92	0.00
Movement LOS	E	C	A	A	B	A
95th-Percentile Queue Length [veh]	1.60	0.56	0.00	0.00	0.21	0.00
95th-Percentile Queue Length [ft]	39.92	14.11	0.00	0.00	5.29	0.00
d_A, Approach Delay [s/veh]	33.36		0.00		0.39	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	1.60					
Intersection LOS	E					

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Intersection Level Of Service Report
Intersection 6: N Main St/SR 116

Control Type:	Signalized	Delay (sec / veh):	14.1
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.725

Intersection Setup

Name	N Main St		SR 116		SR 116	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	0	0	1
Pocket Length [ft]	50.00	100.00	80.00	100.00	100.00	130.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	N Main St		SR 116		SR 116	
Base Volume Input [veh/h]	160	129	87	598	680	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	13	9	301	374	49
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	187	142	96	899	1054	142
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	36	24	225	264	36
Total Analysis Volume [veh/h]	187	142	96	899	1054	142
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Protected	Permissive	Permissive	Permissive
Signal group	4	0	1	6	2	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	100	0	100	100	100	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	22	0	13	98	85	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	1	0	0	1	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	R	L	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	5	48	39	39
g / C, Green / Cycle	0.13	0.13	0.07	0.74	0.61	0.61
(v / s)_i Volume / Saturation Flow Rate	0.11	0.09	0.05	0.48	0.57	0.09
s, saturation flow rate [veh/h]	1774	1583	1774	1863	1863	1583
c, Capacity [veh/h]	239	214	128	1382	1133	963
d1, Uniform Delay [s]	27.18	26.71	29.56	4.18	11.48	5.48
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.51	3.53	8.46	0.52	4.05	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.66	0.75	0.65	0.93	0.15
d, Delay for Lane Group [s/veh]	32.69	30.24	38.03	4.70	15.54	5.55
Lane Group LOS	C	C	D	A	B	A
Critical Lane Group	Yes	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	3.02	2.19	1.70	3.27	11.41	0.67
50th-Percentile Queue Length [ft]	75.55	54.78	42.62	81.72	285.36	16.75
95th-Percentile Queue Length [veh]	5.44	3.94	3.07	5.88	16.96	1.21
95th-Percentile Queue Length [ft]	135.98	98.61	76.72	147.10	423.88	30.16

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.69	30.24	38.03	4.70	15.54	5.55
Movement LOS	C	C	D	A	B	A
d_A, Approach Delay [s/veh]	31.63		7.92		14.35	
Approach LOS	C		A		B	
d_I, Intersection Delay [s/veh]	14.07					
Intersection LOS	B					
Intersection V/C	0.725					

Sequence

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

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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	268	1168	0	0	0	1156
Future Volume (vph)	268	1168	0	0	0	1156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	3.0				4.0
Lane Util. Factor	1.00	1.00				0.95
Frt	1.00	0.85				1.00
Flt Protected	0.95	1.00				1.00
Satd. Flow (prot)	1770	1583				3539
Flt Permitted	0.95	1.00				1.00
Satd. Flow (perm)	1770	1583				3539
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	268	1168	0	0	0	1156
RTOR Reduction (vph)	30	0	0	0	0	0
Lane Group Flow (vph)	238	1168	0	0	0	1156
Turn Type	Prot	custom				NA
Protected Phases	8	2 8				6
Permitted Phases		8				
Actuated Green, G (s)	22.2	36.7				28.3
Effective Green, g (s)	22.2	36.7				28.3
Actuated g/C Ratio	0.38	0.63				0.48
Clearance Time (s)	4.0					4.0
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	671	993				1712
v/s Ratio Prot	0.13	c0.74				c0.33
v/s Ratio Perm						
v/c Ratio	0.35	1.18				0.68
Uniform Delay, d1	13.0	10.9				11.6
Progression Factor	1.00	1.00				1.00
Incremental Delay, d2	0.3	90.0				1.1
Delay (s)	13.3	100.9				12.6
Level of Service	B	F				B
Approach Delay (s)	84.5		0.0			12.6
Approach LOS	F		A			B

Intersection Summary			
HCM 2000 Control Delay	52.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	58.5	Sum of lost time (s)	11.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

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Intersection Level Of Service Report
Intersection 8: McKinley St/Laguna Park Wy/Petaluma Ave

Control Type:	Two-way stop	Delay (sec / veh):	108.9
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.971

Intersection Setup

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]		30.00			30.00			30.00			30.00	
Grade [%]		0.00			0.00			0.00			0.00	
Crosswalk		Yes			Yes			No			Yes	

volumes

Name	Petaluma Ave			Laguna Park Wy			McKinley St			McKinley St		
Base Volume Input [veh/h]	733	58	26	0	0	106	0	0	0	0	61	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	378	79	59	0	0	78	0	0	0	0	53	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1111	137	85	0	0	184	0	0	0	0	114	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	278	34	21	0	0	46	0	0	0	0	29	1
Total Analysis Volume [veh/h]	1111	137	85	0	0	184	0	0	0	0	114	2
Pedestrian Volume [ped/h]		26			62			0			20	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.09	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.67	0.01
d_M, Delay for Movement [s/veh]	0.00	7.74	0.00	0.00	0.00	108.92	0.00	0.00	0.00	0.00	62.79	61.48
Movement LOS	A	A	A			F					F	F
95th-Percentile Queue Length [veh]	0.00	0.00	0.00	0.00	0.00	7.97	0.00	0.00	0.00	0.00	4.05	4.05
95th-Percentile Queue Length [ft]	0.00	0.00	0.00	0.00	0.00	199.35	0.00	0.00	0.00	0.00	101.18	101.18
d_A, Approach Delay [s/veh]	0.80			108.92			0.00			62.77		
Approach LOS	A			F			A			F		
d_I, Intersection Delay [s/veh]	17.38											
Intersection LOS	F											

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Intersection Level Of Service Report
Intersection 9: Morris St/Laguna Park Wy

Control Type:	Two-way stop	Delay (sec / veh):	11.9
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name	Morris St		Morris St		Laguna Park Wy	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	Morris St		Morris St		Laguna Park Wy	
Base Volume Input [veh/h]	56	106	130	19	17	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	0	0	0	0	24
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	106	130	19	17	56
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	27	33	5	4	14
Total Analysis Volume [veh/h]	82	106	130	19	17	56
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.03	0.06
d_M, Delay for Movement [s/veh]	7.67	0.00	0.00	0.00	11.87	9.42
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh]	0.45	0.45	0.00	0.00	0.30	0.30
95th-Percentile Queue Length [ft]	11.30	11.30	0.00	0.00	7.56	7.56
d_A, Approach Delay [s/veh]	3.34		0.00		9.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.31					
Intersection LOS	B					

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Intersection Level Of Service Report
Intersection 10: Bodega Ave/Ragle Rd

Control Type:	Two-way stop	Delay (sec / veh):	42.2
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.370

Intersection Setup

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	70.00	100.00	100.00	60.00	100.00	100.00	60.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Ragle Ave S			Ragle Ave S			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	0	0	10	35	5	132	70	312	2	29	368	61
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	21	0	4	8	97	0	0	145	18
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	10	56	5	136	78	409	2	29	513	79
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	3	14	1	34	20	102	1	7	128	20
Total Analysis Volume [veh/h]	0	0	10	56	5	136	78	409	2	29	513	79
Pedestrian Volume [ped/h]	0			0			0			0		

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Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.37	0.03	0.26	0.08	0.00	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	40.78	27.26	10.70	42.18	28.89	14.61	8.97	0.00	0.00	8.22	0.00	0.00
Movement LOS	E	D	B	E	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh]	0.05	0.05	0.05	1.56	1.16	1.16	0.26	0.00	0.00	0.08	0.00	0.00
95th-Percentile Queue Length [ft]	1.19	1.19	1.19	39.00	29.04	29.04	6.44	0.00	0.00	1.94	0.00	0.00
d_A, Approach Delay [s/veh]	10.70			22.81			1.43			0.38		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	4.21											
Intersection LOS	E											

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Intersection Level Of Service Report
Intersection 11: Bodega Ave/Pleasant Hill Ave

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

Intersection Setup

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	1	0	0	1	0	0	1	0	1
Pocket Length [ft]	100.00	100.00	100.00	40.00	100.00	100.00	80.00	100.00	100.00	45.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			No		

volumes

Name	Pleasant Hill Rd			Pleasant Hill Ave N			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	42	76	44	54	73	40	37	346	36	54	360	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	51	8	24	11	16	14	5	84	29	39	98	2
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	84	68	65	89	54	42	430	65	93	458	85
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	21	17	16	22	14	11	108	16	23	115	21
Total Analysis Volume [veh/h]	93	84	68	65	89	54	42	430	65	93	458	85
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	0	8	0	0	4	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	27	0	0	22	0	10	59	0	12	61	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	C	L	C	L	C	L	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	6	6	2	16	4	18	18
g / C, Green / Cycle	0.18	0.11	0.11	0.04	0.32	0.07	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.14	0.04	0.08	0.02	0.27	0.05	0.25	0.05
s, saturation flow rate [veh/h]	1744	1774	1746	1774	1821	1774	1863	1583
c, Capacity [veh/h]	316	200	196	79	583	128	649	551
d1, Uniform Delay [s]	19.90	20.85	21.88	23.85	16.18	23.16	14.36	11.44
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.10	0.94	5.09	5.48	3.55	7.51	1.42	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.33	0.73	0.53	0.85	0.72	0.71	0.15
d, Delay for Lane Group [s/veh]	23.99	21.79	26.97	29.32	19.73	30.67	15.78	11.57
Lane Group LOS	C	C	C	C	B	C	B	B
Critical Lane Group	Yes	No	Yes	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	2.83	0.70	1.78	0.58	5.14	1.27	4.09	0.59
50th-Percentile Queue Length [ft]	70.83	17.57	44.51	14.40	128.51	31.74	102.36	14.68
95th-Percentile Queue Length [veh]	5.10	1.27	3.20	1.04	8.86	2.29	7.37	1.06
95th-Percentile Queue Length [ft]	127.50	31.63	80.11	25.93	221.47	57.14	184.26	26.43

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.99	23.99	23.99	21.79	26.97	26.97	29.32	19.73	19.73	30.67	15.78	11.57
Movement LOS	C	C	C	C	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	23.99			25.35			20.48			17.40		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	20.43											
Intersection LOS	C											
Intersection V/C	0.547											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Intersection Level Of Service Report
Intersection 12: Bodega Ave/Dutton Ave/Jewell Ave

Control Type:	Signalized	Delay (sec / veh):	15.7
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.499

Intersection Setup

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	Jewell Ave			Dutton Ave			Bodega Ave			Bodega Ave		
Base Volume Input [veh/h]	82	33	43	14	18	1	5	389	84	55	563	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	12	25	2	15	1	1	99	49	28	168	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	107	45	68	16	33	2	6	488	133	83	731	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	11	17	4	8	1	2	122	33	21	183	3
Total Analysis Volume [veh/h]	107	45	68	16	33	2	6	488	133	83	731	13
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Split	Split	Split	Split	Split	Split	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	7	4	0	0	8	0	5	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	5	0	5	5	0
Maximum Green [s]	0	100	0	0	100	0	100	100	0	100	100	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	12	0	0	15	0	10	48	0	54	83	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
l1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
l2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	C	C	L	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	4	2	0	17	3	20
g / C, Green / Cycle	0.09	0.09	0.05	0.01	0.40	0.07	0.47
(v / s)_i Volume / Saturation Flow Rate	0.06	0.07	0.03	0.00	0.35	0.05	0.40
s, saturation flow rate [veh/h]	1774	1684	1822	1774	1795	1774	1857
c, Capacity [veh/h]	165	157	98	15	727	131	874
d1, Uniform Delay [s]	18.70	18.84	19.69	21.10	11.58	19.23	9.99
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.21	6.09	4.24	17.71	3.01	4.94	2.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.72	0.52	0.41	0.85	0.63	0.85
d, Delay for Lane Group [s/veh]	22.91	24.93	23.92	38.81	14.59	24.17	12.45
Lane Group LOS	C	C	C	D	B	C	B
Critical Lane Group	No	Yes	Yes	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.09	1.22	0.55	0.12	4.56	0.88	4.80
50th-Percentile Queue Length [ft]	27.19	30.42	13.79	3.12	114.11	22.09	120.09
95th-Percentile Queue Length [veh]	1.96	2.19	0.99	0.22	8.07	1.59	8.40
95th-Percentile Queue Length [ft]	48.94	54.75	24.82	5.61	201.71	39.76	209.95

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	22.91	24.93	24.93	23.92	23.92	23.92	38.81	14.59	14.59	24.17	12.45	12.45
Movement LOS	C	C	C	C	C	C	D	B	B	C	B	B
d_A, Approach Delay [s/veh]	23.95			23.92			14.82			13.63		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	15.68											
Intersection LOS	B											
Intersection V/C	0.499											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

HCM Signalized Intersection Capacity Analysis
13: Bodega Ave/Sebastopol Rd & Main St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	410	98	544	670	0	0	0	0	387	880	145
Future Volume (vph)	0	410	98	544	670	0	0	0	0	387	880	145
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	0.95	
Frt		1.00	0.85	1.00	1.00					1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)		1863	1583	1770	1863					1770	3464	
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)		1863	1583	1770	1863					1770	3464	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	410	98	544	670	0	0	0	0	387	880	145
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	410	98	544	670	0	0	0	0	387	1025	0
Turn Type		NA	Perm	Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases			2							4		
Actuated Green, G (s)		22.1	22.1	28.0	54.1					27.9	27.9	
Effective Green, g (s)		22.1	22.1	28.0	54.1					27.9	27.9	
Actuated g/C Ratio		0.25	0.25	0.31	0.60					0.31	0.31	
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	
Lane Grp Cap (vph)		457	388	550	1119					548	1073	
v/s Ratio Prot		c0.22		c0.31	0.36						c0.30	
v/s Ratio Perm			0.06							0.22		
v/c Ratio		0.90	0.25	0.99	0.60					0.71	0.96	
Uniform Delay, d1		32.9	27.3	30.8	11.2					27.4	30.4	
Progression Factor		1.00	1.00	0.59	0.63					1.00	1.00	
Incremental Delay, d2		23.0	1.6	9.1	0.2					4.1	17.6	
Delay (s)		55.8	28.9	27.3	7.2					31.6	48.0	
Level of Service		E	C	C	A					C	D	
Approach Delay (s)		50.6			16.2			0.0			43.5	
Approach LOS		D			B			A			D	

Intersection Summary					
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.95				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	119.3%	ICU Level of Service	H		
Analysis Period (min)	15				

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
14: Sebastopol Rd & Petaluma Ave

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	637	0	0	947	292	239	896	604	0	0	0
Future Volume (vph)	178	637	0	0	947	292	239	896	604	0	0	0
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			*0.60			0.95	1.00			
Frt	1.00	1.00			0.96			1.00	0.85			
Flt Protected	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (prot)	1770	1863			2156			3502	1583			
Flt Permitted	0.95	1.00			1.00			0.99	1.00			
Satd. Flow (perm)	1770	1863			2156			3502	1583			
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	178	637	0	0	947	292	239	896	604	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	34	0	0	0
Lane Group Flow (vph)	178	637	0	0	1228	0	0	1135	570	0	0	0
Turn Type	Prot	NA			NA		Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Actuated Green, G (s)	8.0	53.0			41.0			29.0	29.0			
Effective Green, g (s)	8.0	53.0			41.0			29.0	29.0			
Actuated g/C Ratio	0.09	0.59			0.46			0.32	0.32			
Clearance Time (s)	4.0	4.0			4.0			4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0			3.0	3.0			
Lane Grp Cap (vph)	157	1097			982			1128	510			
v/s Ratio Prot	c0.10	0.34			c0.57							
v/s Ratio Perm								0.32	c0.36			
v/c Ratio	1.13	0.58			1.25			1.01	1.12			
Uniform Delay, d1	41.0	11.6			24.5			30.5	30.5			
Progression Factor	0.97	0.58			1.00			1.00	1.00			
Incremental Delay, d2	97.3	1.4			121.3			28.3	76.3			
Delay (s)	137.0	8.1			145.8			58.8	106.8			
Level of Service	F	A			F			E	F			
Approach Delay (s)		36.3			145.8			75.5			0.0	
Approach LOS		D			F			E			A	

Intersection Summary				
HCM 2000 Control Delay	90.0	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.19			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	119.3%	ICU Level of Service	H	
Analysis Period (min)	15			

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
15: Sebastopol Rd & Morris St

4/22/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	1144	5	3	1031	145	4	5	5	160	3	65
Future Volume (vph)	42	1144	5	3	1031	145	4	5	5	160	3	65
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	
Frt	1.00	1.00		1.00	1.00	0.85		0.95		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)	1770	1862		1770	1863	1583		1748		1770	1596	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99		0.95	1.00	
Satd. Flow (perm)	1770	1862		1770	1863	1583		1748		1770	1596	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	42	1144	5	3	1031	145	4	5	5	160	3	65
RTOR Reduction (vph)	0	0	0	0	0	11	0	5	0	0	0	0
Lane Group Flow (vph)	42	1149	0	3	1031	134	0	9	0	160	68	0
Turn Type	Prot	NA		Prot	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6						
Actuated Green, G (s)	4.0	46.4		0.8	43.2	43.2		6.1		22.0	22.0	
Effective Green, g (s)	4.0	46.4		0.8	43.2	43.2		6.1		22.0	22.0	
Actuated g/C Ratio	0.04	0.51		0.01	0.47	0.47		0.07		0.24	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	77	946		15	881	749		116		426	384	
v/s Ratio Prot	c0.02	c0.62		0.00	0.55			c0.01		c0.09	0.04	
v/s Ratio Perm						0.08						
v/c Ratio	0.55	1.21		0.20	1.17	0.18		0.08		0.38	0.18	
Uniform Delay, d1	42.8	22.4		44.9	24.0	13.8		40.0		28.9	27.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2	7.7	106.3		6.5	88.7	0.1		0.3		0.6	0.2	
Delay (s)	50.4	128.8		51.4	112.8	14.0		40.3		29.5	27.7	
Level of Service	D	F		D	F	B		D		C	C	
Approach Delay (s)		126.0			100.5			40.3			28.9	
Approach LOS		F			F			D			C	

Intersection Summary				
HCM 2000 Control Delay	105.6	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	91.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	82.7%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Intersection Level Of Service Report
Intersection 16: SR 12/Llano Rd

Control Type:	Signalized	Delay (sec / veh):	42.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.910

Intersection Setup

Name	Llano Rd		SR 12		SR 12	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	1	0
Pocket Length [ft]	210.00	100.00	100.00	320.00	140.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Llano Rd		SR 12		SR 12	
Base Volume Input [veh/h]	114	211	957	89	167	820
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	350	0	0	244
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	114	211	1307	89	167	1064
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	53	327	22	42	266
Total Analysis Volume [veh/h]	114	211	1307	89	167	1064
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Overlap	Permissive	Permissive	Protected	Permissive
Signal group	4	1	2	0	1	6
Auxiliary Signal Groups		1,4				
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	100	100	100	0	100	100
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	14	9	102	0	9	106
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	1	0	1	0	0	1
Pedestrian Clearance [s]	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan Update W-Trans
Scenario 3: 3: PM General Plan Cumulative Buildout

Lane Group Calculations

Lane Group	L	R	C	R	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	43	100	100	20	124
g / C, Green / Cycle	0.13	0.28	0.66	0.66	0.13	0.82
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.70	0.06	0.09	0.57
s, saturation flow rate [veh/h]	1774	1583	1863	1583	1774	1863
c, Capacity [veh/h]	228	451	1234	1049	230	1524
d1, Uniform Delay [s]	61.22	44.54	25.48	9.12	63.11	5.81
k, delay calibration	0.11	0.11	0.50	0.11	0.11	0.38
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.69	0.76	42.96	0.03	4.35	2.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.47	1.06	0.08	0.73	0.70
d, Delay for Lane Group [s/veh]	62.90	45.29	68.44	9.15	67.46	7.84
Lane Group LOS	E	D	F	A	E	A
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh]	4.21	6.69	55.92	1.07	6.47	12.61
50th-Percentile Queue Length [ft]	105.17	167.34	1398.02	26.84	161.86	315.29
95th-Percentile Queue Length [veh]	7.57	10.94	71.88	1.93	10.65	18.44
95th-Percentile Queue Length [ft]	189.26	273.42	1797.09	48.32	266.19	460.90

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.90	45.29	68.44	9.15	67.46	7.84
Movement LOS	E	D	F	A	E	A
d_A, Approach Delay [s/veh]	51.47		64.66		15.93	
Approach LOS	D		E		B	
d_I, Intersection Delay [s/veh]	42.89					
Intersection LOS	D					
Intersection V/C	0.910					

Sequence

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

Sebastopol General Plan Update W-Trans
Scenario 3: 3: PM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Two-way stop	Delay (sec / veh):	112.8
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	82	844	951	13	50	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	579	365	3	2	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	1423	1316	16	52	64
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	356	329	4	13	16
Total Analysis Volume [veh/h]	97	1423	1316	16	52	64
Pedestrian Volume [ped/h]	0		0		0	

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Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	1
Two-Stage Gap Acceptance			Yes
Number of Storage Spaces in Median	0	0	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.01	0.01	0.00	0.66	0.34
d_M, Delay for Movement [s/veh]	13.54	0.00	0.00	0.00	112.82	33.13
Movement LOS	B	A	A	A	F	D
95th-Percentile Queue Length [veh]	0.68	0.00	0.00	0.00	3.04	1.39
95th-Percentile Queue Length [ft]	17.06	0.00	0.00	0.00	75.93	34.83
d_A, Approach Delay [s/veh]	0.86		0.00		68.85	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	3.13					
Intersection LOS	F					

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Intersection Level Of Service Report
Intersection 18: SR 116/Lynch Rd

