CITY OF YUBA CITY
STAFF REPORT

Date: February 6, 2018

To: Honorable Mayor & Members of the City Council

From: Development Services Department

Presentation By: Arnoldo Rodriguez, AICP, Development Services Director

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Summary:

Subject: General Plan Amendment, Specific Plan Amendment, and a Mitigated Negative Declaration to facilitate the development a hotel located at the former Feather River Mills site.

Recommendation: Conduct a Public Hearing and after consideration concur with Planning Commission recommendations to:

A. Adopt a Mitigated Negative Declaration that determined that the proposed amendments would not create any significant environmental impacts.

B. Adopt a Resolution to amend the General Plan land use map by redesignating approximately 1.5 acres from the Business, Technology & Light Industrial (B,T&LI) land use designation to the Community Commercial (CC) designation.

C. Adopt a Resolution to amend the Central City Specific Plan text by adding the Community Commercial (CC) land use designation and amend the land use map by redesignating approximately 1.5 acres from the Storefront Commercial land use designation to the CC designation.

Fiscal Impact: The costs for processing the land use entitlements is funded by the payment of the required entitlement fee, a flat rate fee that covers staff costs. Moreover, the development of the project will be subject to the payment of development impact fees as well as building permit fees that will cover future costs incurred by the City.

Purpose:

Facilitate the development of a hotel.

Project Proposal:

The project consists of the following components:

1. *General Plan Amendment*: The proposal is to amend the City's General Plan land use designation from the Business, Technology and Light Industrial (B,T&LI) designation to the Community Commercial (CC) designation for the same 1.5 acres as in the Specific Plan Amendment.
2. *Specific Plan Amendment*: A proposal to amend both the text and land use map of the Central City Specific Plan. The text amendment is to add the Community Commercial

(CC) land use designation to the Specific Plan. The new designation is described as follows:

> *"Applied to areas intended for retail and service commercial uses that are primarily conducted indoors, as well as office uses. The allowed uses and development standards shall be the same as in the C-2 Zone District, except modifications can be made to reflect the area's downtown characteristics, if approved by the Planning Commission. Mixed-use development could include residential development at a density of up to 36 units per acre provided that the units are secondary to the commercial uses, but not necessarily in the same building as commercial uses. Building design shall meet the standards in the adopted citywide design guidelines. However, new and remodeled buildings shall also be respectful to the appearance of the Plumas Street storefront commercial uses or the Plumas Boulevard office uses, whichever is nearer."*

3. *Environmental Assessment (EA) 17*-02: An environmental assessment of the proposed project that includes an initial study, including a Mitigated Negative Declaration and Mitigation Monitoring Program.

Planning Commission Action:

On January 10, 2018, the Planning Commission (Commission) considered this project. At the public hearing, the Commission heard testimony from city staff. The Commission posed numerous questions regarding design, ingress and egress, traffic circulation, etc. The Commission, by a vote of 7 to 0 recommended that the Council approve the proposed amendments.

Previous Commission/Council Action:

The subject site has not been the subject of recent Commission and/or City Council action, albeit the January 10, 2018 Commission hearing described above.

Project Analysis:

Staff prepared an in-depth analysis relative to the proposed project, the site's history, potential traffic, and compatibility with surrounding uses. This analysis is provided in Attachment 6.

Environmental Determination:

Pursuant to California Environmental Act (CEQA) Article 19, Section 15070 (b)(1) staff prepared an environmental assessment including an Initial Study and Mitigated Negative Declaration (MND) and Mitigation Monitoring Program (MMP) for the project. Moreover, the assessment was circulated to state and local agencies for comment (State Clearing House # 2017122019) in accordance with the CEQA Guideline requirements. Given that the project includes a General Plan amendment and discretionary action, Native American Tribal consultation was conducted pursuant to Assembly Bill 52 and Senate Bill 18.

It should be noted that a Remedial Design/Remedial Action Plan (FS/RAP) was prepared for this property as part of the City-owned 6.56 acres, of which the subject 1.5 acre site is part of. The study determined that there is contamination in the soil. The site has undergone several different commercial uses since the 1890s until 2003 when it was razed. Past uses included rail lines and a train station, a match plant and lumber company, marine boat service, electric container storage, independent electric plant boiler, in-ground salt-water tank, coal piles and charcoal storage, etc.

These past uses resulted in on-site soil contamination. The contaminants that were within established screening levels include:

- Total petroleum hydrocarbons (TPH) of several types - Primarily found in the oil pit area and the former underground storage tanks.
- Semi-volatile organic compounds (SVOCs) - Naphthalene and benzopyrene. Found around the former oil pit.
- Metals – antimony, arsenic and lead. Antimony was found around the former Feather River Mills building. Arsenic was most concentrated near the former marine boat service/recycling center area, but was found in lower concentrations over much of the property, but has also been reported regionally. Lead was reported in all samples but exceeded reportable levels near the former independent electric plant boiler. Lead also has been reported regionally.
- Organochlorine pesticides – Soil samples containing dieldrin were collected near the former Feather River Mills building.
- Asbestos – was found from directly beneath the wrapping of the crushed boiler buried in-situ.

The data collected for the study indicated that none of the contaminants had migrated to the underlying groundwater. Because the TPH concentrations were low, they had not migrated into the groundwater at reportable levels. The metals typically do not migrate within the soil. Therefore the remedial actions will not involve groundwater but instead center on soil removal.

In the FS/RAP, soil was identified as the only contaminated media and is the target for remediation action for the protection of human health and to facilitate unrestricted land use. The remedial action in the FS/RAP is excavation of impacted soil with proper off-site disposal. A volume of approximately 10,500 cubic yards of material, including contaminated soil, burn debris, ballast and other debris will be excavated, stored on-site for waste disposal characterization and then disposed at proper locations from the 6.56 acre site.

The result will be the 6.56 acre property that is available for unrestricted land uses from a soil contamination standpoint and to allow for the beneficial use of the groundwater beneath the site. Since the City has already committed to this process there should be no potential for adverse environmental impacts and no further mitigation measures are needed.

Based upon the attached environmental assessment and the list of identified mitigation measures potential significant impacts are reduced to less than significance. Staff has determined that there is no evidence in the record that the project may have a significant effect on the environment and recommends adoption of a MND and Mitigation Monitoring Plan for this project. The findings of the mitigated negative declaration is that, with the proposed mitigations for aesthetics, cultural resources, greenhouse gas emissions, hazards and hazardous materials, transportation and traffic, and tribal cultural resources, the project will not create any significant impacts on the environment. As a result, the filing of a MND is appropriate in accordance with the provisions of CEQA.

Recommendation:

The appropriateness of the proposed General Plan Amendment 16-06 and Specific Plan Amendment 16-04 has been examined with respect to its consistency with goals and policies of the General Plan, the Central City Specific Plan and the existing zoning, its compatibility with surrounding uses, and its avoidance or mitigation of potentially significant adverse environmental impacts. These factors have been evaluated as described above and by the accompanying environmental assessment. Therefore, staff recommends that the Council conduct a public hearing and after consideration, concur with the Planning Commission's recommendations, which are to:

A. Adopt a Mitigated Negative Declaration that determined that the proposed project would not create any significant environmental impacts

B. Adopt a Resolution to amend the General Plan land use map by redesignating approximately 1.5 acres from the Business, Technology & Light Industrial (B,T&LI) land use designation to the Community Commercial (CC) designation.

C. Adopt a Resolution to amend the Central City Specific Plan text by adding the Community Commercial (CC) land use designation and amend the land use map by redesignating approximately 1.5 acres from the Storefront Commercial land use designation to the CC designation.

Alternatives:

1. Deny the proposal. Should the project be denied the General Plan land use designation would remain while the Community Commercial designation would not be added to the Central City Specific Plan, while the Commercial storefront designation would remain.
2. Provide staff with further direction.

Attachments:

1. Project Map
2. Resolution (General Plan Amendment)
3. Resolution (Specific Plan Amendment)
4. General Plan Amendment map
5. Specific Plan Amendment map
6. Project Analysis
7. Mitigated negative declaration, including Appendix A, Traffic Study and Appendix B, Remedial Design/Remedial Action Work Plan
8. Draft hotel site plan

Prepared By:

/s/ Arnoldo Rodriguez
Arnoldo Rodriguez
Development Services Director

Submitted By:

/s/ Steven C. Kroeger
Steven C. Kroeger
City Manager

Reviewed By:

Finance — RB

City Attorney — TH by email

ATTACHMENT 1: Project Map

ATTACHMENT 2

Resolution (General Plan Amendment)

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YUBA CITY ADOPTING AN AMENDMENT TO THE LAND USE ELEMENT OF THE YUBA CITY GENERAL PLAN TO REDESIGNATE APPROXIMATELY 1.5 ACRES FROM THE BUSINESS, TECHNOLOGY, AND LIGHT INDUSTRIAL DESIGNATION TO THE COMMUNITY COMMERCIAL DENSITY RESIDENTIAL DESIGNATION