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.842

Intersection Setup

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	0	0	0	0	0	0	1
Pocket Length [ft]	130.00	100.00	100.00	90.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	60.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

volumes

Name	SR 116			SR 116			Lynch Rd			Lynch Rd		
Base Volume Input [veh/h]	66	840	3	12	924	63	47	0	66	3	1	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	44	392	0	0	271	18	7	0	7	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	1232	3	12	1195	81	54	0	73	3	1	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	308	1	3	299	20	14	0	18	1	0	2
Total Analysis Volume [veh/h]	110	1232	3	12	1195	81	54	0	73	3	1	6
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	100	100	0	100	100	0	0	100	0	0	100	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	13	84	0	23	98	0	0	13	0	0	13	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	1	0	0	1	0	0	1	0	0	1	0
Pedestrian Clearance [s]	0	0	0	0	0	0	0	0	0	0	0	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Scenario 3: 3: PM General Plan Cumulative Buildout

Lane Group Calculations

Lane Group	L	C	L	C	C	C	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	90	2	82	12	12	12
g / C, Green / Cycle	0.08	0.78	0.01	0.71	0.10	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.06	0.66	0.01	0.69	0.09	0.00	0.00
s, saturation flow rate [veh/h]	1774	1862	1774	1842	1453	1016	1583
c, Capacity [veh/h]	139	1447	25	1313	197	161	166
d1, Uniform Delay [s]	52.21	8.50	56.44	15.47	50.76	46.29	46.37
k, delay calibration	0.11	0.30	0.11	0.33	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.67	4.14	14.16	14.53	3.52	0.06	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.85	0.49	0.97	0.65	0.02	0.04
d, Delay for Lane Group [s/veh]	61.88	12.64	70.60	30.00	54.28	46.35	46.46
Lane Group LOS	E	B	E	C	D	D	D
Critical Lane Group	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	3.49	17.24	0.44	31.49	3.78	0.11	0.16
50th-Percentile Queue Length [ft]	87.34	431.11	11.08	787.21	94.53	2.65	3.98
95th-Percentile Queue Length [veh]	6.29	24.05	0.80	40.69	6.81	0.19	0.29
95th-Percentile Queue Length [ft]	157.21	601.37	19.94	1017.28	170.15	4.77	7.16

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.88	12.64	12.64	70.60	30.00	30.00	54.28	54.28	54.28	46.35	46.35	46.46
Movement LOS	E	B	B	E	C	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.67			30.38			54.28			46.41		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	24.87											
Intersection LOS	C											
Intersection V/C	0.842											

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sebastopol General Plan Update W-Trans
Scenario 3: 3: PM General Plan Cumulative Buildout

Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Signalized	Delay (sec / veh):	16.5
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.646

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	88	217	567	85	153	389
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	25	11	96	8	2	142
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	228	663	93	155	531
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	57	166	23	39	133
Total Analysis Volume [veh/h]	113	228	663	93	155	531
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	4	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	5	0	5	5
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	22	0	53	0	15	68
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 4: 4: AM General Plan Buildout Mitigated

Lane Group Calculations

Lane Group	L	R	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	9	23	6	33
g / C, Green / Cycle	0.19	0.19	0.46	0.12	0.65
(v / s)_i Volume / Saturation Flow Rate	0.06	0.14	0.41	0.09	0.29
s, saturation flow rate [veh/h]	1774	1583	1823	1774	1863
c, Capacity [veh/h]	331	295	835	207	1219
d1, Uniform Delay [s]	17.74	19.41	12.60	21.47	4.20
k, delay calibration	0.11	0.11	0.23	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.61	4.28	7.87	5.39	0.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.34	0.77	0.91	0.75	0.44
d, Delay for Lane Group [s/veh]	18.35	23.69	20.47	26.86	4.45
Lane Group LOS	B	C	C	C	A
Critical Lane Group	No	Yes	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.07	2.60	7.85	1.91	1.52
50th-Percentile Queue Length [ft]	26.86	64.98	196.17	47.70	37.94
95th-Percentile Queue Length [veh]	1.93	4.68	12.44	3.43	2.73
95th-Percentile Queue Length [ft]	48.35	116.96	311.01	85.86	68.30

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	18.35	23.69	20.47	20.47	26.86	4.45
Movement LOS	B	C	C	C	C	A
d_A, Approach Delay [s/veh]	21.92		20.47		9.51	
Approach LOS	C		C		A	
d_I, Intersection Delay [s/veh]	16.53					
Intersection LOS	B					
Intersection V/C	0.646					

Sequence

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

Sebastopol General Plan W-Trans
Scenario 4: 4: AM General Plan Buildout Mitigated

Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Signalized	Delay (sec / veh):	6.4
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.584

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	35	106	743	51	20	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	5	104	3	2	134
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	111	847	54	22	645
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	28	212	14	6	161
Total Analysis Volume [veh/h]	45	111	847	54	22	645
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Version 4.00-00

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal group	4	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	16	0	74	0	0	74
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Scenario 4: 4: AM General Plan Buildout Mitigated

Lane Group Calculations

Lane Group	C	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	18	18	18
g / C, Green / Cycle	0.13	0.60	0.60	0.60
(v / s)_i Volume / Saturation Flow Rate	0.10	0.49	0.04	0.35
s, saturation flow rate [veh/h]	1634	1843	616	1863
c, Capacity [veh/h]	208	1110	340	1122
d1, Uniform Delay [s]	12.46	4.57	10.91	3.58
k, delay calibration	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.37	1.48	0.08	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.75	0.81	0.06	0.57
d, Delay for Lane Group [s/veh]	17.83	6.06	10.99	4.04
Lane Group LOS	B	A	B	A
Critical Lane Group	Yes	Yes	No	No
50th-Percentile Queue Length [veh]	1.05	1.11	0.10	0.51
50th-Percentile Queue Length [ft]	26.15	27.79	2.49	12.81
95th-Percentile Queue Length [veh]	1.88	2.00	0.18	0.92
95th-Percentile Queue Length [ft]	47.08	50.03	4.48	23.05

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	17.83	17.83	6.06	6.06	10.99	4.04
Movement LOS	B	B	A	A	B	A
d_A, Approach Delay [s/veh]	17.83		6.06		4.27	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	6.43					
Intersection LOS	A					
Intersection V/C	0.584					

Sequence

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

Sebastopol General Plan W-Trans
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Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Signalized	Delay (sec / veh):	6.1
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.636

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	23	967	721	7	3	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	168	124	1	1	7
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1135	845	8	4	42
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	284	211	2	1	11
Total Analysis Volume [veh/h]	30	1135	845	8	4	42
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	31	105	105	0	15	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	C	C	L	R
L, Total Lost Time per Cycle [s]	0.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0	20	20	1	1
g / C, Green / Cycle	0.00	0.68	0.68	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.05	0.61	0.46	0.00	0.03
s, saturation flow rate [veh/h]	644	1863	1860	1412	1583
c, Capacity [veh/h]	241	1272	1270	241	79
d1, Uniform Delay [s]	14.97	3.86	2.78	14.97	13.87
k, delay calibration	0.50	0.16	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.06	3.57	0.62	0.03	5.40
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.12	0.89	0.67	0.02	0.53
d, Delay for Lane Group [s/veh]	16.03	7.42	3.41	14.99	19.28
Lane Group LOS	B	A	A	B	B
Critical Lane Group	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.24	1.26	0.22	0.02	0.33
50th-Percentile Queue Length [ft]	6.03	31.49	5.51	0.59	8.36
95th-Percentile Queue Length [veh]	0.43	2.27	0.40	0.04	0.60
95th-Percentile Queue Length [ft]	10.86	56.68	9.91	1.06	15.05

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	16.03	7.42	3.41	3.41	14.99	19.28
Movement LOS	B	A	A	A	B	B
d_A, Approach Delay [s/veh]	7.64		3.41		18.90	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	6.14					
Intersection LOS	A					
Intersection V/C	0.636					

Sequence

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

Sebastopol General Plan W-Trans
Scenario 4: 4: AM General Plan Buildout Mitigated

Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Signalized	Delay (sec / veh):	34.5
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	71	155	619	130	178	675
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	12	7	211	37	12	172
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	162	830	167	190	847
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	41	208	42	48	212
Total Analysis Volume [veh/h]	83	162	830	167	190	847
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	4	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	5	0	5	5
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	15	0	40	0	35	75
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	L	R	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	8	30	8	42
g / C, Green / Cycle	0.13	0.13	0.52	0.14	0.73
(v / s)_i Volume / Saturation Flow Rate	0.05	0.10	0.55	0.11	0.45
s, saturation flow rate [veh/h]	1774	1583	1809	1774	1863
c, Capacity [veh/h]	239	214	937	248	1354
d1, Uniform Delay [s]	22.74	24.14	13.96	23.99	3.96
k, delay calibration	0.11	0.11	0.50	0.11	0.36
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.86	5.45	47.84	4.89	1.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.76	1.06	0.77	0.63
d, Delay for Lane Group [s/veh]	23.60	29.60	61.79	28.88	5.55
Lane Group LOS	C	C	F	C	A
Critical Lane Group	No	Yes	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.02	2.31	21.85	2.66	2.91
50th-Percentile Queue Length [ft]	25.41	57.79	546.35	66.59	72.78
95th-Percentile Queue Length [veh]	1.83	4.16	30.95	4.79	5.24
95th-Percentile Queue Length [ft]	45.74	104.01	773.63	119.86	131.00

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	23.60	29.60	61.79	61.79	28.88	5.55
Movement LOS	C	C	E	E	C	A
d_A, Approach Delay [s/veh]	27.56		61.79		9.82	
Approach LOS	C		E		A	
d_I, Intersection Delay [s/veh]	34.47					
Intersection LOS	C					
Intersection V/C	0.760					

Sequence

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

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Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.631

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	28	57	755	30	45	822
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	5	209	9	8	177
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	62	964	39	53	999
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	16	241	10	13	250
Total Analysis Volume [veh/h]	35	62	964	39	53	999
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	4	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	5	0	5	5
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	15	0	66	0	9	75
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Lane Group Calculations

Lane Group	C	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	3	25	2	32
g / C, Green / Cycle	0.08	0.59	0.05	0.73
(v / s)_i Volume / Saturation Flow Rate	0.06	0.54	0.03	0.54
s, saturation flow rate [veh/h]	1647	1850	1774	1863
c, Capacity [veh/h]	132	1086	98	1369
d1, Uniform Delay [s]	19.43	8.05	19.90	3.28
k, delay calibration	0.11	0.29	0.11	0.28
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	7.62	9.16	4.61	1.99
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.92	0.54	0.73
d, Delay for Lane Group [s/veh]	27.06	17.21	24.51	5.27
Lane Group LOS	C	B	C	A
Critical Lane Group	Yes	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.12	7.29	0.59	1.40
50th-Percentile Queue Length [ft]	27.96	182.29	14.66	34.93
95th-Percentile Queue Length [veh]	2.01	11.72	1.06	2.51
95th-Percentile Queue Length [ft]	50.33	293.00	26.38	62.87

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.06	27.06	17.21	17.21	24.51	5.27
Movement LOS	C	C	B	B	C	A
d_A, Approach Delay [s/veh]	27.06		17.21		6.24	
Approach LOS	C		B		A	
d_I, Intersection Delay [s/veh]	12.29					
Intersection LOS	B					
Intersection V/C	0.631					

Sequence

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

Sebastopol General Plan Update W-Trans
Scenario 4: 4: PM General Plan Buildout Mitigated

Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Signalized	Delay (sec / veh):	33.3
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.758

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	82	844	951	13	50	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	226	265	3	2	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	1070	1216	16	52	64
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	268	304	4	13	16
Total Analysis Volume [veh/h]	97	1070	1216	16	52	64
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	75	90	15	0	30	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan Update W-Trans
Scenario 4: 4: PM General Plan Buildout Mitigated

Lane Group Calculations

Lane Group	L	C	C	L	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	38	30	3	3
g / C, Green / Cycle	0.08	0.77	0.62	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.05	0.57	0.66	0.03	0.04
s, saturation flow rate [veh/h]	1774	1863	1858	1774	1583
c, Capacity [veh/h]	138	1441	1140	111	99
d1, Uniform Delay [s]	21.30	0.00	9.42	22.07	22.33
k, delay calibration	0.11	0.40	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.33	2.83	51.27	3.05	6.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.74	1.08	0.47	0.65
d, Delay for Lane Group [s/veh]	27.63	2.83	60.69	25.12	29.20
Lane Group LOS	C	A	F	C	C
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	1.20	1.13	23.05	0.62	0.84
50th-Percentile Queue Length [ft]	29.97	28.34	576.25	15.48	21.07
95th-Percentile Queue Length [veh]	2.16	2.04	32.90	1.11	1.52
95th-Percentile Queue Length [ft]	53.95	51.01	822.51	27.87	37.93

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.63	2.83	60.69	60.69	25.12	29.20
Movement LOS	C	A	F	E	C	C
d_A, Approach Delay [s/veh]	4.89		60.69		27.37	
Approach LOS	A		E		C	
d_I, Intersection Delay [s/veh]	33.26					
Intersection LOS	C					
Intersection V/C	0.758					

Sequence

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

Sebastopol General Plan Update W-Trans
Scenario 4: 4: PM General Plan Buildout Mitigated

Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.730

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	88	217	567	85	153	389
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	31	40	204	10	13	178
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	119	257	771	95	166	567
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	64	193	24	42	142
Total Analysis Volume [veh/h]	119	257	771	95	166	567
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	4	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	5	0	5	5
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	15	0	66	0	9	75
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 5: 5: AM General Plan Cumulative Buildout Mitigated

Lane Group Calculations

Lane Group	L	R	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	12	30	8	42
g / C, Green / Cycle	0.20	0.20	0.48	0.12	0.67
(v / s)_i Volume / Saturation Flow Rate	0.07	0.16	0.47	0.09	0.30
s, saturation flow rate [veh/h]	1774	1583	1827	1774	1863
c, Capacity [veh/h]	357	319	883	217	1248
d1, Uniform Delay [s]	21.24	23.65	15.78	26.38	4.86
k, delay calibration	0.11	0.11	0.44	0.11	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.54	4.82	24.16	5.49	0.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.81	0.98	0.76	0.45
d, Delay for Lane Group [s/veh]	21.78	28.47	39.95	31.87	5.29
Lane Group LOS	C	C	D	C	A
Critical Lane Group	No	Yes	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.44	3.77	15.81	2.57	2.43
50th-Percentile Queue Length [ft]	36.05	94.13	395.24	64.32	60.66
95th-Percentile Queue Length [veh]	2.60	6.78	22.33	4.63	4.37
95th-Percentile Queue Length [ft]	64.89	169.43	558.26	115.77	109.19

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.78	28.47	39.95	39.95	31.87	5.29
Movement LOS	C	C	D	D	C	A
d_A, Approach Delay [s/veh]	26.35		39.95		11.31	
Approach LOS	C		D		B	
d_I, Intersection Delay [s/veh]	26.73					
Intersection LOS	C					
Intersection V/C	0.730					

Sequence

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

Sebastopol General Plan W-Trans
Scenario 5: 5: AM General Plan Cumulative Buildout Mitigated

Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Signalized	Delay (sec / veh):	16.0
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.670

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	35	106	743	51	20	511
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	10	5	239	5	2	181
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	45	111	982	56	22	692
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	28	246	14	6	173
Total Analysis Volume [veh/h]	45	111	982	56	22	692
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	4	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	5	0	5	5
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	15	0	66	0	9	75
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan W-Trans
Scenario 5: 5: AM General Plan Cumulative Buildout Mitigated

Lane Group Calculations

Lane Group	C	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6	28	1	33
g / C, Green / Cycle	0.12	0.59	0.03	0.71
(v / s)_i Volume / Saturation Flow Rate	0.10	0.56	0.01	0.37
s, saturation flow rate [veh/h]	1634	1845	1774	1863
c, Capacity [veh/h]	204	1097	48	1315
d1, Uniform Delay [s]	20.03	8.89	22.70	3.26
k, delay calibration	0.11	0.37	0.11	0.15
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.82	13.60	6.81	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.95	0.46	0.53
d, Delay for Lane Group [s/veh]	25.85	22.50	29.51	3.70
Lane Group LOS	C	C	C	A
Critical Lane Group	Yes	Yes	Yes	No
50th-Percentile Queue Length [veh]	1.81	9.93	0.31	1.24
50th-Percentile Queue Length [ft]	45.33	248.21	7.76	30.91
95th-Percentile Queue Length [veh]	3.26	15.10	0.56	2.23
95th-Percentile Queue Length [ft]	81.59	377.40	13.96	55.64

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.85	25.85	22.50	22.50	29.51	3.70
Movement LOS	C	C	C	C	C	A
d_A, Approach Delay [s/veh]	25.85		22.50		4.50	
Approach LOS	C		C		A	
d_I, Intersection Delay [s/veh]	16.03					
Intersection LOS	B					
Intersection V/C	0.670					

Sequence

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

Sebastopol General Plan W-Trans
Scenario 5: 5: AM General Plan Cumulative Buildout Mitigated

Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.699

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	23	967	721	7	3	35
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	250	484	1	3	13
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	1217	1205	8	6	48
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	304	301	2	2	12
Total Analysis Volume [veh/h]	30	1217	1205	8	6	48
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	9	105	96	0	15	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Scenario 5: 5: AM General Plan Cumulative Buildout Mitigated

Lane Group Calculations

Lane Group	L	C	C	L	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	36	30	2	2
g / C, Green / Cycle	0.04	0.77	0.65	0.05	0.05
(v / s)_i Volume / Saturation Flow Rate	0.02	0.65	0.65	0.00	0.03
s, saturation flow rate [veh/h]	1774	1863	1861	1774	1583
c, Capacity [veh/h]	68	1441	1207	95	85
d1, Uniform Delay [s]	21.76	3.42	8.12	20.78	21.36
k, delay calibration	0.11	0.46	0.45	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.52	5.73	25.83	0.28	5.84
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.84	1.00	0.06	0.57
d, Delay for Lane Group [s/veh]	26.28	9.15	33.94	21.06	27.20
Lane Group LOS	C	A	F	C	C
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	0.37	2.29	14.09	0.06	0.60
50th-Percentile Queue Length [ft]	9.33	57.37	352.24	1.57	14.88
95th-Percentile Queue Length [veh]	0.67	4.13	20.32	0.11	1.07
95th-Percentile Queue Length [ft]	16.79	103.27	508.06	2.83	26.78

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.28	9.15	33.94	33.94	21.06	27.20
Movement LOS	C	A	C	C	C	C
d_A, Approach Delay [s/veh]	9.56		33.94		26.52	
Approach LOS	A		C		C	
d_I, Intersection Delay [s/veh]	21.69					
Intersection LOS	C					
Intersection V/C	0.699					

Sequence

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

Sebastopol General Plan W-Trans
Scenario 5: 5: AM General Plan Cumulative Buildout Mitigated

Intersection Level Of Service Report
Intersection 3: SR 116/Covert Lane

Control Type:	Signalized	Delay (sec / veh):	30.9
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.741

Intersection Setup

Name	Covert Ln		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	180.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Covert Ln		SR 116		SR 116	
Base Volume Input [veh/h]	71	155	619	130	178	675
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	16	25	248	43	44	288
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	180	867	173	222	963
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	45	217	43	56	241
Total Analysis Volume [veh/h]	87	180	867	173	222	963
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	ProtectedPermissi	Permissive
Signal group	4	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	5	0	5	5
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	15	0	40	0	35	75
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Scenario 5: 5: PM General Plan Cumulative Buildout Mitigated

Lane Group Calculations

Lane Group	L	R	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	8	8	30	39	39
g / C, Green / Cycle	0.15	0.15	0.54	0.71	0.71
(v / s)_i Volume / Saturation Flow Rate	0.05	0.11	0.57	0.29	0.52
s, saturation flow rate [veh/h]	1774	1583	1810	760	1863
c, Capacity [veh/h]	265	237	984	437	1314
d1, Uniform Delay [s]	20.98	22.51	12.58	11.93	4.95
k, delay calibration	0.11	0.11	0.49	0.11	0.41
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.71	4.98	44.74	0.94	3.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.76	1.06	0.51	0.73
d, Delay for Lane Group [s/veh]	21.70	27.50	57.32	12.87	7.99
Lane Group LOS	C	C	F	B	A
Critical Lane Group	No	Yes	Yes	Yes	No
50th-Percentile Queue Length [veh]	0.98	2.39	21.02	0.52	4.32
50th-Percentile Queue Length [ft]	24.50	59.66	525.52	13.07	107.99
95th-Percentile Queue Length [veh]	1.76	4.30	29.79	0.94	7.73
95th-Percentile Queue Length [ft]	44.10	107.39	744.71	23.53	193.20

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.70	27.50	57.32	57.32	12.87	7.99
Movement LOS	C	C	E	E	B	A
d_A, Approach Delay [s/veh]	25.61		57.32		8.91	
Approach LOS	C		E		A	
d_I, Intersection Delay [s/veh]	30.90					
Intersection LOS	C					
Intersection V/C	0.741					

Sequence

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

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Scenario 5: 5: PM General Plan Cumulative Buildout Mitigated

Intersection Level Of Service Report
Intersection 4: SR 116/Murphy Ave

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 2010	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.675

Intersection Setup

Name	Murphy Ave		SR 116		SR 116	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	1	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	70.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	Murphy Ave		SR 116		SR 116	
Base Volume Input [veh/h]	28	57	755	30	45	822
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	5	259	14	8	325
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	62	1014	44	53	1147
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	16	254	11	13	287
Total Analysis Volume [veh/h]	35	62	1014	44	53	1147
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

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Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	4	0	2	0	1	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	0	5	0	5	5
Maximum Green [s]	30	0	30	0	30	30
Amber [s]	3.0	0.0	3.0	0.0	3.0	3.0
All red [s]	1.0	0.0	1.0	0.0	1.0	1.0
Split [s]	15	0	66	0	9	75
Vehicle Extension [s]	3.0	0.0	3.0	0.0	3.0	3.0
Walk [s]	5	0	5	0	0	5
Pedestrian Clearance [s]	10	0	10	0	0	10
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	2.0	2.0
Minimum Recall	No		No		No	No
Maximum Recall	No		No		No	No
Pedestrian Recall	No		No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