WHEREAS, General Plan Amendment application No. GP 16-06 was initiated by the Yuba City Planning Commission on September 14, 2016 to amend the land use designation of the City's General Plan, relating to approximately 1.5 acres of property located on the northeast intersection of Shasta and B Streets from the Business, Technology and Light Industrial (B,T&LI) designation to the Community Commercial (CC) designation as shown on attached Exhibit A; and

WHEREAS, the environmental assessment conducted for the proposed plan amendment resulted in the filing of a mitigated negative declaration; and

WHEREAS, on January 10, 2018, the City of Yuba City Planning Commission held a public hearing to consider Plan Amendment application No. GP 16-06 and associated mitigated negative declaration Environmental Assessment No. EA 17-02; and

WHEREAS, at the same hearing the Planning Commission reviewed related Specific Plan Amendment No. SPA 16-04 to amend both the text and land use map of the Central City Specific Plan. The text amendment is to add the Community Commercial (CC) land use designation to the Specific Plan; and

WHEREAS, General Plan Amendment No. GP 16-06 and SPA 16-04 will facilitate the development of a hotel and public improvements; and

WHEREAS, the Planning Commission took action to recommend approval of the GP 16-06, which proposes to amend the land use designation of the City's General Plan; and

WHEREAS, no neighbors spoke in opposition; and

WHEREAS, the Planning Commission found that the proposed General Plan Amendment is in the public interest; and

WHEREAS, on February 6, 2018, the Yuba City Council conducted a public hearing to consider Plan Amendment application No. GP 16-06 and received both oral testimony and written information presented at the hearing regarding the Plan Amendment; and

WHEREAS the City Council of the City of Yuba City considered said recommendations of the Yuba City Planning Commission on the matter of redesignating said property and after review and consideration of the mitigated negative declaration found that the mitigated negative declaration prepared for the project is in conformance with State and local environmental guidelines and adopted said mitigated negative declaration.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Yuba, based upon the testimony and information presented at the hearing and upon review and consideration of

the environmental documentation provided, as follows:

1. The Council finds that on the basis of the whole record before it that there is no substantial evidence that the Project will have a significant effect on the environment and that the mitigated negative declaration reflects the Council's independent judgment and analysis.

2. The Council further finds that the project will not cause substantial environmental damage to fish and/or wildlife and their habitats, nor have the potential for adverse effect(s) on wildlife resources or the habitat upon which wildlife depends. The mitigated negative declaration prepared for the Project is in conformance with State and local environmental guidelines and a Notice of Determination will be recorded for Environment Assessment No. EA 17-02 with the County Recorder.

3. The Council finds the adoption of the proposed General Plan Amendment as recommended by the Yuba City Planning Commission is in the best interest of the City of Yuba City.

4. The Council of the City of Yuba City hereby adopts Environmental Assessment No. EA-17-02 and General Plan Amendment No. GP 16-06 amending the General Plan from the from the Business, Technology and Light Industrial (B,T&LI) designation to the Community Commercial (CC) for approximately 1.5 acres of property located on the northeast intersection of Shasta and B Streets.

5. General Plan Amendment No. GP 16-06 is hereby approved and shall become effective on February 20, 2018.

The foregoing Resolution was duly and regularly introduced, passed and adopted by the City Council of the City of Yuba City at a regular meeting thereof held on February 6, 2018 by the following vote:

AYES:

NOES:

ABSENT:

_____
Preet Didbal, Mayor

ATTEST:

_____
Patricia Buckland, City Clerk

ATTACHMENT 3

Resolution (Specific Plan Amendment)

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF YUBA CITY ADOPTING AN AMENDMENT TO BOTH THE TEXT AND LAND USE MAP OF THE CENTRAL CITY SPECIFIC PLAN. THE TEXT AMENDMENT IS TO ADD THE COMMUNITY COMMERCIAL (CC) LAND USE DESIGNATION TO THE SPECIFIC PLAN, WHEREAS THE LAND USE AMENDMENT WOULD REDESIGNATE 1.5 ACRES FROM THE STOREFRONT COMMERCIAL LAND USE DESIGNATION TO THE COMMUNITY COMMERCIAL DESIGNATION

WHEREAS, Specific Plan Amendment application No. SPA 16-04 was initiated by the Yuba City Planning Commission on September 14, 2016 to amend the land use designation of the Central City Specific Plan relating to approximately 1.5 acres of property located on the northeast intersection of Shasta and B Streets from the Storefront Commercial designation to the Community Commercial (CC) designation as shown on attached Exhibit A, and to add the Community Commercial designation to the Specific Plan; and