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Scenario 5: 5: PM General Plan Cumulative Buildout Mitigated

Lane Group Calculations

Lane Group	C	C	L	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	28	2	34
g / C, Green / Cycle	0.08	0.61	0.05	0.75
(v / s)_i Volume / Saturation Flow Rate	0.06	0.57	0.03	0.62
s, saturation flow rate [veh/h]	1647	1849	1774	1863
c, Capacity [veh/h]	128	1121	96	1392
d1, Uniform Delay [s]	20.70	8.30	21.13	3.80
k, delay calibration	0.11	0.36	0.11	0.41
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	8.71	12.82	4.91	4.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.94	0.55	0.82
d, Delay for Lane Group [s/veh]	29.41	21.12	26.04	8.45
Lane Group LOS	C	C	C	A
Critical Lane Group	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	1.22	9.24	0.63	2.77
50th-Percentile Queue Length [ft]	30.52	230.95	15.74	69.26
95th-Percentile Queue Length [veh]	2.20	14.22	1.13	4.99
95th-Percentile Queue Length [ft]	54.93	355.57	28.33	124.66

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Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.41	29.41	21.12	21.12	26.04	8.45
Movement LOS	C	C	C	C	C	A
d_A, Approach Delay [s/veh]	29.41		21.12		9.22	
Approach LOS	C		C		A	
d_I, Intersection Delay [s/veh]	15.40					
Intersection LOS	B					
Intersection V/C	0.675					

Sequence

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

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Scenario 5: 5: PM General Plan Cumulative Buildout Mitigated

Intersection Level Of Service Report
Intersection 17: SR 116/Fircrest Ave

Control Type:	Signalized	Delay (sec / veh):	54.5
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.812

Intersection Setup

Name	SR 116		SR 116		Fircrest Ave	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	1	0
Pocket Length [ft]	90.00	100.00	100.00	100.00	40.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

volumes

Name	SR 116		SR 116		Fircrest Ave	
Base Volume Input [veh/h]	82	844	951	13	50	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	15	579	365	3	2	8
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	97	1423	1316	16	52	64
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	356	329	4	13	16
Total Analysis Volume [veh/h]	97	1423	1316	16	52	64
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Generated with PTV VISTRO
Version 4.00-00

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Protected	Permissive
Signal group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	9	61	52	0	59	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	10	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Sebastopol General Plan Update W-Trans
Scenario 5: 5: PM General Plan Cumulative Buildout Mitigated

Lane Group Calculations

Lane Group	L	C	C	L	R
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	4	38	30	3	3
g / C, Green / Cycle	0.08	0.77	0.62	0.06	0.06
(v / s)_i Volume / Saturation Flow Rate	0.05	0.76	0.72	0.03	0.04
s, saturation flow rate [veh/h]	1774	1863	1859	1774	1583
c, Capacity [veh/h]	139	1441	1140	111	99
d1, Uniform Delay [s]	21.34	0.00	9.45	22.13	22.38
k, delay calibration	0.11	0.50	0.50	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.18	20.91	85.36	3.02	6.78
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.33	1.33	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.99	1.17	0.47	0.64
d, Delay for Lane Group [s/veh]	27.52	20.91	94.81	25.14	29.16
Lane Group LOS	C	C	F	C	C
Critical Lane Group	Yes	No	Yes	No	Yes
50th-Percentile Queue Length [veh]	1.20	8.37	33.88	0.62	0.84
50th-Percentile Queue Length [ft]	29.90	209.26	847.03	15.49	21.06
95th-Percentile Queue Length [veh]	2.15	13.11	49.00	1.12	1.52
95th-Percentile Queue Length [ft]	53.83	327.87	1224.90	27.88	37.91

Generated with PTV VISTRO
Version 4.00-00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.52	20.91	94.81	94.81	25.14	29.16
Movement LOS	C	C	F	F	C	C
d_A, Approach Delay [s/veh]	21.33		94.81		27.36	
Approach LOS	C		F		C	
d_I, Intersection Delay [s/veh]	54.54					
Intersection LOS	D					
Intersection V/C	0.812					

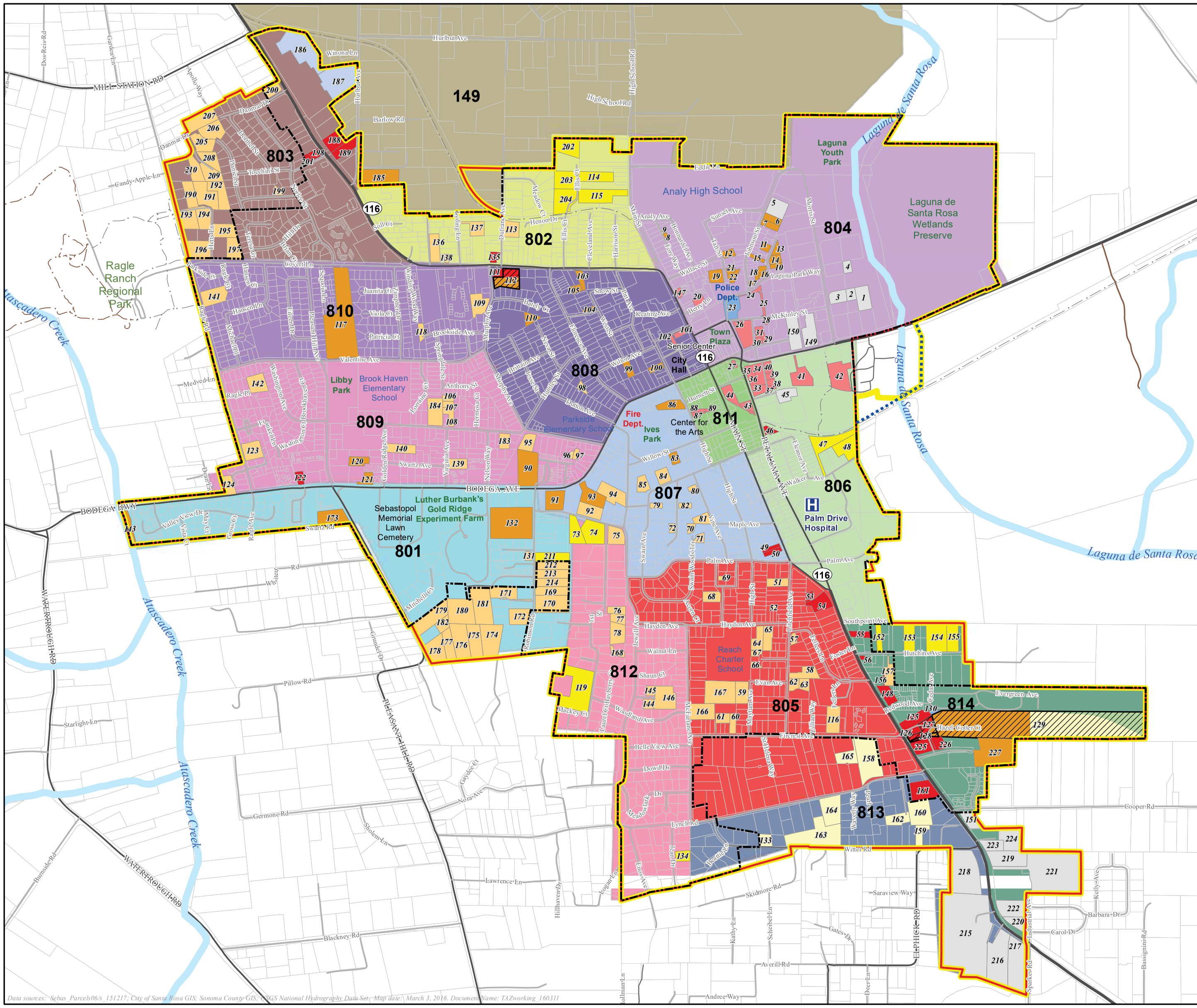
Sequence

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

Sebastopol General Plan Update W-Trans
Scenario 5: 5: PM General Plan Cumulative Buildout Mitigated

TRIP GENERATION INFORMATION

Traffic Analysis Zones (TAZ) and Vacant and Underdeveloped Parcels



Land Use Designation

- VDR - Very Low Density Residential
- LDR - Low Density Residential
- MDR -Medium Density Residential
- HDR - High Density Residential
- CD- Downton Core
- CO - Commercial/Office
- LI - Light Industrial
- OLI - Office/Light Industrial
- CF - Community Facility
- OS - Open Space
- PA - Park
- Single parcel with multiple designations

Planning Boundaries

- City of Sebastopol
- Sphere of Influence
- Urban Growth Boundary
- Proposed Sphere of Influence/Urban Growth Boundary Expansion

not to scale

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

Data sources: Sebas_Parcels06/s_151217; City of Santa Rosa GIS; Sonoma County GIS; USGS National Hydrography Data Set; Map date: March 3, 2016; Document Name: TAZworking_160311

Trip Generation Summary by Land Use - General Plan Buildout

Land Use	ITE LU #	Units	General Plan	Daily Trips	AM Trips			PM Trips		
					Total	In	Out	Total	In	Out
Industrial	110	ksf	59.959	418	55	49	6	58	7	51
Single Family Residential	210	units	328	3,123	246	62	184	328	207	121
Multi-Family Residential	220	units	422	2,806	215	43	172	262	170	92
Hotel	310	rooms	173	1,413	92	54	38	104	53	51
Office	710	ksf	137.375	1,515	214	189	25	205	35	170
Retail	826	ksf	341.159	15,120	328	203	125	925	407	518
Double-Counted non-res trips				-3,028	-113	-81	-32	-212	-82	-130
Total				21,367	1,037	519	518	1,670	797	873

Trip Generation Summary by Land Use - General Plan Cumulative Buildout

Land Use	ITE LU #	Units	General Plan	General Plan Cumulative	Daily Trips	AM Trips			PM Trips		
						Total	In	Out	Total	In	Out
Industrial	110	ksf	59.959	624.93	4,774	630	555	75	664	80	584
Single Family Residential	210	units	328	186	4,894	386	97	289	514	324	190
Multi-Family Residential	220	units	422	249	4,462	342	68	274	416	270	146
Hotel	310	rooms	173	0	1,413	92	54	38	104	53	51
Office	710	ksf	137.375	0	1,515	214	189	25	205	35	170
Retail	826	ksf	341.159	0	15,120	328	203	125	925	407	518
Double-Counted non-res trips					-3,743	-207	-164	-43	-311	-94	-217
Total					28,435	1,785	1,002	783	2,517	1,075	1,442

SIGNAL WARRANT CALCULATIONS

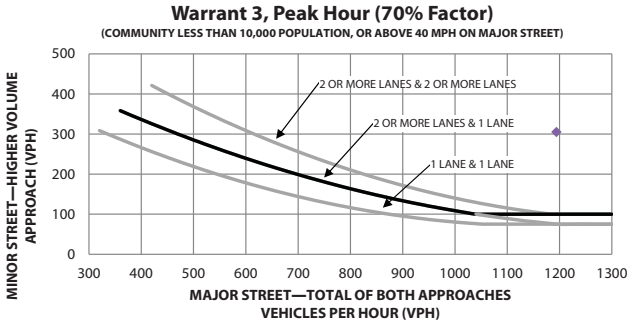
Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol SEB039
SR 116 Healdsburg Ave & Covert Lane

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Covert Lane
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	35	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM Existing

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 1.82 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 305 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1499 vph	
Condition B	Met
The plotted point falls above the curve	



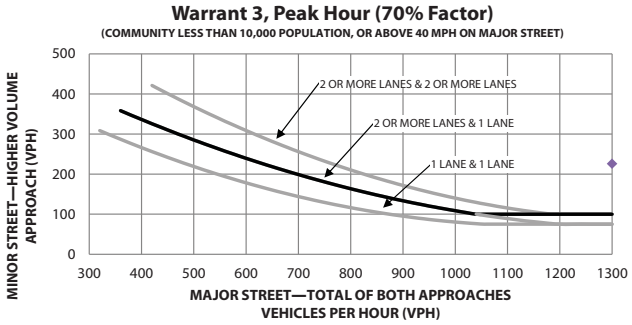
Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol SEB039
SR 116 Healdsburg Ave & Covert Lane

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Covert Lane
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	35	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM Existing

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 1.56 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 226 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1828 vph	
Condition B	Met
The plotted point falls above the curve	



Warrant 3: Peak-Hour Volumes and Delay

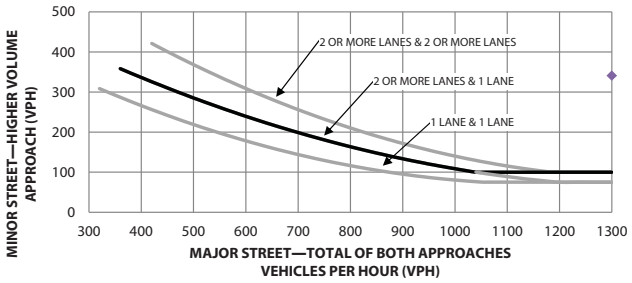
City of Sebastopol — SEB039
SR 116 Healdsburg Ave & Covert Lane

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Covert Lane
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	35	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM General Plan Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 2.62 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 341 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1783 vph	
Condition B	Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

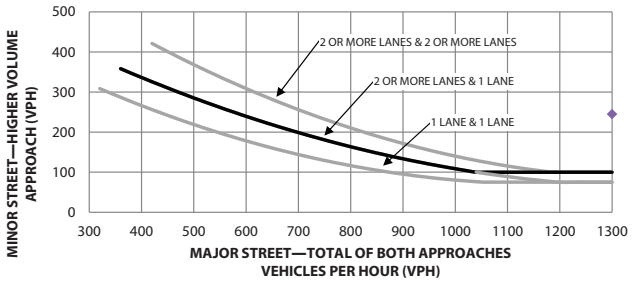
City of Sebastopol — SEB039
SR 116 Healdsburg Ave & Covert Lane

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Covert Lane
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	35	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM General Plan Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 2.98 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 245 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 2279 vph	
Condition B	Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



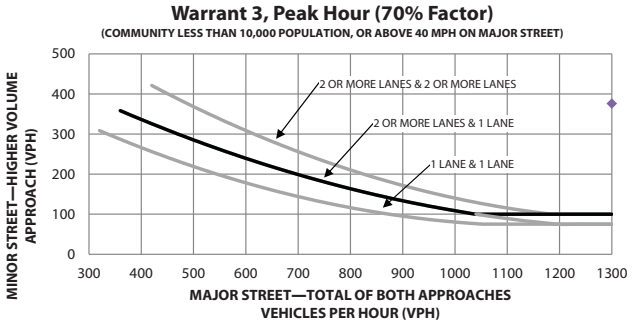
Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol — SEB039
SR 116 Healdsburg Ave & Covert Lane

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Covert Lane
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	35	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM General Plan Cumulative Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 4.16 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 376 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1975 vph	
Condition B	Met
The plotted point falls above the curve	



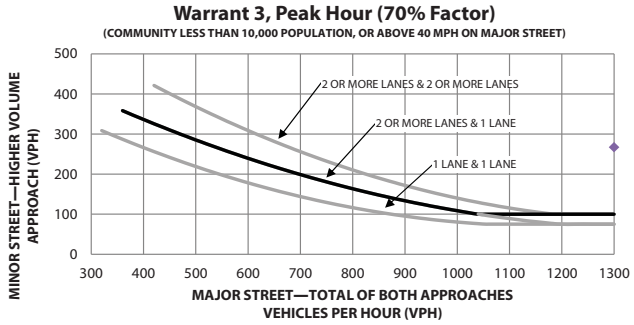
Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol — SEB039
SR 116 Healdsburg Ave & Covert Lane

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Covert Lane
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	35	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM General Plan Cumulative Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Met
Condition A1	Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 5.06 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 267 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 2492 vph	
Condition B	Met
The plotted point falls above the curve	



Warrant 3: Peak-Hour Volumes and Delay

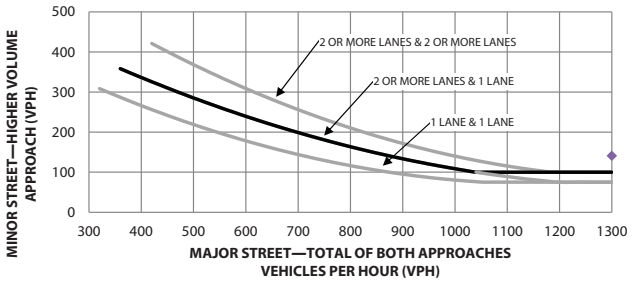
City of Sebastopol — SEB039
SR 116 Healdsburg Ave & Murphy Ave

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Murphy Ave
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM Existing

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.93 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 141 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1466 vph	
Condition B	Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

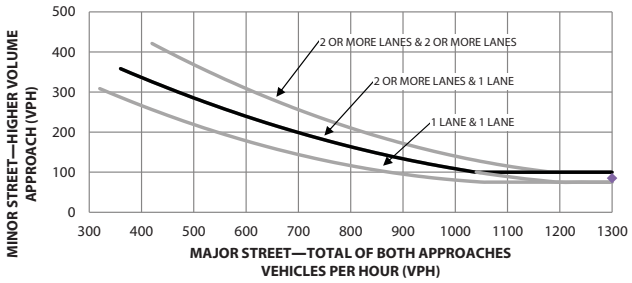
City of Sebastopol — SEB039
SR 116 Healdsburg Ave & Murphy Ave

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Murphy Ave
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM Existing

Warrant 3 Met?: Met when either Condition A or B is met	**No**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.49 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 85 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1737 vph	
Condition B	Not Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol SEB039
SR 116 Healdsburg Ave & Murphy Ave

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Murphy Ave
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM General Plan Buildout

Warrant 3 Met?: Met when either Condition A or B is met — **Yes**

Condition A: Met when conditions A1, A2, and A3 are met — Not Met

Condition A1 — Not Met

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 1.18 vehicle-hours

Condition A2 — Met

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 156 vph

Condition A3 — Met

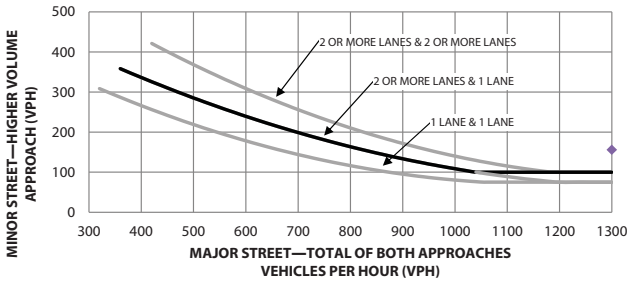
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches

Total Entering Volume: 1724 vph

Condition B — Met

The plotted point falls above the curve

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol SEB039
SR 116 Healdsburg Ave & Murphy Ave

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Murphy Ave
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM General Plan Buildout

Warrant 3 Met?: Met when either Condition A or B is met — **No**

Condition A: Met when conditions A1, A2, and A3 are met — Not Met

Condition A1 — Not Met

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 0.84 vehicle-hours

Condition A2 — Not Met

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 97 vph

Condition A3 — Met

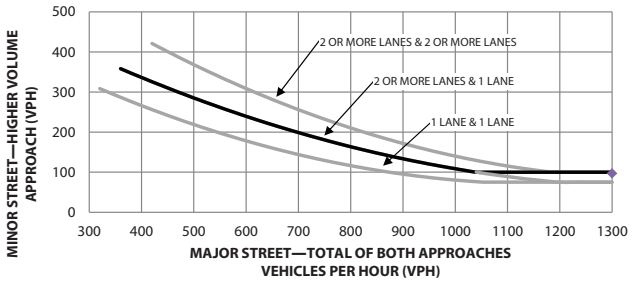
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches

Total Entering Volume: 2152 vph

Condition B — Not Met

The plotted point falls above the curve

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

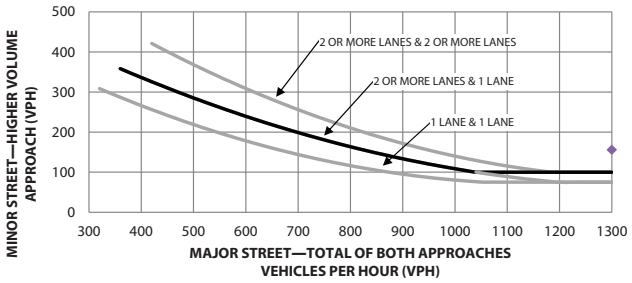
City of Sebastopol — SEB039
SR 116 Healdsburg Ave & Murphy Ave

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Murphy Ave
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM General Plan Cumulative Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 1.18 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 156 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1908 vph	
Condition B	Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

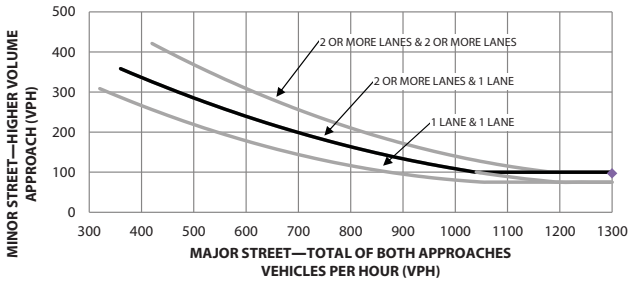
City of Sebastopol — SEB039
SR 116 Healdsburg Ave & Murphy Ave

	Major Street	Minor Street
Street Name	SR 116 Healdsburg Ave	Murphy Ave
Direction	E-W	N-S
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM General Plan Cumulative Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**No**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.98 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 97 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 2355 vph	
Condition B	Not Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