WHEREAS, the environmental assessment conducted for the proposed plan amendment resulted in the filing of a mitigated negative declaration; and

WHEREAS, on January 10, 2018, the City of Yuba City Planning Commission held a public hearing to consider Specific Plan Amendment application No. SPA 16-04 and associated mitigated negative declaration Environmental Assessment No. EA 17-02; and

WHEREAS, at the same hearing the Planning Commission reviewed related General Plan Amendment No. SPA 16-06 to amend the General Plan land use map by redesignating the subject site from the Business, Technology & Light Industrial (B,T&LI) land use designation to the Community Commercial (CC) designation; and

WHEREAS, SPA 16-06 and General Plan Amendment No. GP 16-06 will facilitate the development of a hotel and public improvements; and

WHEREAS, the Planning Commission took action to recommend approval of the SPA 16-04; and

WHEREAS, no neighbors spoke in opposition; and

WHEREAS, the Planning Commission found that the proposed Specific Plan Amendment is in the public interest; and

WHEREAS, on February 6, 2018, the Yuba City Council conducted a public hearing to consider Specific Plan Amendment application No. SPA 16-04 and received both oral testimony and written information presented at the hearing regarding the Specific Plan Amendment; and

WHEREAS the City Council of the City of Yuba City considered said recommendations of the Yuba City Planning Commission on the matter of redesignating said property and after review and consideration of the mitigated negative declaration found that the mitigated negative declaration prepared for the project is in conformance with State and local environmental guidelines and adopted said mitigated negative declaration; and

WHEREAS, the City considered the proposed Specific Plan Amendment and determined that the proposed amendment was consistent with the City's General Plan pursuant to Government Code Section 65454.

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Yuba, based upon the testimony and information presented at the hearing and upon review and consideration of the environmental documentation provided, as follows:

1. The Council finds that on the basis of the whole record before it that there is no substantial evidence that the Project will have a significant effect on the environment and that the mitigated negative declaration reflects the Council's independent judgment and analysis.

2. The Council further finds that the project will not cause substantial environmental damage to fish and/or wildlife and their habitats, nor have the potential for adverse effect(s) on wildlife resources or the habitat upon which wildlife depends. The mitigated negative declaration prepared for the Project is in conformance with State and local environmental guidelines and a Notice of Determination will be recorded for Environment Assessment No. EA 17-02 with the County Recorder.

3. The Council finds the adoption of the proposed Specific Plan Amendment as recommended by the Yuba City Planning Commission is in the best interest of the City of Yuba City.

4. The Council finds that the adoption of the proposed Specific Plan Amendment as recommended by the Yuba City Planning Commission is consistent with the City's General Plan pursuant to Government Code Section 65454, which states that no specific plan may be adopted or amended unless the proposed plan or amendment is consistent with the general plan.

5. The Council of the City of Yuba City hereby adopts Environmental Assessment No. EA-17-02 and Specific Plan Amendment No. SPA 16-04 amending the Central City Specific Plan text by adding the Community Commercial (CC) land use designation and amending the land use map by redesignating approximately 1.5 acres from the Storefront Commercial land use designation to the CC designation.

6. Specific Plan Amendment No. SPA 16-04 is hereby approved and shall become effective on February 20, 2018.

The foregoing Resolution was duly and regularly introduced, passed and adopted by the City Council of the City of Yuba City at a regular meeting thereof held on February 6, 2018 by the following vote:

AYES:

NOES:

ABSENT:

_____

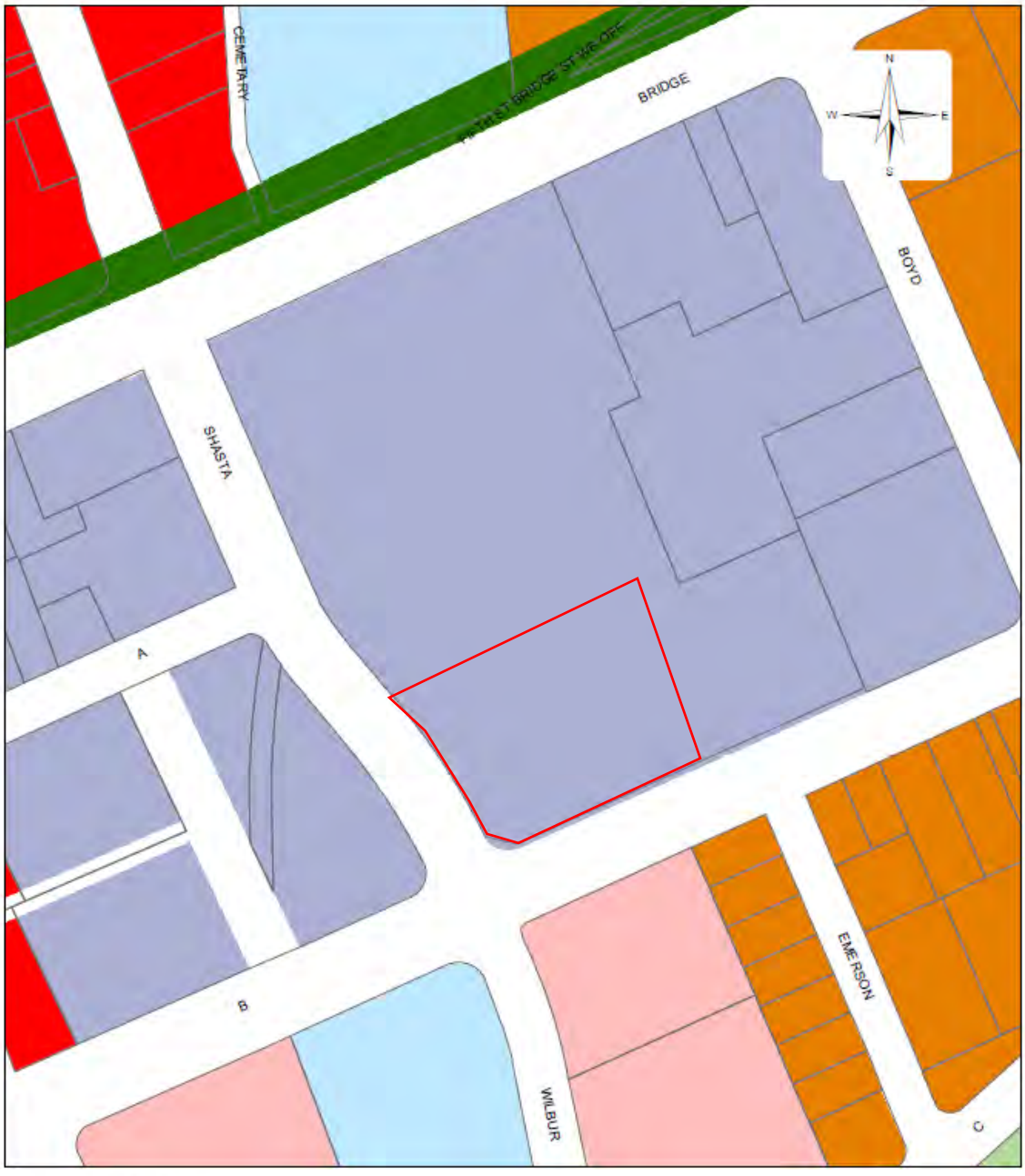
Preet Didbal, Mayor

ATTEST:

_____
Patricia Buckland, City Clerk

ATTACHMENT 4

General Plan Land Use Designation



Legend

- Medium/High Density Residential
- Parks, Recreation & Open Space
- HS-High School; EMS-Elementry/Middle School
- Community Commercial
- Office & Office Park
- Business, Technology & Light Industry

ATTACHMENT 5

Specific Plan Amendment

ATTACHMENT 6

Project Analysis

Project Information:

A potential applicant is proposing to construct up to a 108-room hotel on the site. This project includes the amendment to the Central City Specific Plan and the General Plan to a designation that will accommodate a hotel. This proposal does not include entitlements for the hotel. The project review process will be performed under a separate review if this proposal is approved.

Property Description:

The site is part of a larger 6.56 acre property purchased years ago by the City's Redevelopment Agency (RDA). With the State requirements of the RDA being dissolved, land assets were transferred to the Successor Agency (the City of Yuba City) as required by State law.

The property is undeveloped, previously being scraped cleared of any buildings and vegetation. There are no remaining native trees, landmark type rocks, etc.

General Plan Designation:

Existing: The property is currently designated B,T&LI. This designation primarily provides for light industrial and office uses, and high tech businesses. These are businesses that generally do not cater directly to the general public. It does not provide for retail or service commercial uses such as the proposed hotel.

Proposed: The CC General Plan land use designation provides for most of the City's commercial uses - both retail and service commercial uses, including hotels.