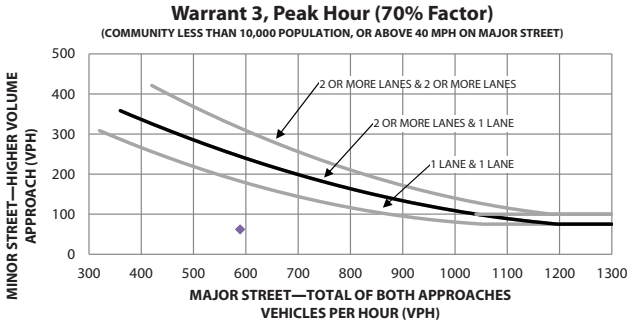
Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol SEB039
Petaluma Ave-McKinley St & McKinley St/Laguna Park Wy

	Major Street	Minor Street
Street Name	Petaluma Ave-McKinley St	McKinley St/Laguna Park Wy
Direction	E-W	N-S
Number of Lanes	2	1
Approach Speed	25	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM Existing

Warrant 3 Met?: Met when either Condition A or B is met	**No**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.26 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 62 vph	
Condition A3	Not Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 651 vph	
Condition B	Not Met
The plotted point falls above the curve	



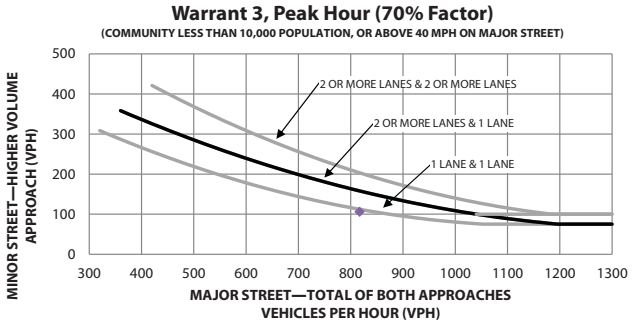
Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol SEB039
Petaluma Ave-McKinley St & McKinley St/Laguna Park Wy

	Major Street	Minor Street
Street Name	Petaluma Ave-McKinley St	McKinley St/Laguna Park Wy
Direction	E-W	N-S
Number of Lanes	2	1
Approach Speed	25	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM Existing

Warrant 3 Met?: Met when either Condition A or B is met	**No**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.59 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 106 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 923 vph	
Condition B	Not Met
The plotted point falls above the curve	



Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol SEB039
Petaluma Ave-McKinley St & McKinley St/Laguna Park Wy

	Major Street	Minor Street
Street Name	Petaluma Ave-McKinley St	McKinley St/Laguna Park Wy
Direction	E-W	N-S
Number of Lanes	2	1
Approach Speed	25	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM General Plan Buildout

Warrant 3 Met?: Met when either Condition A or B is met — **No**

Condition A: Met when conditions A1, A2, and A3 are met — Not Met

Condition A1 — Not Met

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 0.51 vehicle-hours

Condition A2 — Met

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 101 vph

Condition A3 — Met

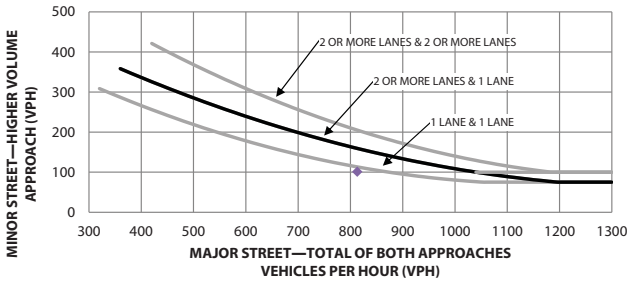
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches

Total Entering Volume: 914 vph

Condition B — Not Met

The plotted point falls above the curve

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol SEB039
Petaluma Ave-McKinley St & McKinley St/Laguna Park Wy

	Major Street	Minor Street
Street Name	Petaluma Ave-McKinley St	McKinley St/Laguna Park Wy
Direction	E-W	N-S
Number of Lanes	2	1
Approach Speed	25	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM General Plan Buildout

Warrant 3 Met?: Met when either Condition A or B is met — **Yes**

Condition A: Met when conditions A1, A2, and A3 are met — Not Met

Condition A1 — Not Met

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 1.01 vehicle-hours

Condition A2 — Met

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 181 vph

Condition A3 — Met

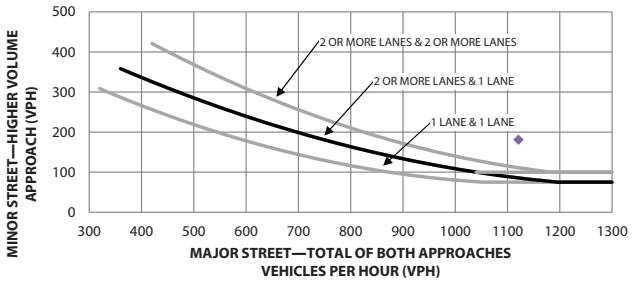
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches

Total Entering Volume: 1302 vph

Condition B — Met

The plotted point falls above the curve

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

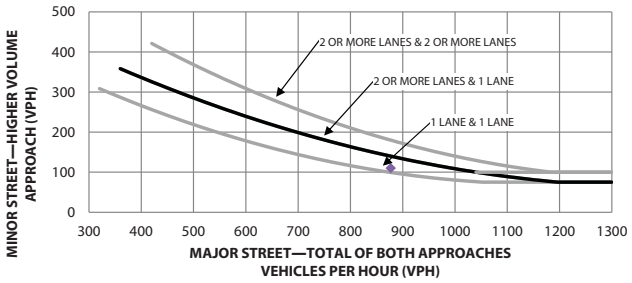
City of Sebastopol SEB039
Petaluma Ave-McKinley St & McKinley St/Laguna Park Wy

	Major Street	Minor Street
Street Name	Petaluma Ave-McKinley St	McKinley St/Laguna Park Wy
Direction	E-W	N-S
Number of Lanes	2	1
Approach Speed	25	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM General Plan Cumulative Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**No**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.56 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 110 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 987 vph	
Condition B	Not Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

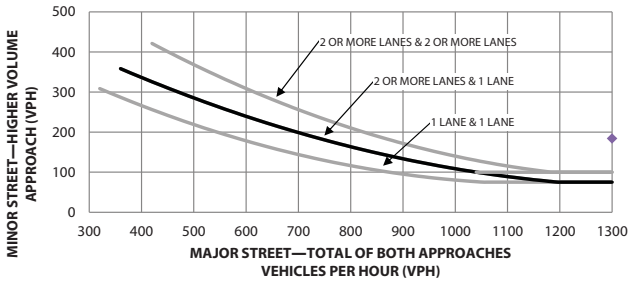
City of Sebastopol SEB039
Petaluma Ave-McKinley St & McKinley St/Laguna Park Wy

	Major Street	Minor Street
Street Name	Petaluma Ave-McKinley St	McKinley St/Laguna Park Wy
Direction	E-W	N-S
Number of Lanes	2	1
Approach Speed	25	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM General Plan Cumulative Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 3.21 vehicle-hours	
Condition A2	Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 184 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1517 vph	
Condition B	Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



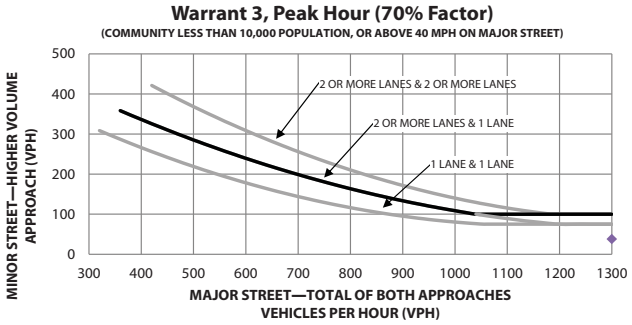
Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol — SEB039
SR 116 Petaluma Ave & Fircrest Ave

	Major Street	Minor Street
Street Name	SR 116 Petaluma Ave	Fircrest Ave
Direction	N-S	E-W
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM Existing

Warrant 3 Met?: Met when either Condition A or B is met	**No**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.17 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 38 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1756 vph	
Condition B	Not Met
The plotted point falls above the curve	



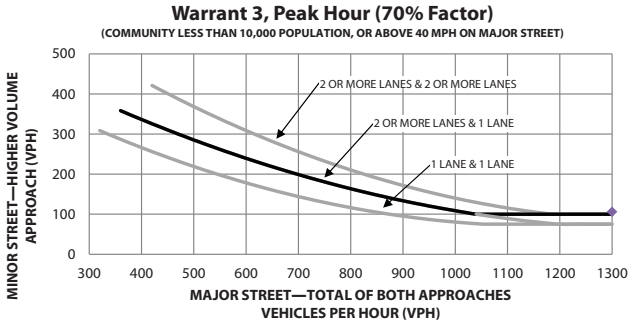
Warrant 3: Peak-Hour Volumes and Delay

City of Sebastopol — SEB039
SR 116 Petaluma Ave & Fircrest Ave

	Major Street	Minor Street
Street Name	SR 116 Petaluma Ave	Fircrest Ave
Direction	N-S	E-W
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM Existing

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.87 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 106 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 1996 vph	
Condition B	Met
The plotted point falls above the curve	



Warrant 3: Peak-Hour Volumes and Delay

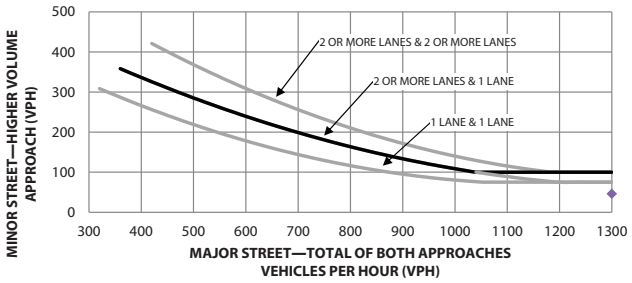
City of Sebastopol SEB039
SR 116 Petaluma Ave & Fircrest Ave

	Major Street	Minor Street
Street Name	SR 116 Petaluma Ave	Fircrest Ave
Direction	N-S	E-W
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM General Plan Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**No**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.22 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 46 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 2064 vph	
Condition B	Not Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

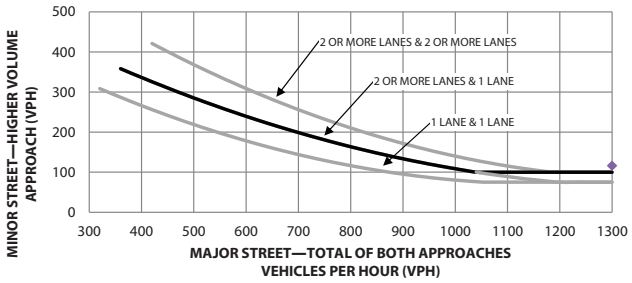
City of Sebastopol SEB039
SR 116 Petaluma Ave & Fircrest Ave

	Major Street	Minor Street
Street Name	SR 116 Petaluma Ave	Fircrest Ave
Direction	N-S	E-W
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM General Plan Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 1.38 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 116 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 2515 vph	
Condition B	Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

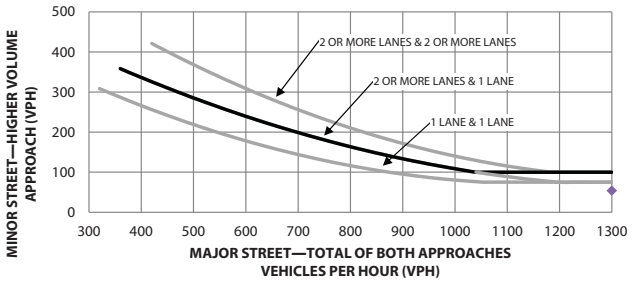
City of Sebastopol — SEB039
SR 116 Petaluma Ave & Fircrest Ave

	Major Street	Minor Street
Street Name	SR 116 Petaluma Ave	Fircrest Ave
Direction	N-S	E-W
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: AM General Plan Cumulative Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**No**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 0.4 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 54 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 2514 vph	
Condition B	Not Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



Warrant 3: Peak-Hour Volumes and Delay

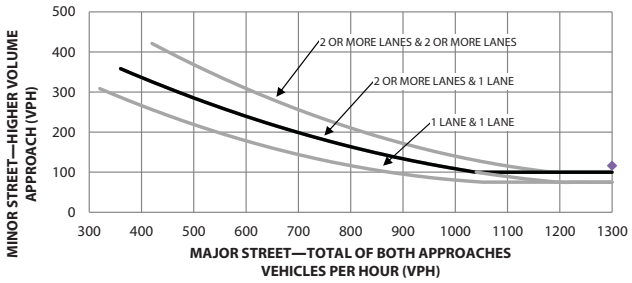
City of Sebastopol — SEB039
SR 116 Petaluma Ave & Fircrest Ave

	Major Street	Minor Street
Street Name	SR 116 Petaluma Ave	Fircrest Ave
Direction	N-S	E-W
Number of Lanes	1	2
Approach Speed	30	25

Population less than 10,000? Yes
Date of Count: Thursday, March 27, 2014
Scenario: PM General Plan Cumulative Buildout

Warrant 3 Met?: Met when either Condition A or B is met	**Yes**
Condition A: Met when conditions A1, A2, and A3 are met	Not Met
Condition A1	Not Met
The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach	
Minor Approach Delay: 2.22 vehicle-hours	
Condition A2	Not Met
The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes	
Minor Approach Volume: 116 vph	
Condition A3	Met
The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches	
Total Entering Volume: 2968 vph	
Condition B	Met
The plotted point falls above the curve	

Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION, OR ABOVE 40 MPH ON MAJOR STREET)



PES Environmental, Inc.
Engineering & Environmental Services

April 3, 2015

954.001.03.002

Richard Emig
City of Sebastopol
Public Works Department
714 Johnson Street
Sebastopol, California 95472

Re: Groundwater Level Data Transmittal
First Quarter 2015
City of Sebastopol
Sebastopol, California

Dear Mr. Emig:

This data transmittal has been prepared by PES Environmental, Inc. (PES) on behalf of the City of Sebastopol (City) to summarize the results of the groundwater level monitoring program performed in the first quarter of 2015 (January through March). The following sections of this transmittal summarize the activities performed and data collected for the subject monitoring period.

GROUNDWATER LEVEL MONITORING PROGRAM

The activities performed for the monitoring period (January through March) included: (1) recording groundwater levels in five City production wells; (2) summarizing regional precipitation data; (3) performing a site inspection with manual depth-to-water measurements; and (4) preparing groundwater level hydrographs.

Groundwater Level Measurements

Groundwater level data collected for the fourth quarter included groundwater elevations from five City monitoring: inactive municipal Wells #5 and #7, and active municipal Wells #4, #6, and #8. These wells are equipped with Solinst Inc., electronic submersible "LT Edge Levellogger" absolute (i.e., un-vented) pressure transducers and data logger systems. Additionally, a Solinst Inc., "LT Edge Barologger" is installed within Well #4 to provide baseline data for barometric compensation. The pressure transducers/data loggers

were programmed to record pressure-head measurements at 15-minute intervals. Pressure-head measurements stored in each data logger were transmitted to PES' office via telemetry stations installed within the respective pump houses. The pressure-head measurements were then barometrically compensated and correlated to manual groundwater level measurements that were obtained via an electronic water level sounder on January 13, 2015. The respective manual groundwater level measurements on January 13, 2015 for Wells #4, #6, #7, and #8 were 114.7, 64.8, 82.1, and 40.3 feet below top of casing. An accurate groundwater level measurement could not be obtained from Well #5 due to the presence of oil within the well casing. Due to data transmission malfunctions with the telemetry system, pressure-head data is not available for the following brief periods: January 9 through 12, 2015 (Well #7 only), and March 14 through 15, 2015 (Wells #5, #6, and #8).

Precipitation Data

Daily precipitation records maintained by the National Oceanic and Atmospheric Administration are summarized on Table 1. The precipitation data (reported in total inches per day) were measured at the Sonoma County Airport, Santa Rosa, California (Station ID: USW00023213). As indicated in Table 1, a total of 4.41 inches of rain were recorded during the subject monitoring period, comprising of 0.10 inches, 4.19 inches, and 0.12 inches in January, February, and March, respectively.

Groundwater Level Hydrographs

Following conversion of the pressure-head measurements to depth-to-groundwater levels, groundwater level hydrographs were prepared for each of the five City wells (Plates 1 through 5). To facilitate groundwater trend analysis, groundwater data from the previous quarter (October through December) is included on Plates 1 through 5. During the subject monitoring period (January through March), observed groundwater levels generally exhibit a trend of recovery or relative stability. These observations appear to correlate with the seasonal precipitation and associated groundwater recharge during the monitoring period.

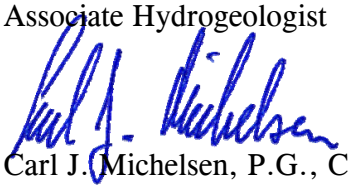
CLOSURE

PES appreciates the opportunity to be of service to the City and in providing assistance with the subject Groundwater Level Monitoring Program. Should you have any questions regarding this information, please call PES at (415) 899-1600.

Yours very truly,

PES ENVIRONMENTAL, INC.

Peter D. Gorman, P.G., C.HG.
Associate Hydrogeologist



Carl J. Michelsen, P.G., C.HG.
Principal Geochemist

cc: Susan Kelly – City of Sebastopol
Dante Del Prete – City of Sebastopol

Attachments: Table 1 – Summary of Precipitation Totals
Plate 1 – Groundwater Level Hydrograph, Municipal Well #4
Plate 2 – Groundwater Level Hydrograph, Municipal Well #5
Plate 3 – Groundwater Level Hydrograph, Municipal Well #6
Plate 4 – Groundwater Level Hydrograph, Municipal Well #7
Plate 5 – Groundwater Level Hydrograph, Municipal Well #8

TABLES

Table 1
Summary of Precipitation Totals
Sonoma County Airport
Santa Rosa, California

Day	Daily Precipitation Totals (inches)		
	Jan-2015	Feb-2015	Mar-2015
1	--	--	--
2	--	--	T
3	--	--	--
4	T	--	--
5	--	--	--
6	--	2.61	--
7	--	0.04	--
8	--	1.31	--
9	--	0.23	--
10	--	--	--
11	--	--	0.02
12	--	--	T
13	--	--	--
14	--	--	--
15	--	--	--
16	0.08	--	T
17	0.02	--	--
18	--	--	--
19	--	--	--
20	--	--	T
21	--	--	--
22	--	--	0.06
23	--	--	0.04
24	--	--	--
25	--	--	--
26	--	--	--
27	--	T	--
28	--	T	--
29	--	na	--
30	--	na	--
31	--	na	--
Total (inches)	0.10	4.19	0.12
Total Precipitation (in inches) for January through March: 4.41			

Notes:

Source of Data: National Oceanic and Atmospheric Administration (NOAA) Preliminary Record of Climatological Observations for Sonoma County Airport - Cooperative Station Network (Station ID: USW00023213)
-- = No measureable/reported precipitation
T = Trace precipitation event
na = Not Applicable

PLATES

Plate 1
Groundwater Level Hydrograph - Well #4
City of Sebastopol Municipal Wellfield
Sebastopol, California

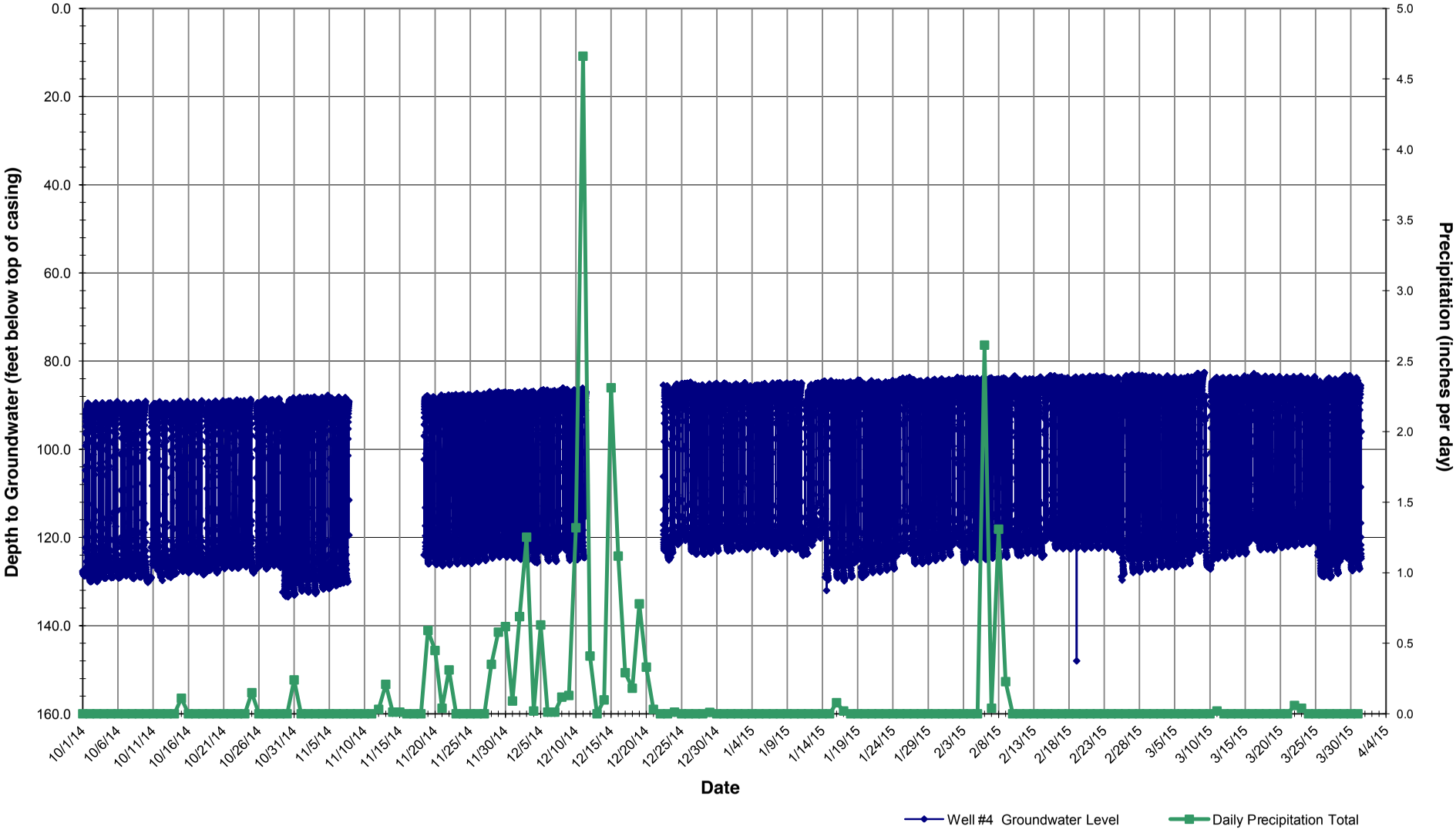


Plate 2
Groundwater Level Hydrograph - Well #5
City of Sebastopol Municipal Wellfield
Sebastopol, California