Specific Plan Designation:

Existing: The property is currently designated Storefront Commercial, which may not accommodate a hotel. Further, the Storefront Commercial development and design standards are a concern when accommodating a new building that is not part of the historic downtown. It should be noted that the Storefront Commercial Designation was added in 2002 to accommodate a movie theatre which was not developed.

Proposed: The CC Specific Plan land use designation is intended to accommodate hotels, as well as other commercial uses. Its development standards are also intended for today's buildings that are not part of a historic downtown area.

Zoning Classification:

The site is zoned Community Commercial District (C-2) and there are no proposed changes to the existing zone district.

Bordering Information:

Table 1: *Bordering Information*	
North	Remaining City-owned vacant property, Bridge Street.
South	Medical office, single-family residence (a corner residence that does not directly face the site).
East	Vacant property and light industrial buildings
West	Religious institution

Staff Comments:

Specific Plan text amendment

In 2002, the Central City Specific Plan was amended to designate the City owned property as "Storefront Commercial." The Storefront Commercial designation was originally applied to Plumas Street area businesses that have storefronts along the street. While this has been successful in the Plumas Street area, this type of commercial building is of less development value for projects located outside of the historical downtown area, evidenced by the fact that there has been only limited interest in developing this area under that model.

Replacing Storefront Commercial designation with the Community Commercial land use designation will allow non-storefront commercial type uses to be constructed in the areas away from Plumas Street, but that will still help revitalize the downtown area. With the new 5th Street Bridge and the other Bridge Street improvements, the increased traffic flows will increase demand for more contemporary commercial development. To that end there is interest in building a new hotel on the subject property.

The description of the new CC specific plan designation also provides that, while newer styled building design are permitted, the older style of the nearby Plumas Street buildings, as well as the design theme of the newer Plumas Boulevard office buildings must be respected. This is discussed in more detail later in this report.

General Plan and Specific Plan Land Use Map amendments

Table 2: *Existing City Designations Applied to the Property*		
General Plan designation:	Business, Technology & Light Industrial (B,T&LI)	Primarily for jobs producing businesses, but not commercial uses. **Hotels not permitted.**
Central City Specific Plan designation:	Storefront Commercial	Primarily for retail and service commercial uses, but **potentially not a hotel**.
Zoning:	Community Commercial (C-2)	Primarily for retail and service commercial uses, **including a hotel.**

There is currently an inconsistency between the General Plan Land Use Map and the Central City Specific Plan and the zoning for this area. As indicated in the chart above, the General Plan calls for businesses, technology uses and light industrial uses that are non-retail and non-service commercial type businesses; the Specific Plan and zoning are intended for commercial uses.

Inconsistencies raise confusion among businesses looking for new or expanded locations and property owners. Inconsistencies also make it challenging to provide for orderly development and

to adequately size infrastructure in the area. Both of these items are contrary to providing sound planning. To address these inconsistencies, staff is recommending amending both the General Plan and Specific Plan land use maps to reflect the CC designation.

It should be noted that during the Central City Specific Plan adoption process, the discussion of the area under consideration was accurate. Then, and to some extent still today, the area was home to light industrial uses. Rather than creating nonconforming uses, the Specific Plan contemplated that over time, if some of the City's redevelopment efforts were successful, these light industrial uses would be replaced by commercial uses. The thought is that commercial development is more appropriate downtown as compared to most light industrial uses, which are better suited outside the central business district. During the preceding 20 plus years, some progression has occurred. Some of the light industrial uses have faded and there has been a natural progression towards more commercial development. The 5th Street Bridge replacement has further spurred this concept. Thus, these amendments recognize this transition.

Building Design/Design Review

As previously discussed, there has not been significant interest in developing storefront type buildings outside the Plumas Street area. Regardless, new, more modern buildings that may locate near Plumas Street should be sympathetic in style to existing older buildings. Similarly, newer office buildings located just south of this site on Plumas Boulevard, these buildings were constructed to a distinct architectural criterion that should be respected. It is therefore important that the new buildings in this vicinity respect the urban design of both the Plumas Street commercial uses as well as the Plumas Boulevard office buildings. A mitigation measure has been added to the environmental document to address this.

As this is only an amendment to the Specific Plan and General Plan, the specificities of the hotel project will be reviewed later under a separate process if these amendments are approved.

Compatibility with Surrounding Uses

As discussed above, there is interest in transitioning this area to commercial uses. The proposed hotel, or other commercial uses that could be developed on this site if these amendments are approved, would be compatible with the religious institution to the west, the remaining light industrial uses to the east, and the medical building to the south. The remaining vacant portion of this property to the north is expected to be developed with commercial type uses that are compatible with a hotel.