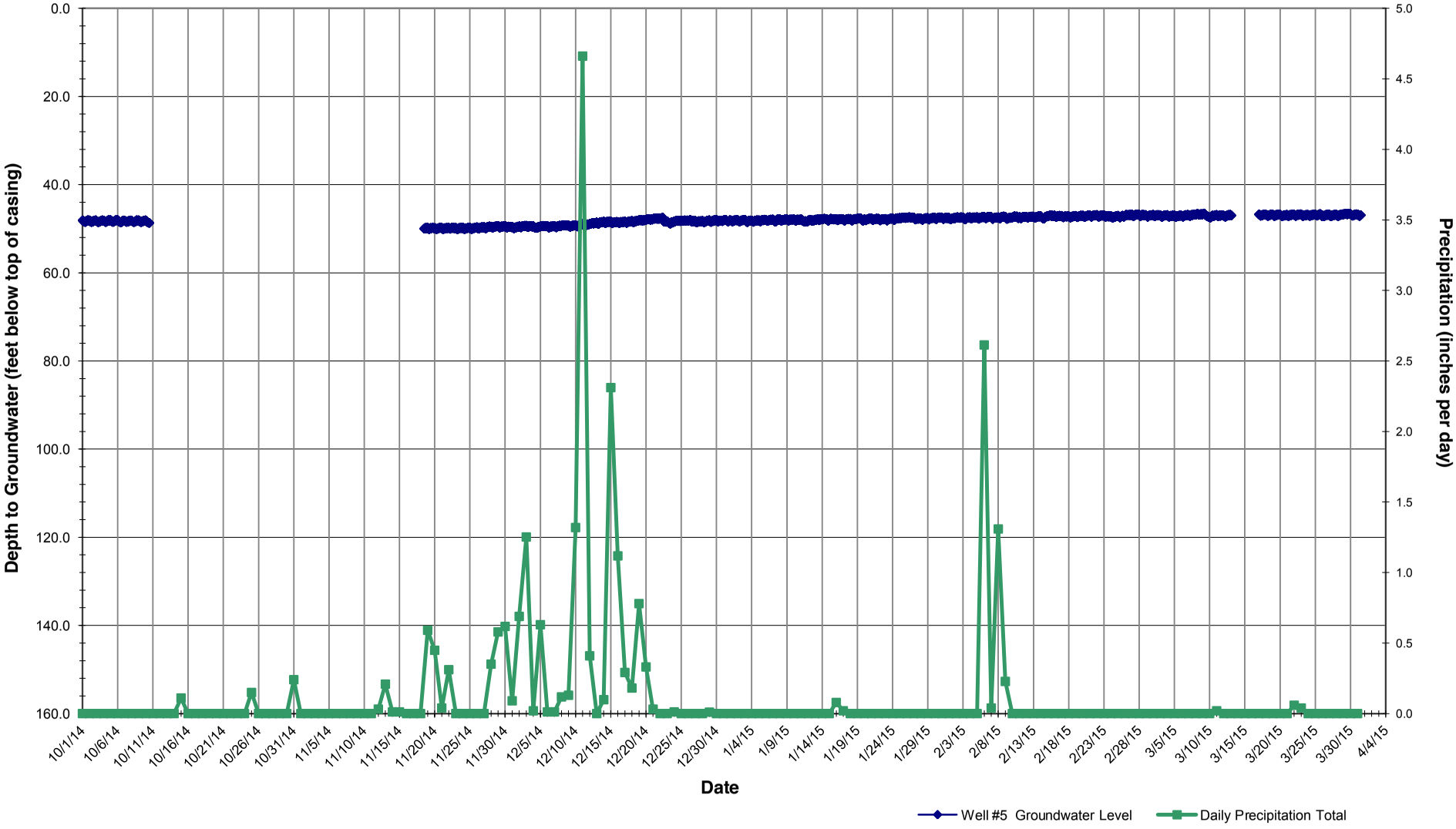


Plate 3
Groundwater Level Hydrograph - Well #6
City of Sebastopol Municipal Wellfield
Sebastopol, California

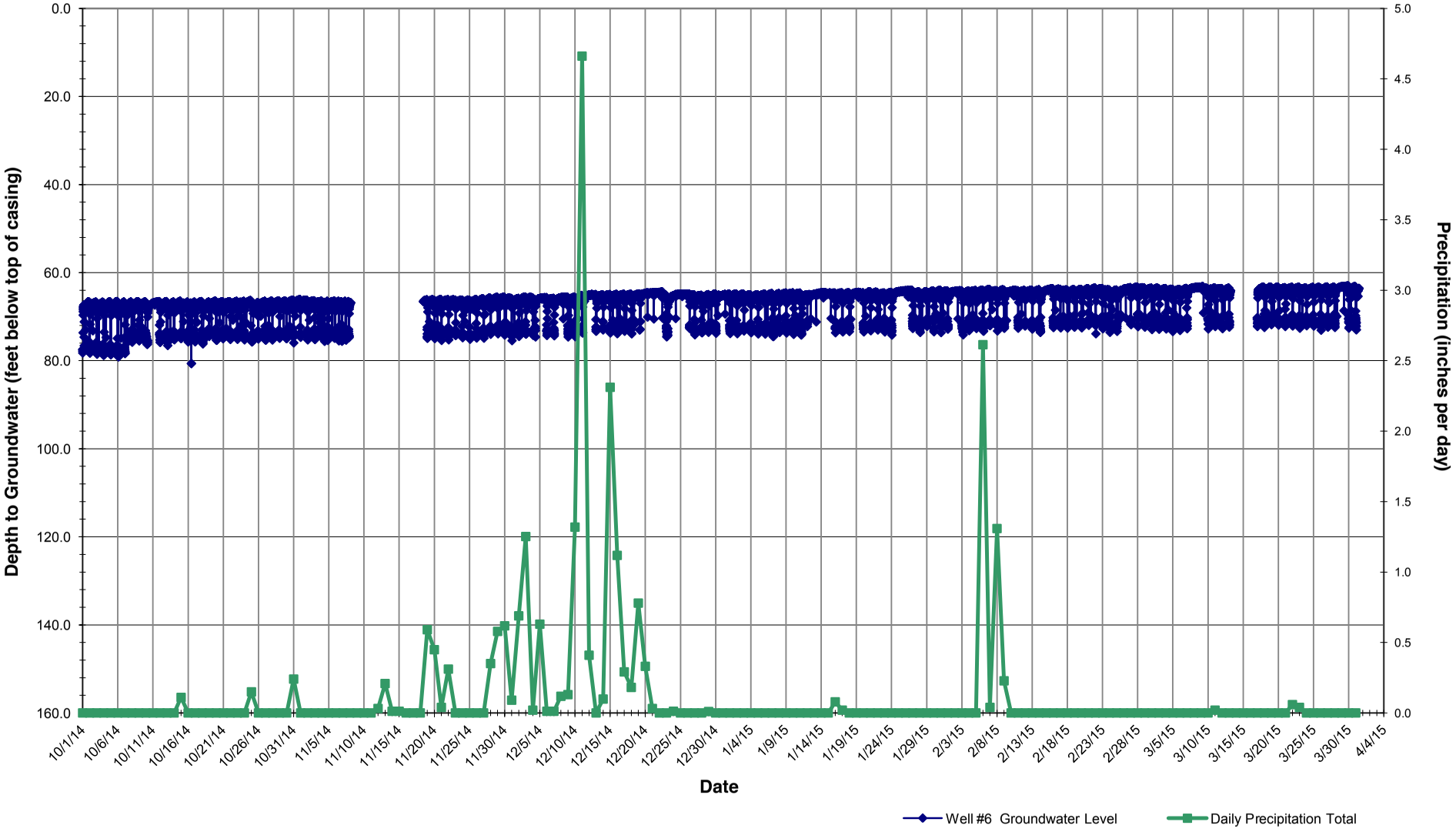


Plate 4
Groundwater Level Hydrograph - Well #7
City of Sebastopol Municipal Wellfield
Sebastopol, California

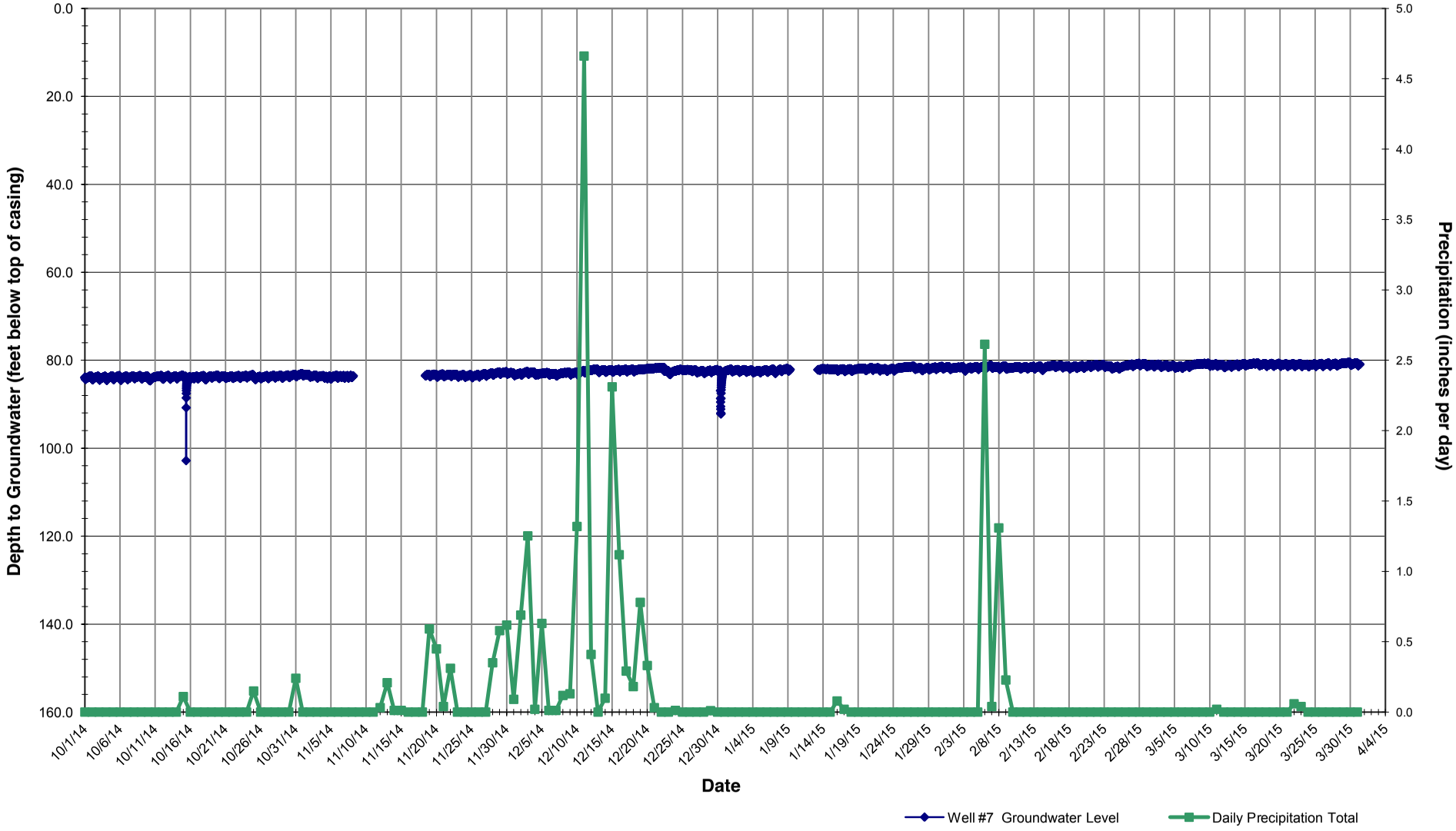
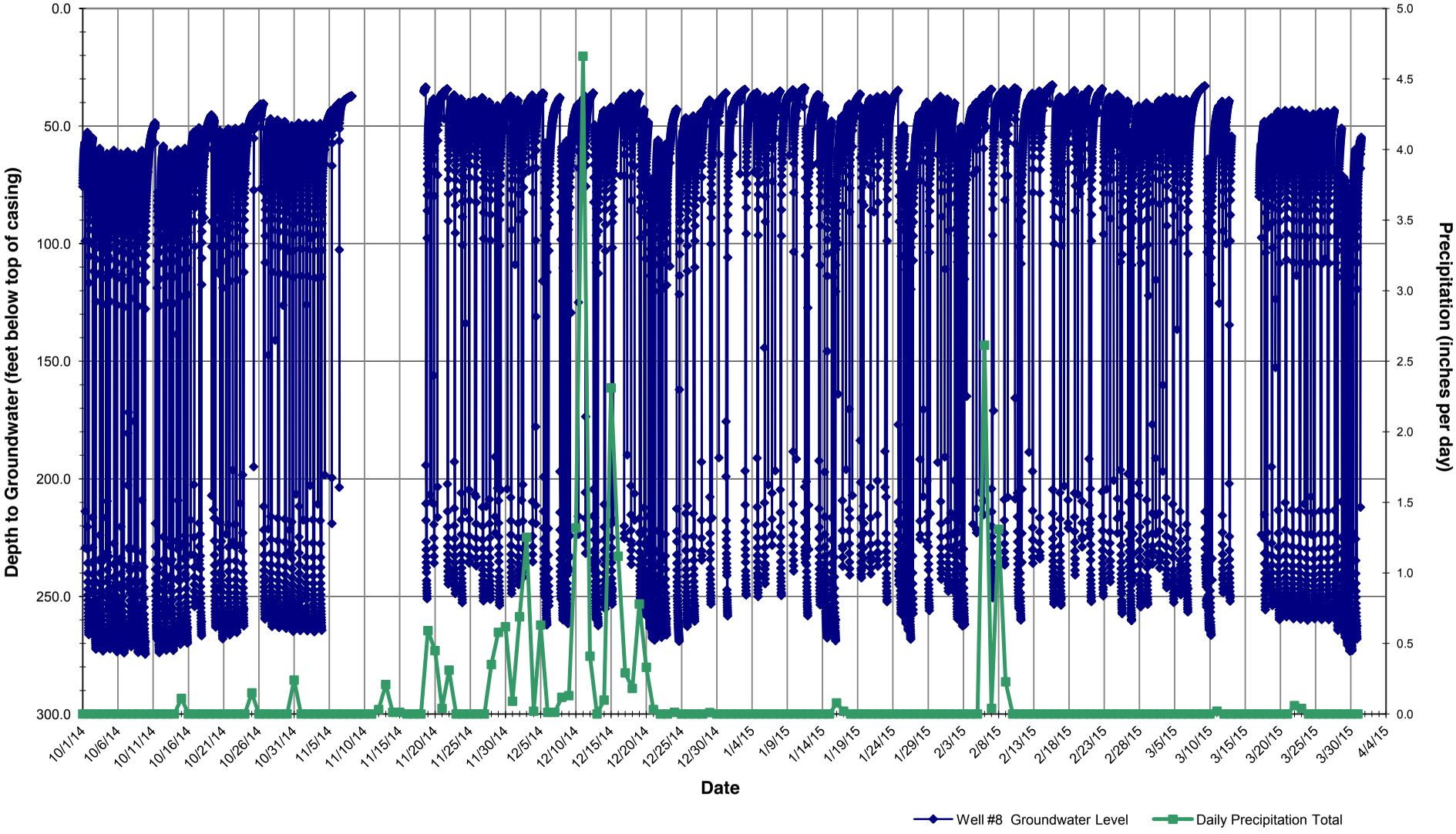


Plate 5
Groundwater Level Hydrograph - Well #8
City of Sebastopol Municipal Wellfield
Sebastopol, California



PES Environmental, Inc.
Engineering & Environmental Services

July 21, 2015

954.001.03.002

Richard Emig
City of Sebastopol
Public Works Department
714 Johnson Street
Sebastopol, California 95472

Re: Groundwater Level Data Transmittal
Second Quarter 2015
City of Sebastopol
Sebastopol, California

Dear Mr. Emig:

This data transmittal has been prepared by PES Environmental, Inc. (PES) on behalf of the City of Sebastopol (City) to summarize the results of the groundwater level monitoring program performed in the second quarter of 2015 (April through June). The following sections of this transmittal summarize the activities performed and data collected for the subject monitoring period.

GROUNDWATER LEVEL MONITORING PROGRAM

The activities performed for the monitoring period (April through June) included: (1) recording groundwater levels in five City production wells; (2) summarizing regional precipitation data; (3) performing a site inspection with manual depth-to-water measurements; and (4) preparing groundwater level hydrographs.

Groundwater Level Measurements

Groundwater level data collected for the fourth quarter included groundwater elevations from five City monitoring: inactive municipal Wells #5 and #7, and active municipal Wells #4, #6, and #8. These wells are equipped with Solinst Inc., electronic submersible "LT Edge Levellogger" absolute (i.e., un-vented) pressure transducers and data logger systems. Additionally, a Solinst Inc., "LT Edge Barologger" is installed within Well #4 to provide baseline data for barometric compensation. The pressure transducers/data loggers

were programmed to record pressure-head measurements at 15-minute intervals. Pressure-head measurements stored in each data logger were transmitted to PES' office via telemetry stations installed within the respective pump houses. The pressure-head measurements were then barometrically compensated and correlated to manual groundwater level measurements that were obtained via an electronic water level sounder on June 30, 2015. The respective manual groundwater level measurements on June 30, 2015 for Wells #4, #6, #7, and #8 were 117.9, 63.2, 80.2, and 88.2 feet below top of casing. An accurate groundwater level measurement could not be obtained from Well #5 due to the presence of oil within the well casing. Due to data transmission malfunctions with the telemetry system, pressure-head data is not available for the following brief periods: May 29 through June 1, 2015 (Well #6 only), and April 17 through 22, 2015 (Well #7 only).

Precipitation Data

Daily precipitation records maintained by the National Oceanic and Atmospheric Administration are summarized on Table 1. The precipitation data (reported in total inches per day) were measured at the Sonoma County Airport, Santa Rosa, California (Station ID: USW00023213). As indicated in Table 1, a total of 1.52 inches of rain were recorded during the subject monitoring period, comprising of 1.50 inches and 0.02 inches in April and June, respectively. No measureable precipitation was recorded in May.

Groundwater Level Hydrographs

Following conversion of the pressure-head measurements to depth-to-groundwater levels, groundwater level hydrographs were prepared for each of the five City wells (Plates 1 through 5). To facilitate groundwater trend analysis, groundwater data from the previous quarter (January through March) is included on Plates 1 through 5. During the subject monitoring period (April through June), observed groundwater levels generally exhibit a trend of relative stability in Wells #4, #5, #6, and #7, and a slight declining trend in Well #8. These observations appear to correlate with the seasonal precipitation and associated groundwater recharge during the monitoring period.

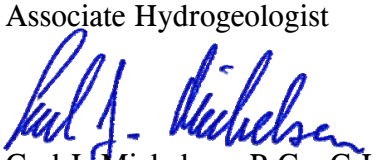
CLOSURE

PES appreciates the opportunity to be of service to the City and in providing assistance with the subject Groundwater Level Monitoring Program. Should you have any questions regarding this information, please call PES at (415) 899-1600.

Yours very truly,

PES ENVIRONMENTAL, INC.