Traffic Impacts

New commercial development that will be allowed under these amendments will generate more vehicle traffic, as compared to the previous light industrial designation. Therefore a traffic impact study was prepared as part of the environmental assessment for the potential hotel, attached to this report and titled *Traffic Impact Study for the Feather River Mills Hotel GPA.* Traffic impacts typically occur at intersections, as compared to through road sections. Therefore the study included seven nearby intersections:

- Bridge Street/Plumas Street
- Bridge Street/Shasta Street
- Bridge Street/Boyd Street
- Bridge Street/EB on-ramp
- B Street/Plumas Street
- B Street/Shasta Street
- B Street/Boyd Street

The following is a summary of the analysis:

Existing Conditions: Most study area intersections operate at Levels of Service (LOS) that satisfy the City Standard of LOS D (the lowest (worst) acceptable level per City policy). However, the Bridge Street/Boyd Street intersection operates at LOS E (below acceptable level for these intersections) in the a.m. peak hour, and the Bridge Street/Bridge Street eastbound on-ramp intersections operate at LOS F in the evening peak hour. The City's pending 5th Street Bridge Replacement Project will address these locations.

Trip Generation: The proposed hotel is projected to generate a total of 882 new one-way daily vehicle trips with 57 trips in the a.m. peak hour and 65 trips in the p.m. peak hour.

Project Impacts: Development of the Feather River Mills Hotel will not significantly impact most intersections. The project will increase traffic through the Bridge Street/Boyd Street and Bridge Street/Bridge Street - eastbound on-ramp intersections, and in the short term the intersections will continue to operate at Levels of Service that exceed the City's LOS D minimum. While the increase in delays associated with the project would normally be considered significant at the eastbound on-ramp intersection, no mitigation is required because the issue will be resolved with the City's pending 5th Street Bridge Replacement Project.

Cumulative Impacts – No Project: In the long term background traffic volumes on Bridge Street and B Street will increase dramatically. Even with the 5th Street Bridge Replacement Project, the signalized intersections at Plumas Street and Shasta Street will operate at LOS F. Similarly, the all-way stop controlled intersections at B Street at Plumas Street and Shasta Street intersections will operate at LOS F. The B Street/Boyd Street intersection will also operate LOS F. While no additional feasible improvements have been identified for the Bridge Street corridor, traffic signals and auxiliary lanes will be needed on B Street.

*Cumulative Plus Project Impacts***:** The addition of project traffic will exacerbate the deficient background conditions that are expected if the site had been developed with industrial uses. Because LOS F is forecast with and without the project, the significance of cumulative impacts is determined based on the worsening of the delay at each location.

The project will increase delays at the intersections on Bridge and B Street intersection but as the increase in the delays are less than the five second increment allowed under City adopted guidelines, the project impact is not significant at all but one of the intersections. The exception is the B Street/Boyd Street intersection for which the delay would be increased over the five-second threshold and is considered significant. The impact must be mitigated by contributing its fair share to the cost of improvements to the intersection, which includes auxiliary left turn lanes and a traffic signal. The result would be the intersection would be improved to an acceptable level of LOS D. Since the hotel project will contribute 0.5% of the new traffic, the project will be required to contribute 0.5% of the cost of the improvements. A mitigation is included in the environmental assessment that requires this payment.

Availability of City Services

All City services, including water, sewer and storm-water drainage are available to this site.

ATTACHMENT 7

TRAFFIC IMPACT STUDY

FOR

FEATHER RIVER MILLS HOTEL GPA

Yuba City, CA

Prepared For:

City of Yuba City
Development Services Department
1201 Civic Center Boulevard
Yuba City, CA 95993

Prepared By:

KDAnderson & Associates, Inc.
3853 Taylor Road, Suite G
Loomis, California 95650
(916) 660-1555

September 21, 2017

TRAFFIC IMPACT STUDY FOR
FEATHER RIVER MILLS HOTEL GPA
Yuba City, Ca

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September 21, 2017

KDA

TRAFFIC IMPACT ANALYSIS FOR FEATHER RIVER MILLS HOTEL GPA

INTRODUCTION / SUMMARY

Study Purpose and Project Description

Location. This traffic impact study presents an analysis of the traffic-related impacts associated with the proposed Feather River Mills Hotel GPA in Yuba City. Figure 1 presents the regional location of the project site between B Street and Bridge Street in the area between Plumas Street and Boyd Street.