Peter D. Gorman, P.G., C.HG.
Associate Hydrogeologist



Carl J. Michelsen, P.G., C.HG.
Principal Geochemist

cc: Susan Kelly – City of Sebastopol
Dante Del Prete – City of Sebastopol

Attachments: Table 1 – Summary of Precipitation Totals
Plate 1 – Groundwater Level Hydrograph, Municipal Well #4
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Plate 3 – Groundwater Level Hydrograph, Municipal Well #6
Plate 4 – Groundwater Level Hydrograph, Municipal Well #7
Plate 5 – Groundwater Level Hydrograph, Municipal Well #8

TABLES

Table 1
Summary of Precipitation Totals
Sonoma County Airport
Santa Rosa, California

Day	Daily Precipitation Totals (inches)		
	Apr-2015	May-2015	Jun-2015
1	T	--	0.01
2	--	--	--
3	--	--	--
4	--	--	--
5	0.18	--	--
6	0.10	--	--
7	0.75	T	--
8	T	--	--
9	--	--	T
10	--	--	0.01
11	--	--	--
12	--	--	--
13	T	--	--
14	T	--	--
15	--	--	--
16	--	--	--
17	T	--	--
18	--	T	--
19	--	T	--
20	--	T	--
21	T	T	--
22	--	--	--
23	--	--	--
24	0.46	--	--
25	0.01	--	--
26	--	T	--
27	--	T	--
28	--	--	--
29	--	--	--
30	--	T	--
31	na	--	na
Total (inches)	1.50	0.00	0.02
Total Precipitation (in inches) for April through June: 1.52			

Notes:

Source of Data: National Oceanic and Atmospheric Administration (NOAA) Preliminary Record of Climatological Observations for Sonoma County Airport - Cooperative Station Network (Station ID: USW00023213)
-- = No measureable/reported precipitation
T = Trace precipitation event
na = Not Applicable

PLATES

Plate 1
Groundwater Level Hydrograph - Well #4
City of Sebastopol Municipal Wellfield
Sebastopol, California

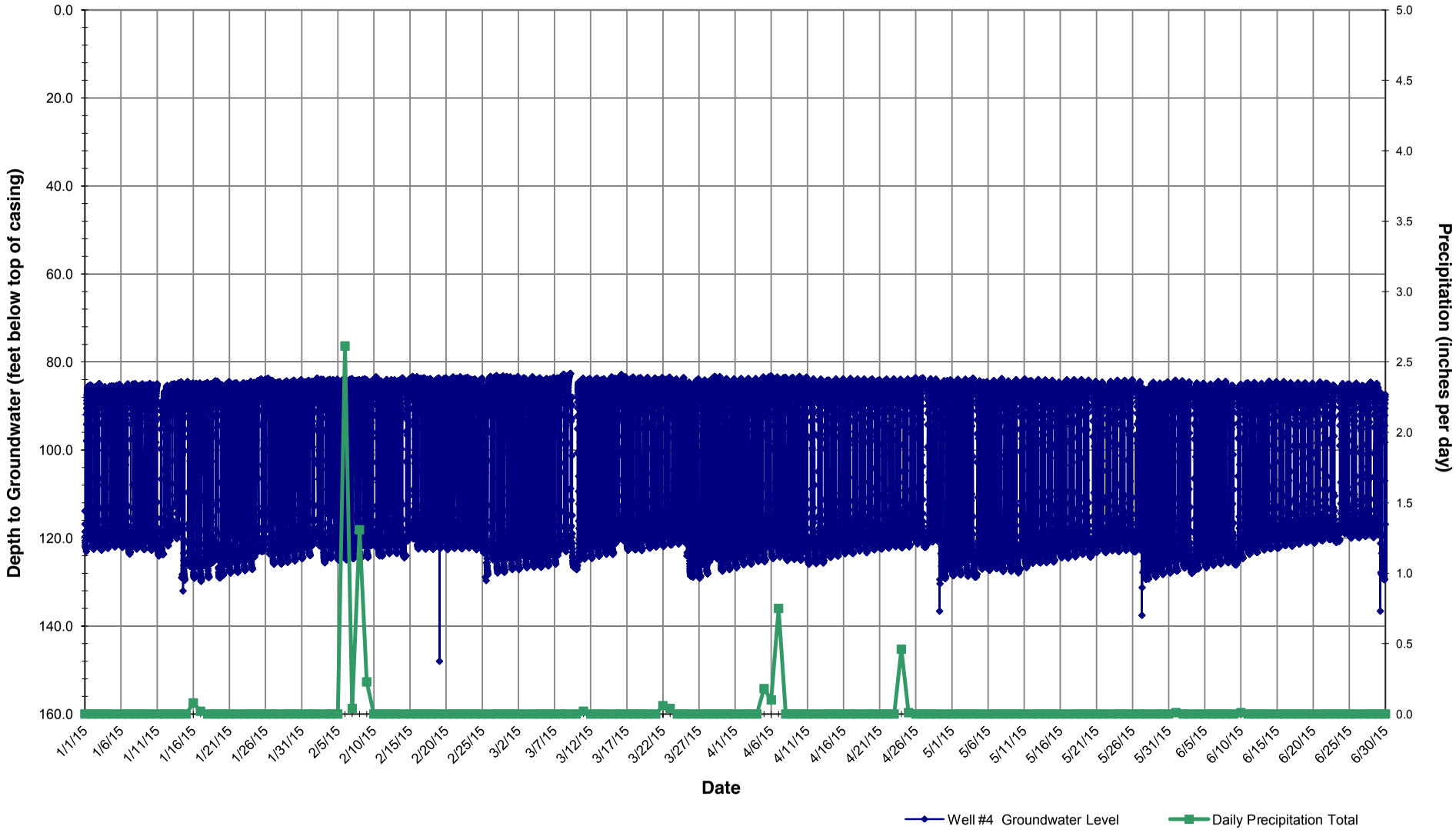


Plate 2
Groundwater Level Hydrograph - Well #5
City of Sebastopol Municipal Wellfield
Sebastopol, California

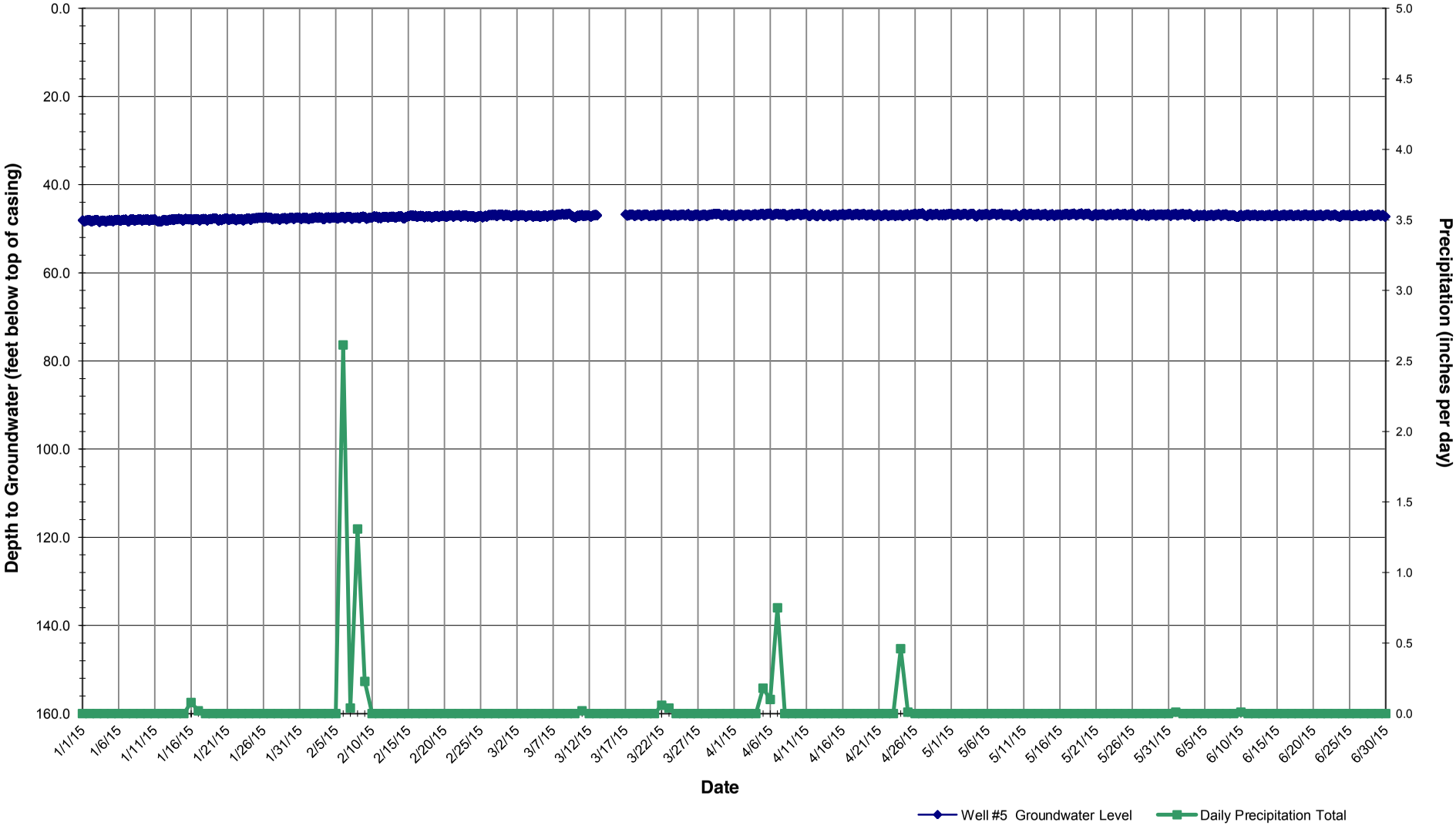


Plate 3
Groundwater Level Hydrograph - Well #6
City of Sebastopol Municipal Wellfield
Sebastopol, California

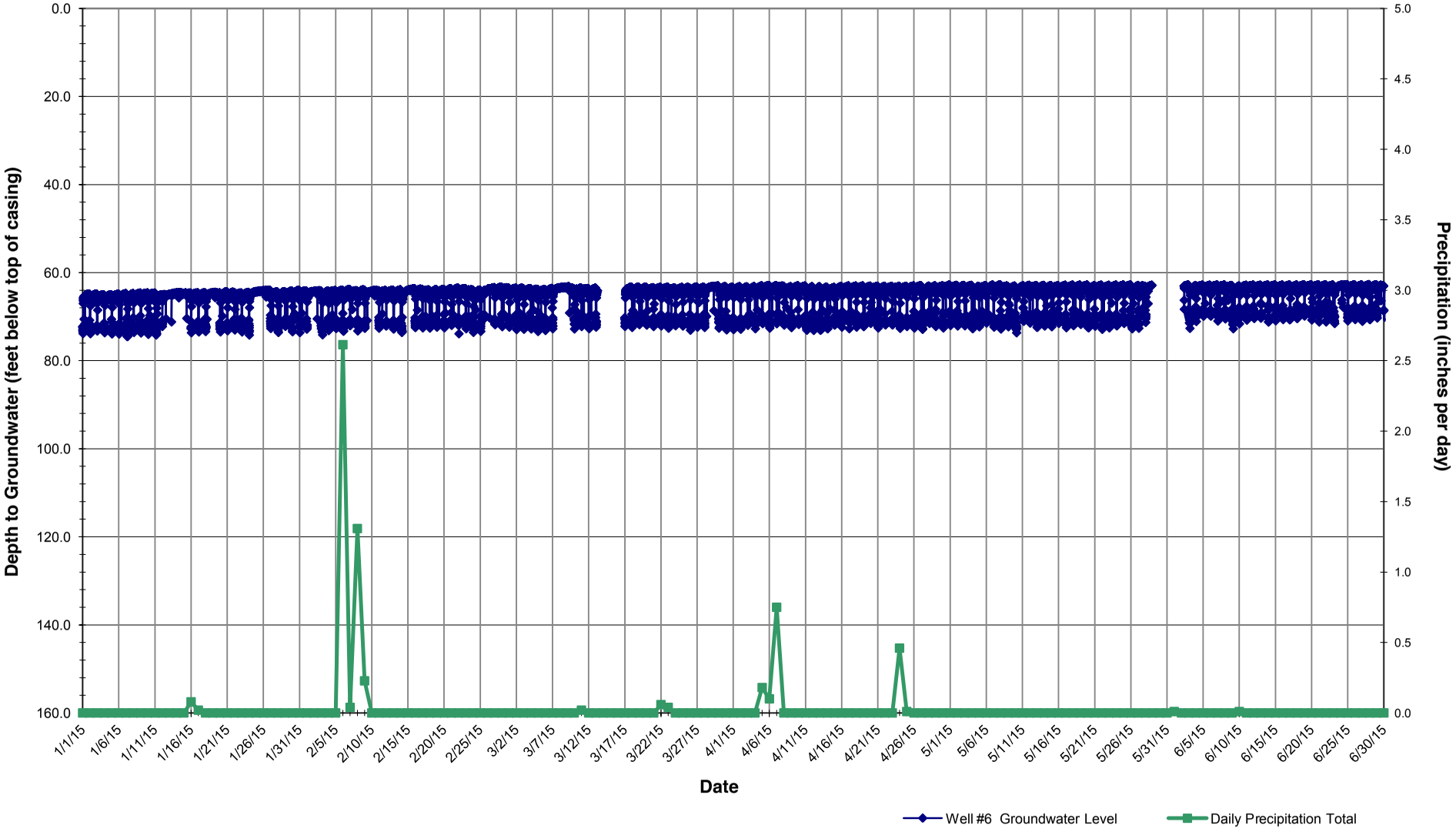


Plate 4
Groundwater Level Hydrograph - Well #7
City of Sebastopol Municipal Wellfield
Sebastopol, California

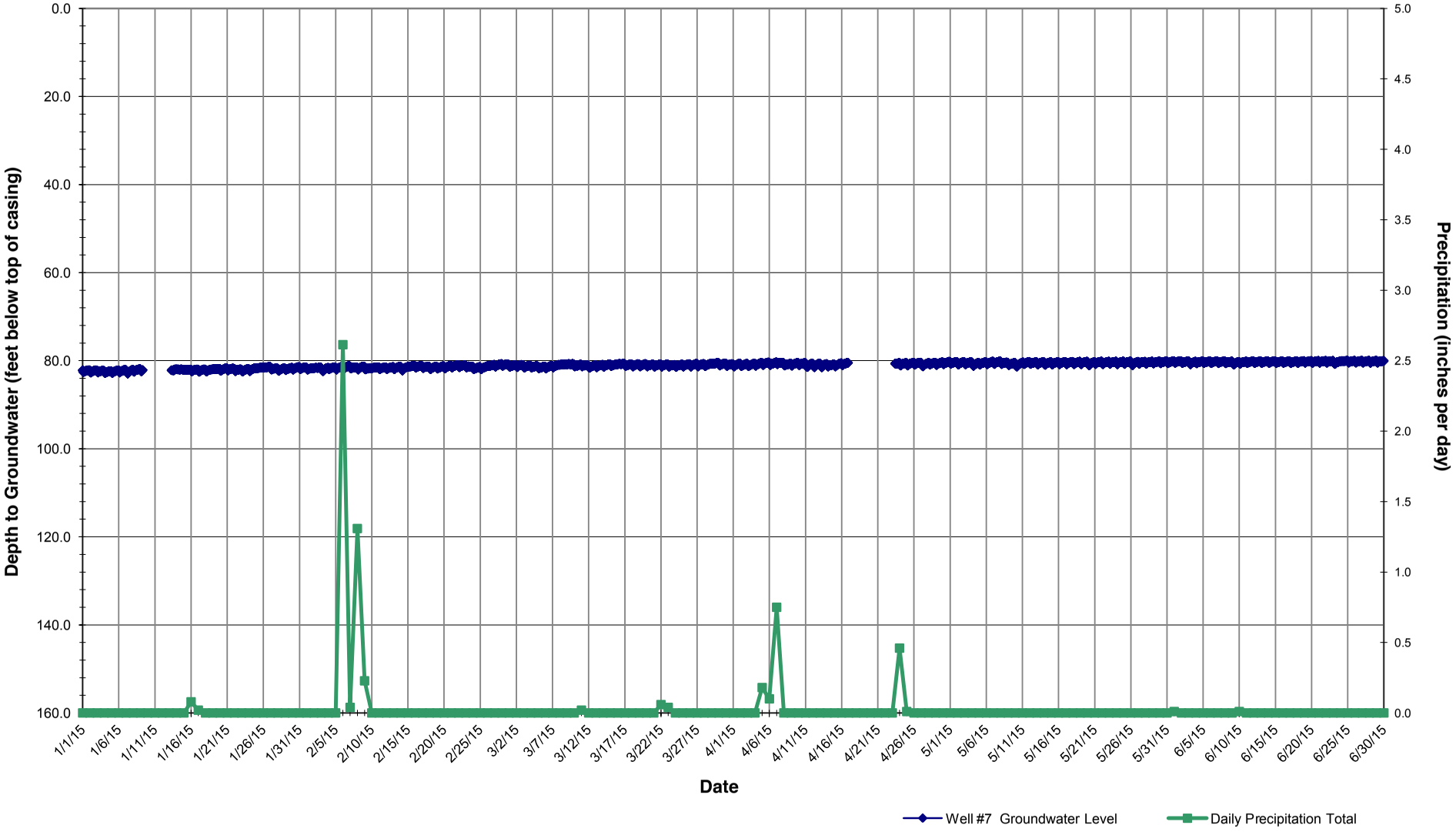
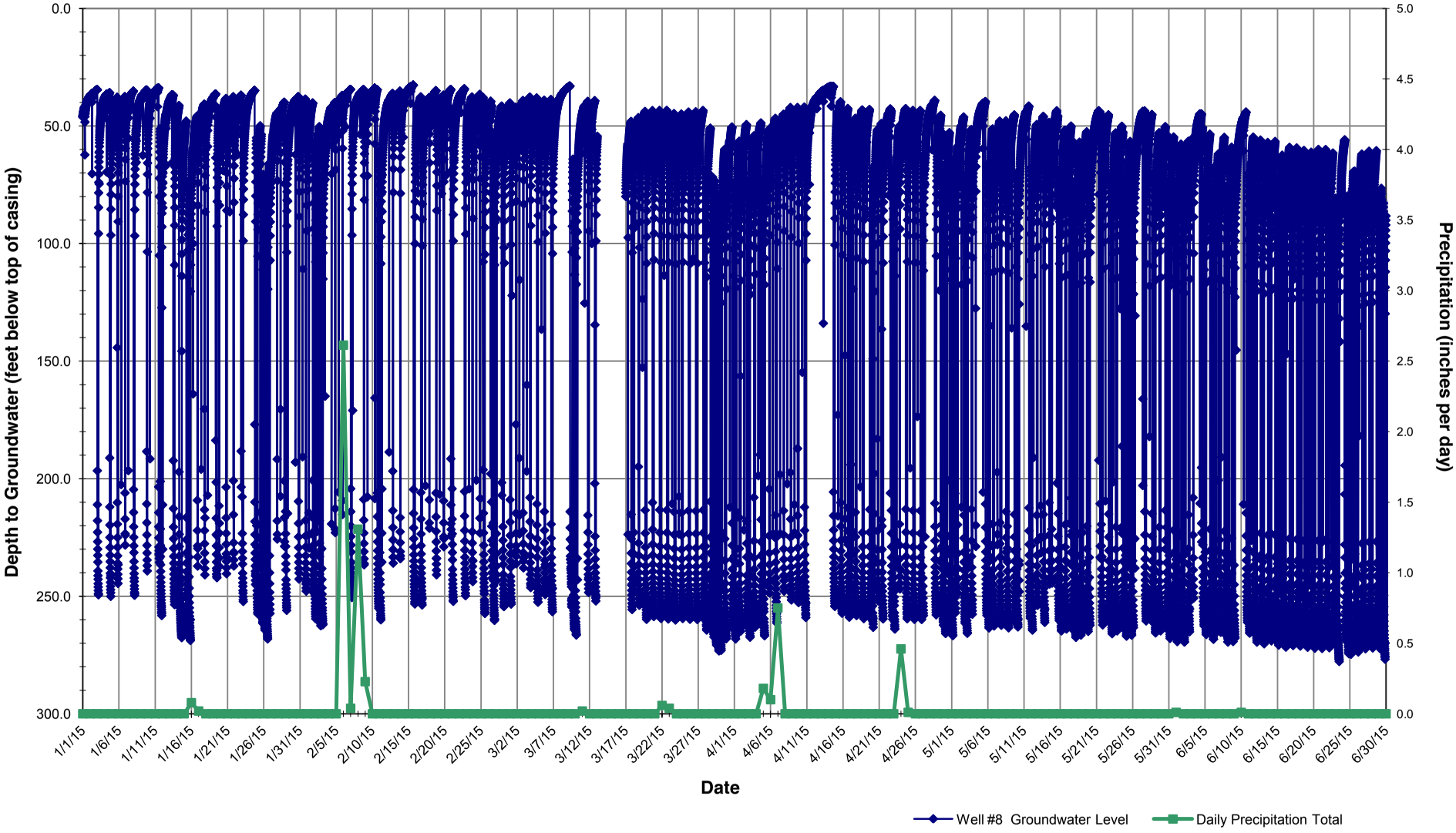


Plate 5
Groundwater Level Hydrograph - Well #8
City of Sebastopol Municipal Wellfield
Sebastopol, California



PES Environmental, Inc.
Engineering & Environmental Services

November 5, 2015

954.001.03.002

Richard Emig
City of Sebastopol
Public Works Department
714 Johnson Street
Sebastopol, California 95472

Re: Groundwater Level Data Transmittal
Third Quarter 2015
City of Sebastopol
Sebastopol, California

Dear Mr. Emig:

This data transmittal has been prepared by PES Environmental, Inc. (PES) on behalf of the City of Sebastopol (City) to summarize the results of the groundwater level monitoring program performed in the third quarter of 2015 (July through September). The following sections of this transmittal summarize the activities performed and data collected for the subject monitoring period.

GROUNDWATER LEVEL MONITORING PROGRAM

The activities performed for the monitoring period (July through September) included: (1) recording groundwater levels in five City production wells; (2) summarizing regional precipitation data; (3) performing a site inspection with manual depth-to-water measurements; and (4) preparing groundwater level hydrographs.

Groundwater Level Measurements

Groundwater level data collected for the fourth quarter included groundwater elevations from five City monitoring: inactive municipal Wells #5 and #7, and active municipal Wells #4, #6, and #8. These wells are equipped with Solinst Inc., electronic submersible "LT Edge Levellogger" absolute (i.e., un-vented) pressure transducers and data logger systems. Additionally, a Solinst Inc., "LT Edge Barologger" is installed within Well #4 to provide baseline data for barometric compensation. The pressure transducers/data loggers were programmed to record pressure-head measurements at 15-minute intervals. Pressure-head measurements stored in each data logger were transmitted to PES' office via

telemetry stations installed within the respective pump houses. The pressure-head measurements were then barometrically compensated and correlated to manual groundwater level measurements that were obtained via an electronic water level sounder on September 10, 2015. The respective manual groundwater level measurements on September 10, 2015 for Wells #4, #6, #7, and #8 were 130.1, 64.3, 80.9, and 83.1 feet below top of casing. An accurate groundwater level measurement could not be obtained from Well #5 due to the presence of oil within the well casing. Due to data transmission errors with the telemetry system, pressure-head data is not available for the following brief periods: July 27 through 30, 2015 (Wells #5, #6, and #8), and August 8 through 9, 2015 (Well #7 only).

Precipitation Data

Daily precipitation records maintained by the National Oceanic and Atmospheric Administration are summarized on Table 1. The precipitation data (reported in total inches per day) were measured at the Sonoma County Airport, Santa Rosa, California (Station ID: USW00023213). As indicated in Table 1, a total of 0.50 inches of rain were recorded during the subject monitoring period, comprising of 0.05, 0.03, and 0.42 inches in July, August, and September, respectively.

Groundwater Level Hydrographs

Following conversion of the pressure-head measurements to depth-to-groundwater levels, groundwater level hydrographs were prepared for each of the five City wells (Plates 1 through 5). To facilitate groundwater trend analysis, groundwater data from the previous quarter (April through June) is included on Plates 1 through 5. During the subject monitoring period (July through September), observed groundwater levels generally exhibit slight declining trends, which appear to correlate with the low seasonal precipitation totals and regional drought conditions.

CLOSURE

PES appreciates the opportunity to be of service to the City and in providing assistance with the subject Groundwater Level Monitoring Program. Should you have any questions regarding this information, please call PES at (415) 899-1600.

Yours very truly,

PES ENVIRONMENTAL, INC.

Peter D. Gorman, P.G., C.HG.
Associate Hydrogeologist

Carl J. Michelsen, P.G., C.HG.
Principal Geochemist

cc: Henry Mikus – City of Sebastopol
Dante Del Prete – City of Sebastopol

Attachments: Table 1 – Summary of Precipitation Totals
Plate 1 – Groundwater Level Hydrograph, Municipal Well #4
Plate 2 – Groundwater Level Hydrograph, Municipal Well #5
Plate 3 – Groundwater Level Hydrograph, Municipal Well #6
Plate 4 – Groundwater Level Hydrograph, Municipal Well #7
Plate 5 – Groundwater Level Hydrograph, Municipal Well #8

TABLES

Table 1
Summary of Precipitation Totals
Sonoma County Airport
Santa Rosa, California

Day	Daily Precipitation Totals (inches)		
	Jul-2015	Aug-2015	Sep-2015
1	--	--	--
2	T	--	--
3	--	T	--
4	--	T	--
5	--	--	--
6	--	T	--
7	--	T	--
8	--	--	--
9	0.05	--	--
10	T	--	--
11	--	--	--
12	--	T	--
13	--	--	T
14	--	--	0.01
15	--	--	--
16	T	--	0.41
17	--	--	--
18	--	T	--
19	--	--	--
20	--	--	--
21	--	--	--
22	--	--	--
23	--	--	--
24	--	--	--
25	--	--	--
26	--	--	--
27	--	--	--
28	--	--	--
29	T	0.03	--
30	--	--	--
31	T	--	na
Total (inches)	0.05	0.03	0.42
Total Precipitation (in inches) for July through September: 0.50			

Notes:

Source of Data: National Oceanic and Atmospheric Administration (NOAA) Preliminary Record of Climatological Observations for Sonoma County Airport - Cooperative Station Network (Station ID: USW00023213)
-- = No measureable/reported precipitation
T = Trace precipitation event
na = Not Applicable

PLATES

Plate 1
Groundwater Level Hydrograph - Well #4
City of Sebastopol Municipal Wellfield
Sebastopol, California

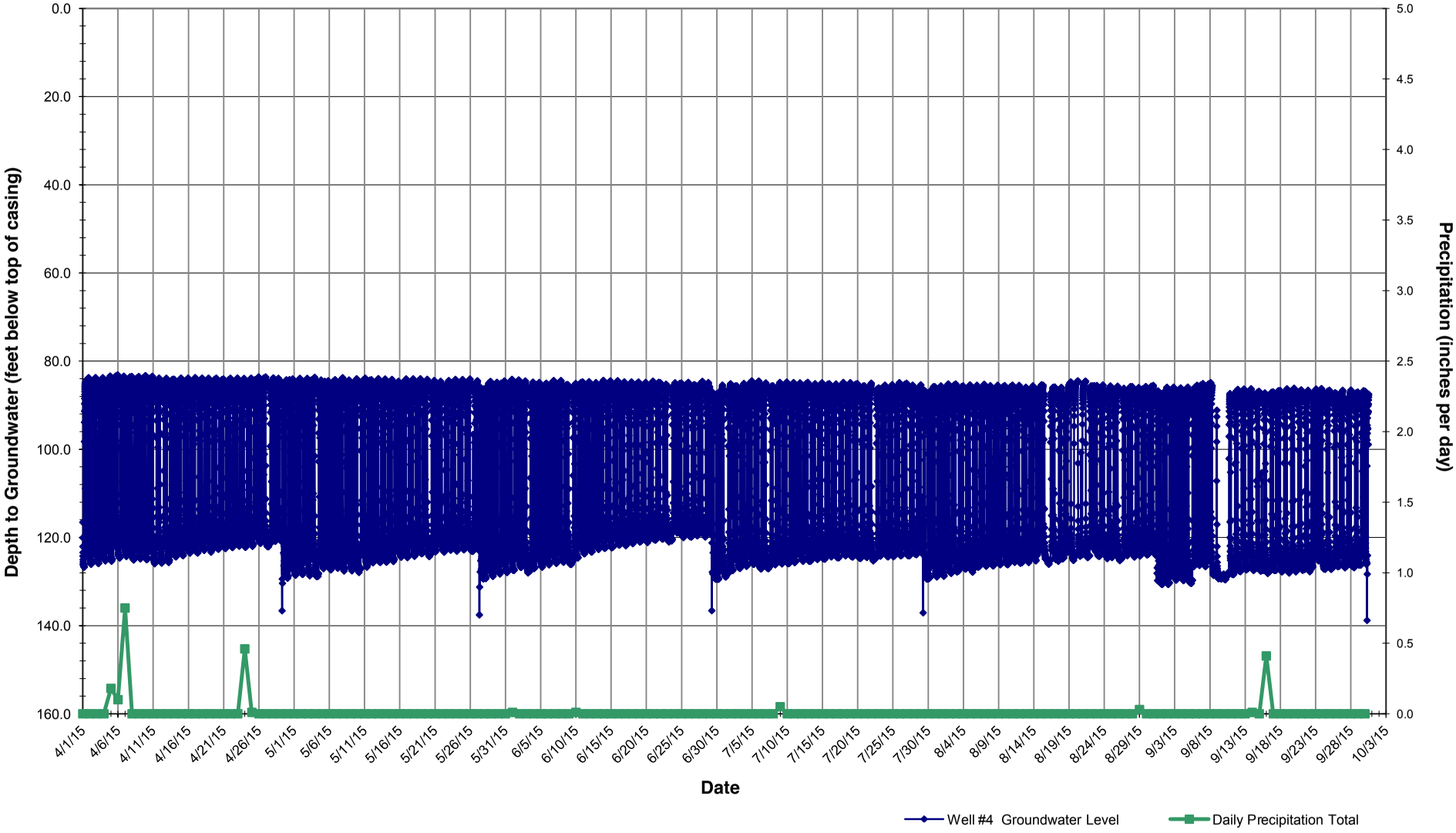


Plate 2
Groundwater Level Hydrograph - Well #5
City of Sebastopol Municipal Wellfield
Sebastopol, California

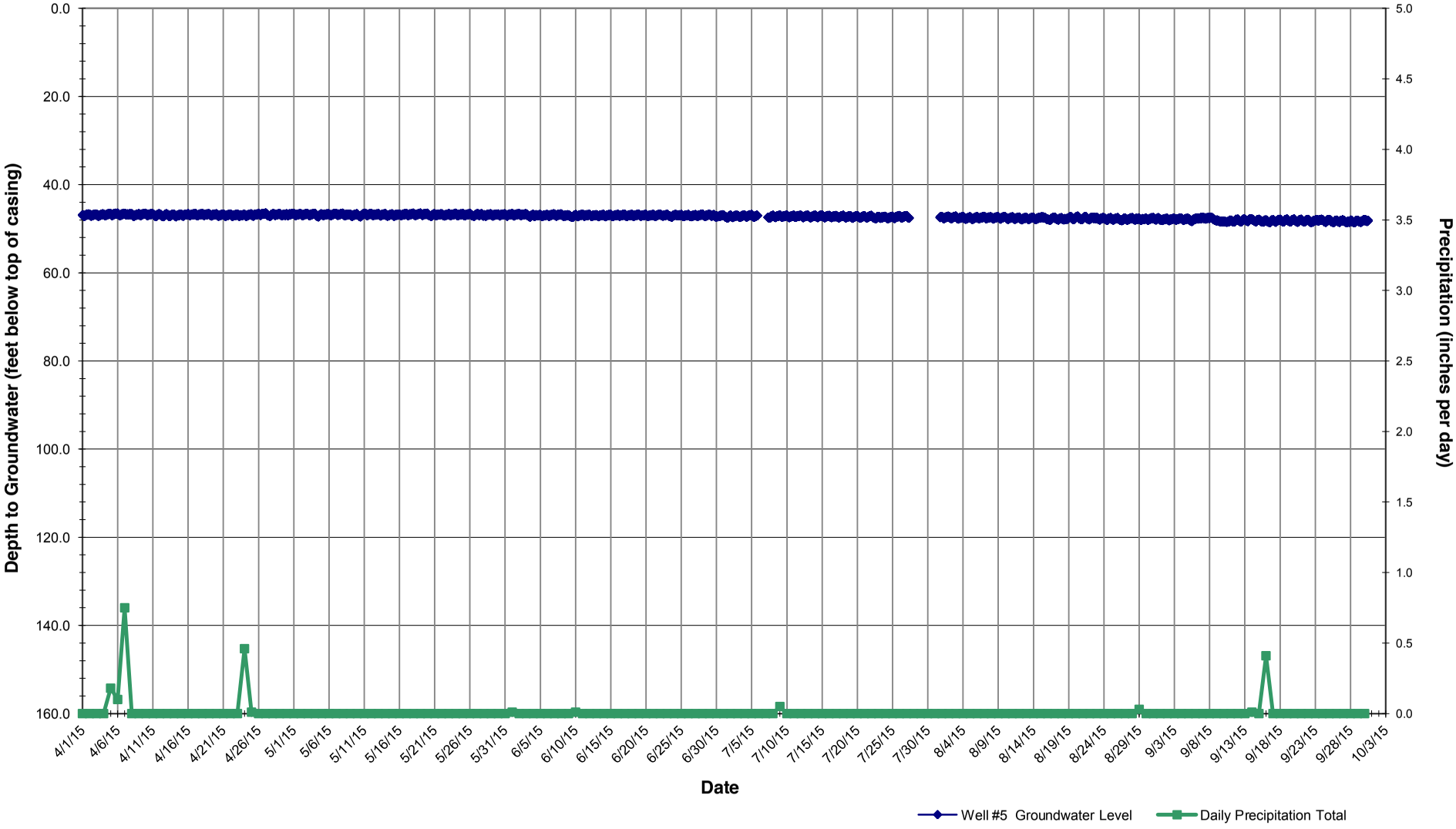


Plate 3
Groundwater Level Hydrograph - Well #6
City of Sebastopol Municipal Wellfield
Sebastopol, California

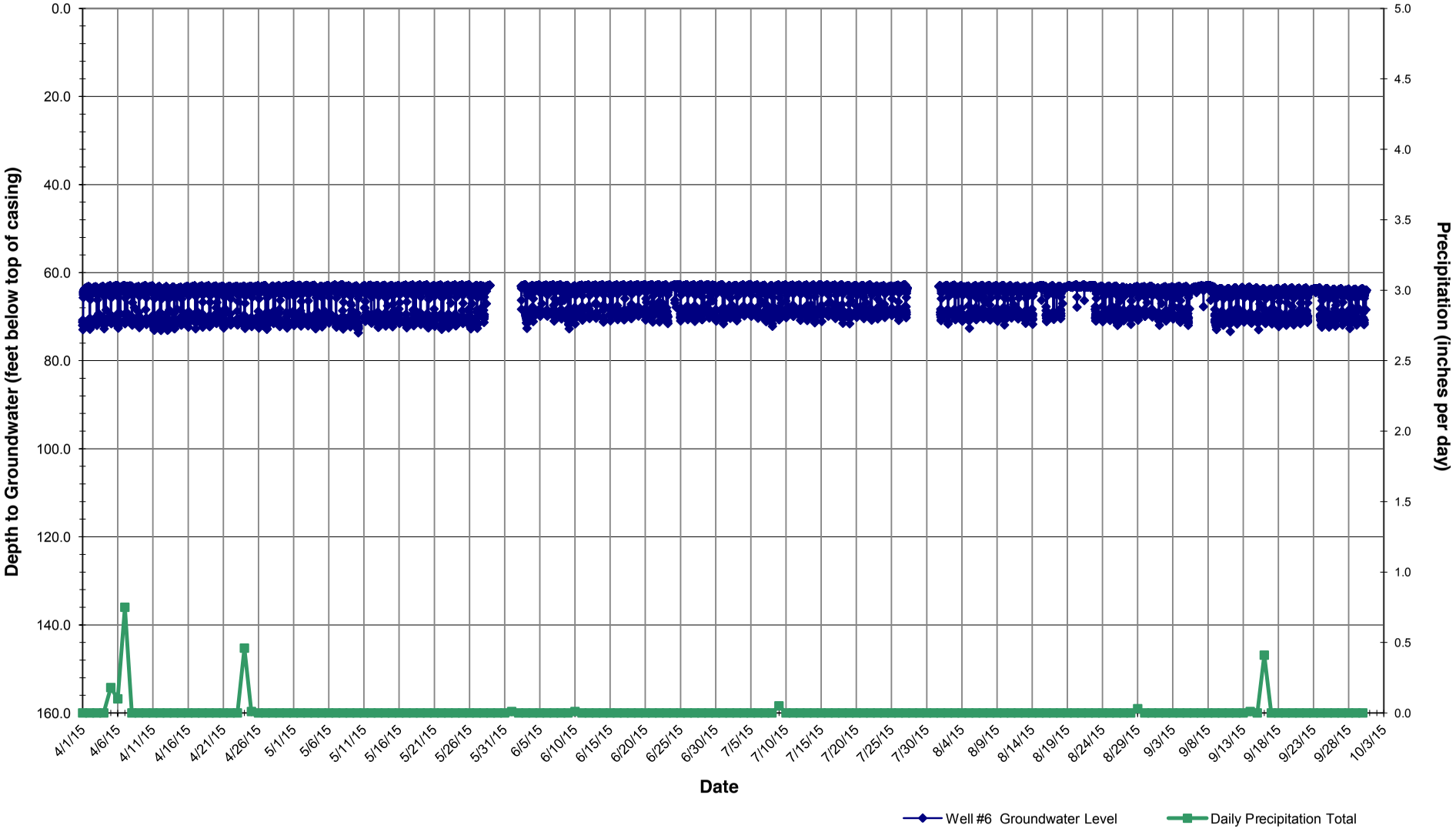


Plate 4
Groundwater Level Hydrograph - Well #7
City of Sebastopol Municipal Wellfield
Sebastopol, California

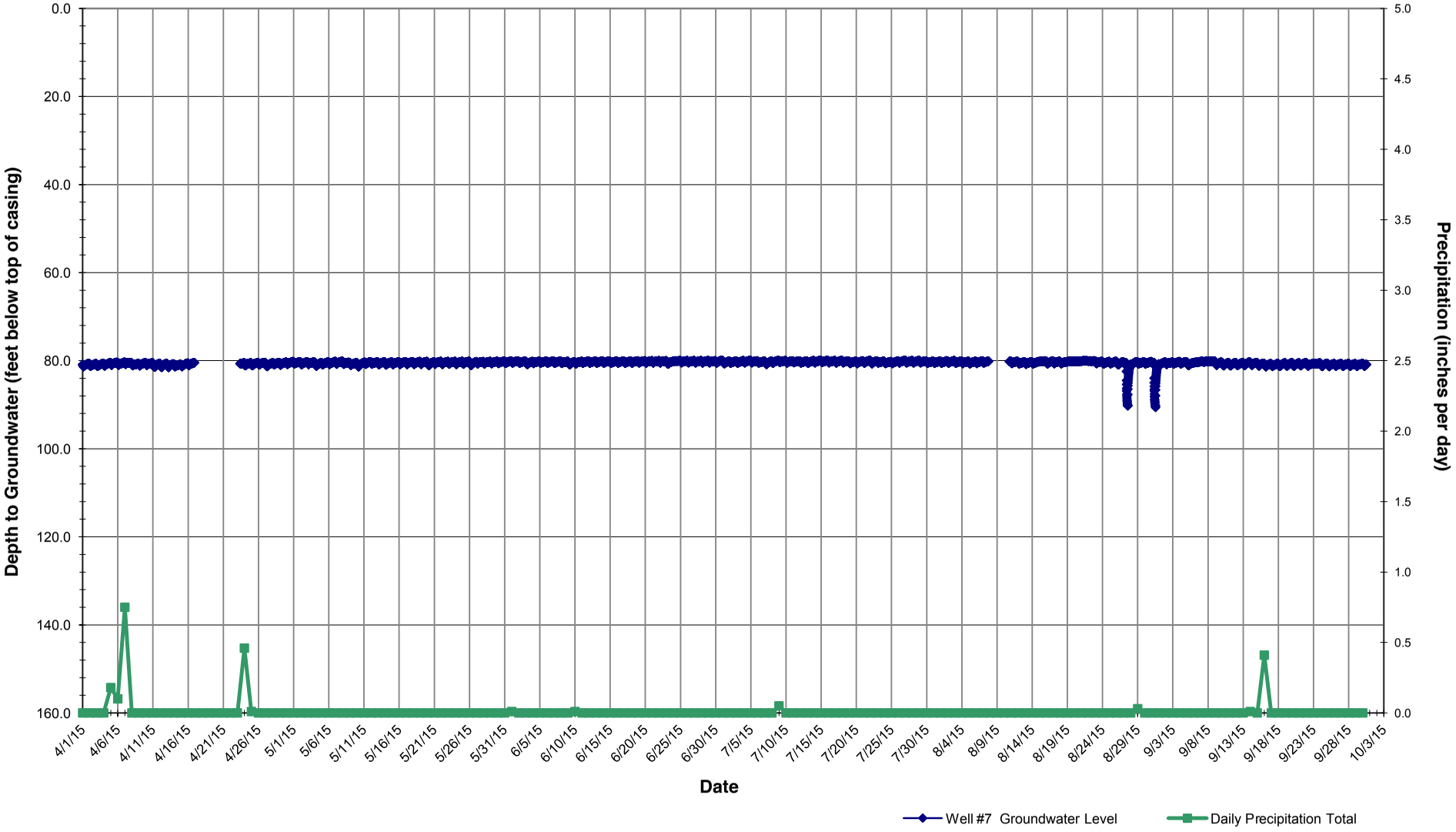
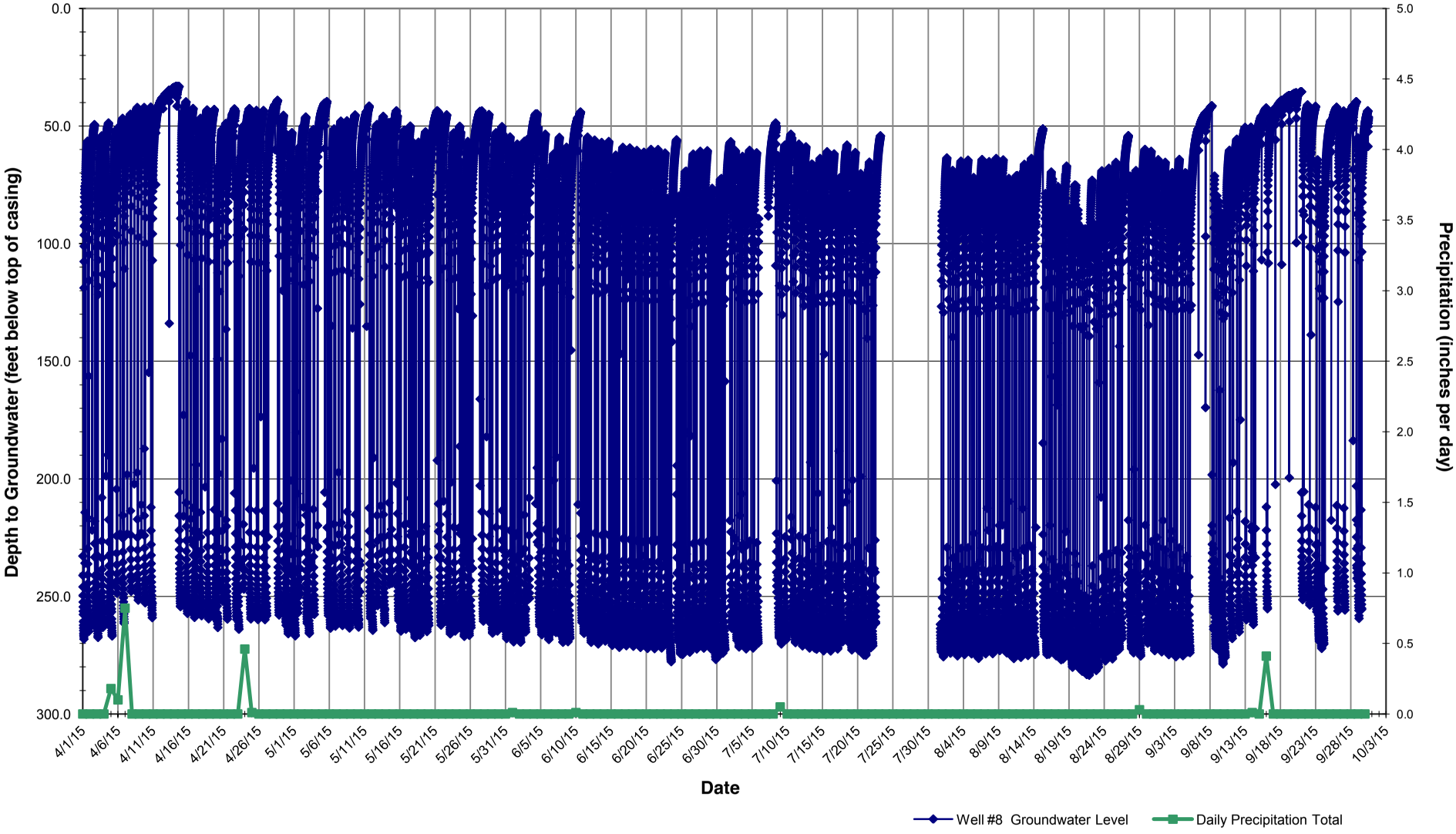


Plate 5
Groundwater Level Hydrograph - Well #8
City of Sebastopol Municipal Wellfield
Sebastopol, California



PES Environmental, Inc.
Engineering & Environmental Services

February 2, 2016

954.001.03.002

Richard Emig
City of Sebastopol
Public Works Department
714 Johnson Street
Sebastopol, California 95472

Re: Groundwater Level Data Transmittal
Fourth Quarter 2015
City of Sebastopol
Sebastopol, California

Dear Mr. Emig:

This data transmittal has been prepared by PES Environmental, Inc. (PES) on behalf of the City of Sebastopol (City) to summarize the results of the groundwater level monitoring program performed in the fourth quarter of 2015 (October through December). The following sections of this transmittal summarize the activities performed and data collected for the subject monitoring period.

GROUNDWATER LEVEL MONITORING PROGRAM

The activities performed for the monitoring period (October through December) included: (1) recording groundwater levels in five City production wells; (2) summarizing regional precipitation data; (3) performing a site inspection with manual depth-to-water measurements; and (4) preparing groundwater level hydrographs.

Groundwater Level Measurements

Groundwater level data collected for the fourth quarter included groundwater elevations from five City production wells: inactive municipal Well #5, and active municipal Wells #4, #6, #7[1], and #8. These wells are equipped with Solinst Inc., electronic submersible "LT Edge Levellogger" absolute (i.e., un-vented) pressure transducers and data logger

[1] Active pumping at Well #7 resumed on October 6, 2015.

systems. Additionally, a Solinst Inc., "LT Edge Barologger" is installed within Well #4 to provide baseline data for barometric compensation. The pressure transducers/data loggers were programmed to record pressure-head measurements at 15-minute intervals. Pressure-head measurements stored in each data logger were transmitted to PES' office via telemetry stations installed within the respective pump houses. The pressure-head measurements were then barometrically compensated and correlated to manual groundwater level measurements that were obtained via an electronic water level sounder on December 1, 2015. The respective manual groundwater level measurements on December 1, 2015 for Wells #4, #5, #6, #7, and #8 were 80.9, 49.5, 66.4, 109.2, and 43.8 feet below top of casing. Due to data transmission errors with the telemetry system, pressure-head data is not available for the following brief periods: October 15 through 18, 2015 (Wells #5, #6, and #8), November 2 through 30, 2015 (Well #6 only), and December 8 through 14, 2015 (Well #7 only).

Precipitation Data

Daily precipitation records maintained by the National Oceanic and Atmospheric Administration are summarized on Table 1. The precipitation data (reported in total inches per day) were measured at the Sonoma County Airport, Santa Rosa, California (Station ID: USW00023213). As indicated in Table 1, a total of 8.58 inches of rain were recorded during the subject monitoring period, comprising of 0.09, 1.48, and 7.01 inches in October, November, and December, respectively.

Groundwater Level Hydrographs

Following conversion of the pressure-head measurements to depth-to-groundwater levels, groundwater level hydrographs were prepared for each of the five City wells (Plates 1 through 5). To facilitate groundwater trend analysis, groundwater data from the previous quarter (July through September) is included on Plates 1 through 5. During the subject monitoring period (October through December), observed groundwater levels: (1) exhibit slight declining trends in Wells #6 and #7, which appear to correlate with the resumption of pumping at Well #7; and (2) exhibit slight recovery trends in Wells #4, #5, and #8, which appear to correlate with the onset of seasonal precipitation and less frequent pumping (Wells #4 and #8).

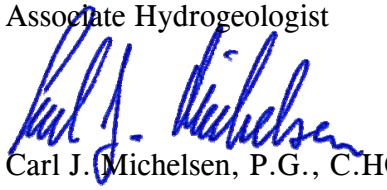
CLOSURE

PES appreciates the opportunity to be of service to the City and in providing assistance with the subject Groundwater Level Monitoring Program. Should you have any questions regarding this information, please call PES at (415) 899-1600.

Yours very truly,

PES ENVIRONMENTAL, INC.

Peter D. Gorman, P.G., C.HG.
Associate Hydrogeologist



Carl J. Michelsen, P.G., C.HG.
Principal Geochemist

cc: Henry Mikus – City of Sebastopol
Dante Del Prete – City of Sebastopol

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Plate 3 – Groundwater Level Hydrograph, Municipal Well #6
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Plate 5 – Groundwater Level Hydrograph, Municipal Well #8

TABLES

Table 1
Summary of Precipitation Totals
Sonoma County Airport
Santa Rosa, California

Day	Daily Precipitation Totals (inches)		
	Oct-2016	Nov-2016	Dec-2016
1	T	0.18	--
2	--	0.26	T
3	--	--	0.82
4	--	--	0.12
5	--	--	--
6	--	--	0.85
7	--	--	--
8	--	0.01	--
9	--	0.49	0.43
10	--	--	0.56
11	--	--	0.06
12	--	--	0.20
13	--	--	0.88
14	--	--	--
15	--	0.43	--
16	--	--	--
17	--	--	0.02
18	--	--	0.73
19	--	--	0.10
20	--	--	0.69
21	--	--	1.16
22	--	--	0.14
23	--	--	--
24	0.01	0.11	0.21
25	--	--	--
26	0.01	--	--
27	T	--	0.02
28	0.07	--	T
29	--	--	--
30	--	T	0.02
31	--		--
Total (inches)	0.09	1.48	7.01
Total Precipitation (in inches) for October through December: 8.58			

Notes:

Source of Data: National Oceanic and Atmospheric Administration (NOAA) Preliminary Record of Climatological Observations for Sonoma County Airport - Cooperative Station Network (Station ID: USW00023213)
-- = No measureable/reported precipitation
T = Trace precipitation event
na = Not Applicable

PLATES

Plate 1
Groundwater Level Hydrograph - Well #4
City of Sebastopol Municipal Wellfield
Sebastopol, California

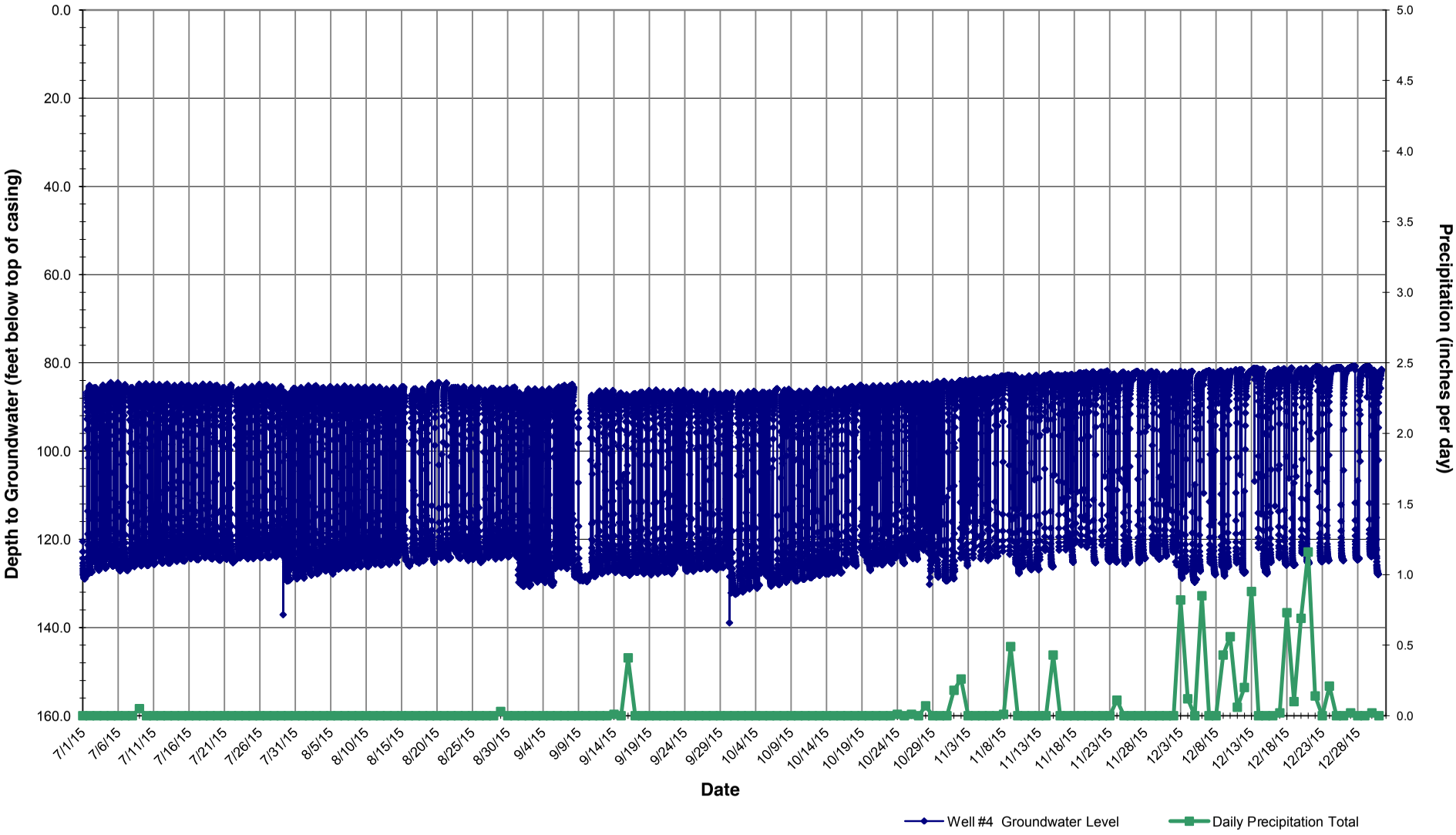

Plate 2
Groundwater Level Hydrograph - Well #5
City of Sebastopol Municipal Wellfield
Sebastopol, California

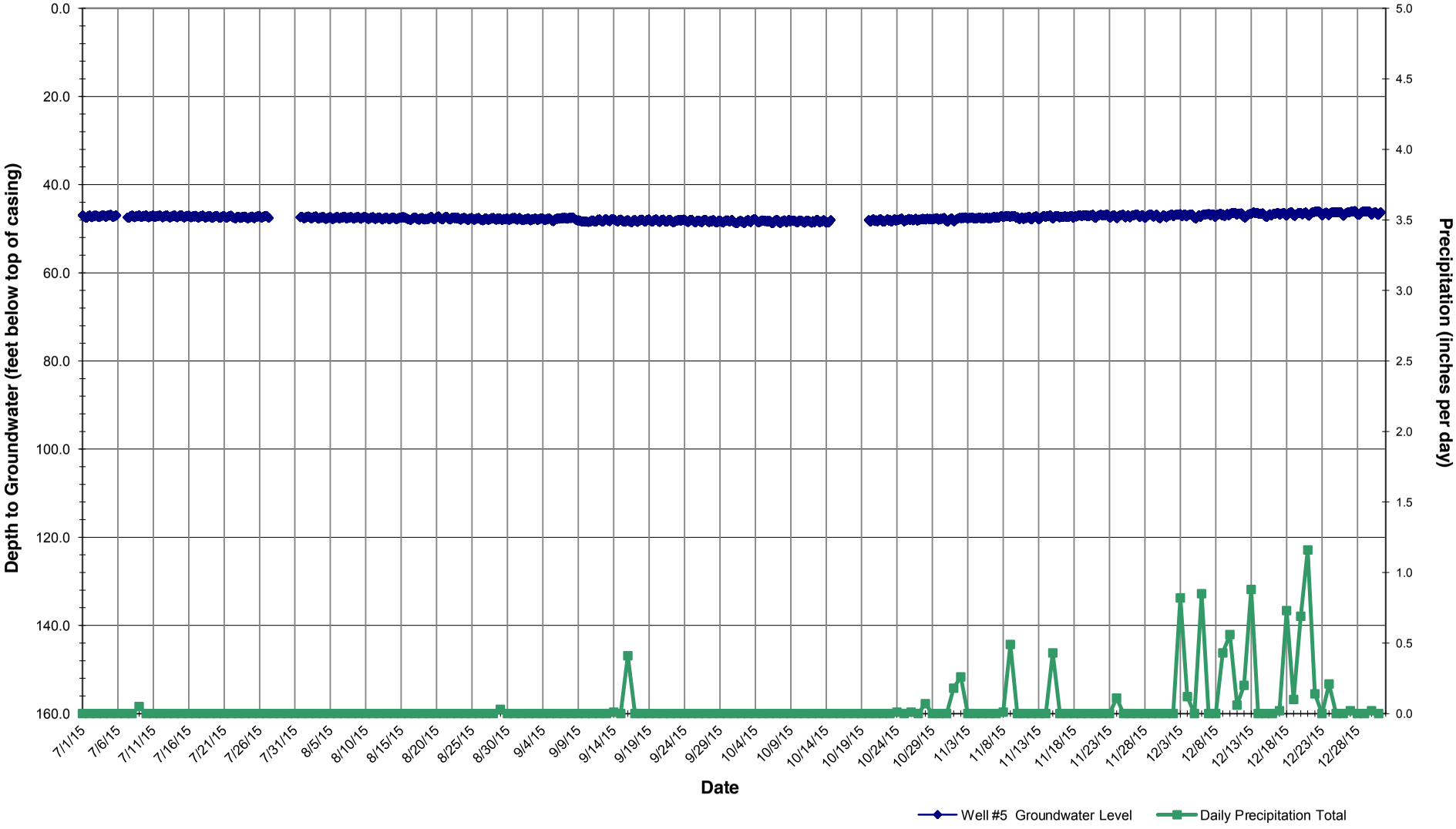

Plate 3
Groundwater Level Hydrograph - Well #6
City of Sebastopol Municipal Wellfield
Sebastopol, California

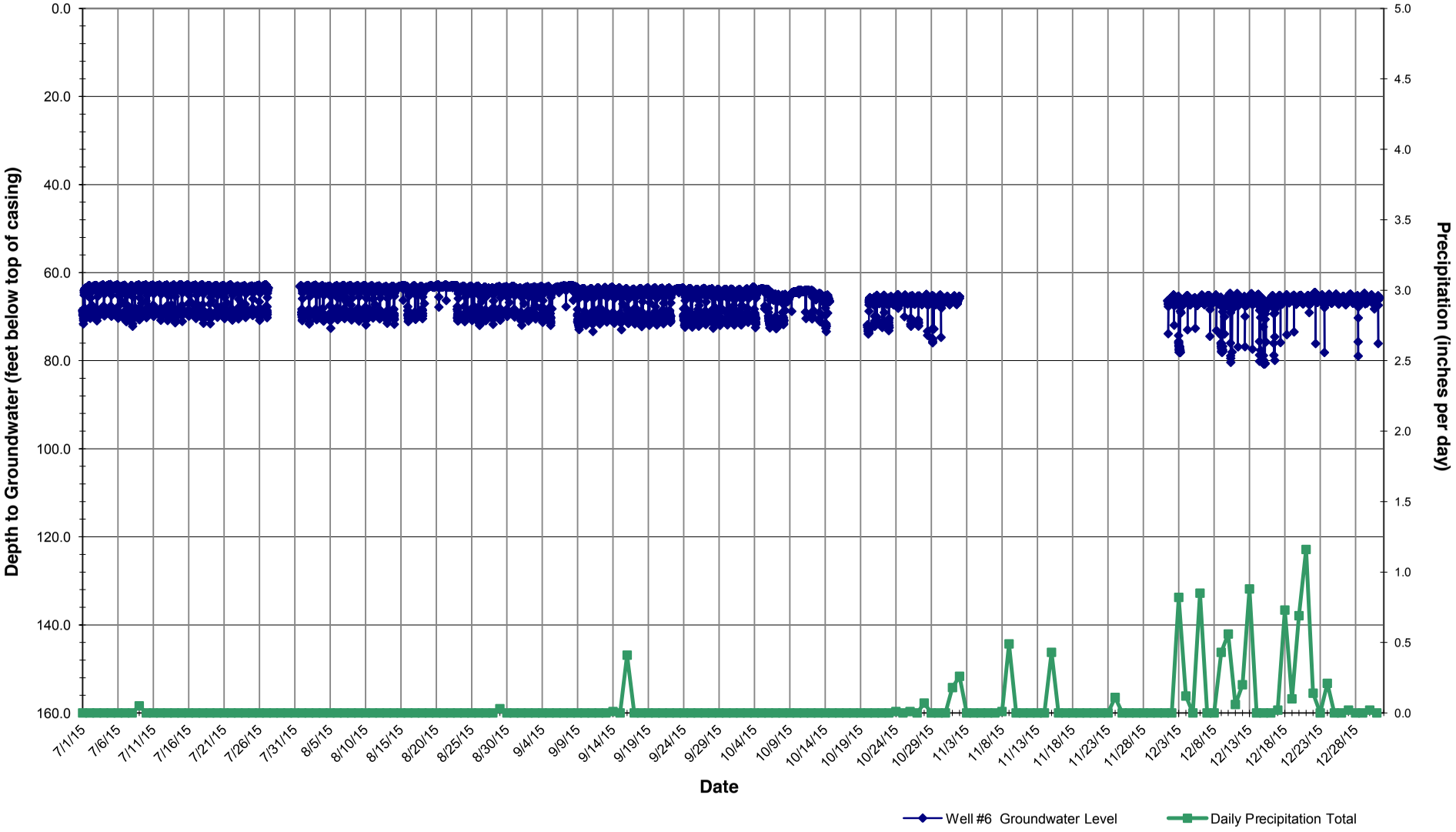

Plate 4
Groundwater Level Hydrograph - Well #7
City of Sebastopol Municipal Wellfield
Sebastopol, California

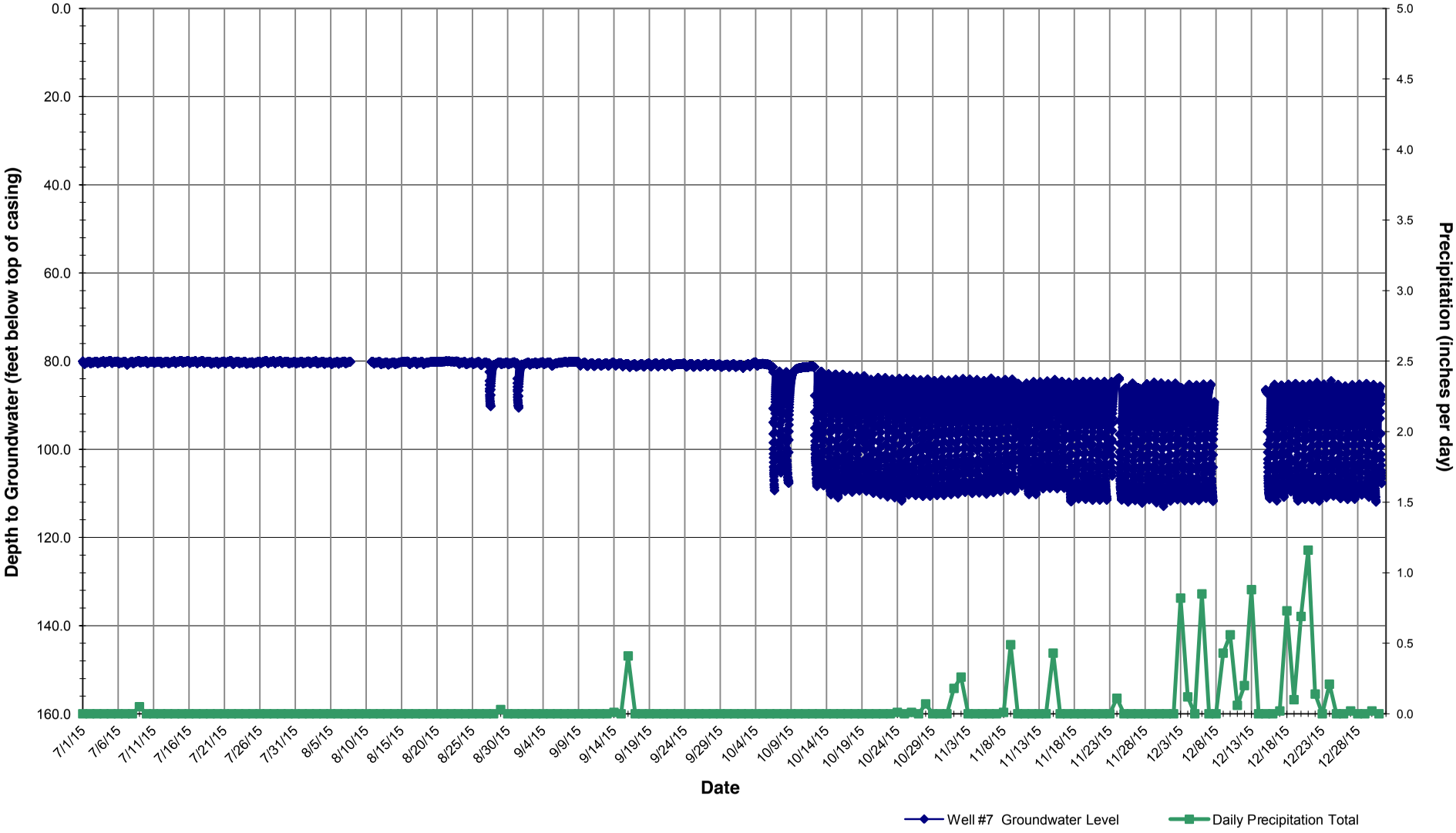

Plate 5
Groundwater Level Hydrograph - Well #8
City of Sebastopol Municipal Wellfield
Sebastopol, California