Land Use. The City of Yuba City has initiated a General Plan Amendment, a Specific Plan Amendment to the Central City Specific Plan, and the Rezoning of a 1.5 acre property currently planned for Light Industrial uses. The site is zoned C-2 (Community Commercial), and will be re-designated under the General Plan from Light Industrial to Commercial. The project also includes a specific development proposal (Feather River Mills) for a 108 room hotel, as noted in Figure 2.

Access. The Feather River Mills Hotel project envisions full access to Shasta Street and B Street.

Circulation System Improvements. The land use development contemplated in this report does not involve improvements to the regional circulation system. However, the City of Yuba City is pursuing the Fifth Street Bridge Replacement Project that will create a new four-lane crossing over the Feather River, as shown in Figure 3. Completion of the Bridge Street Replacement project has been assumed under cumulative conditions.

Overall Analysis Approach

This traffic impact study presents an analysis of traffic operations under the following five (5) scenarios:

- Existing a.m. and p.m. peak hour conditions
- Existing Plus Feather River Mills Hotel Project alone
- Year 2035 a.m. and p.m. peak hour conditions with the Bridge Street Replacement Project without the project
- Year 2035 Plus Feather River Mills Hotel Project

Study Area Intersections. The quality of traffic flow is typically governed by the operation of intersections along an arterial street system. To quantitatively evaluate traffic conditions and to provide a basis for comparison of operating conditions with and without traffic generated by the

proposed project, traffic operations at the following seven (7) study area intersections were evaluated:

- Bridge Street / Plumas Street (signalized),
- Bridge Street / Shasta Street (signalized),
- Bridge Street / Boyd Street (side street stop),
- Bridge Street / Bridge Street EB on ramp (side street stop),
- B Street / Plumas Street (all-way stop),
- B Street / Shasta Street / Wilbur Street (all-way stop)
- B Street / Boyd Street (side street stop)

Summary Conclusions

Existing Conditions. Most study area intersections operate with Levels of Service that satisfy the City's minimum LOS D standard. However, the Bridge Street / Boyd Street operates at LOS E in the a.m. peak hour, and the Bridge Street / Bridge Street - EB on ramp intersections operate at LOS F today in the evening. These locations will be addressed by the City's pending Fifth Street Bridge Replacement Project.

Trip Generation. The proposed Hotel project is projected to generate a total of 882 new daily external trips with 57 trips in the a.m. peak hour and 65 trips in the p.m. peak hour.

Project Impacts. Development of the Feather River Mills Hotel project will not impact most study area intersections. The project would increase traffic through the Bridge Street / Boyd Street and Bridge Street / Bridge Street – EB on ramp intersections, and in the short term the intersections will continue to operate with Levels of Service that exceed the City's LOS D minimum. While the increase in delays associated with the project may normally be considered significant at the EB on ramp intersection, because this issue will be resolved with the City's pending Fifth Street Bridge Replacement Project, no mitigation is required.

Cumulative Impacts – No Project. Under long term conditions the background traffic volumes on Bridge Street and B Street will increase dramatically. Even with the Fifth Street Bridge Replacement Project, the signalized intersections at Plumas Street and Shasta Street will operate at LOS F. Similarly, the all-way stop controlled intersections on B Street at Plumas Street and Shasta Street will operate at LOS F. The B Street / Boyd Street intersection will also operate at LOS F. While no additional feasible improvements have been identified for the Bridge Street corridor, traffic signals and auxiliary lanes would be needed at intersections on B Street.

Cumulative Plus Project Impacts. The addition of project traffic will exacerbate the deficient background conditions that are expected if the site had been developed with industrial uses. Because LOS F is forecast with and without the project, the significance of cumulative impact is determined based on the change in delay at each location.

The project will increase delays at intersections on Bridge Street, but as the increase in the length of delays is less than the 5.0 second increment allowed under City guidelines, the project's impact is not significant and no mitigation is required at these locations.

The project will increase delays at the B Street intersections controlled by all-way stops, but as the length of the increase is less than the 5.0 second increment allowed under City guidelines, the project's impact is not significant at the Plumas Street and Shasta Street intersections, and mitigation is not required.

The project will increase the length of delays at the B Street / Boyd Street intersection that will operate at LOS F with and without the project. The increase in delay is significant under City guidelines. Auxiliary turn lanes and a traffic signal will be needed, and the project shall mitigate its impacts by contributing its fair share to the cost of these improvements. The project generates 0.5% of total future traffic.

Non-Automobile Circulation. The project will include sidewalk along its frontage as development proceeds.

VICINITY MAP

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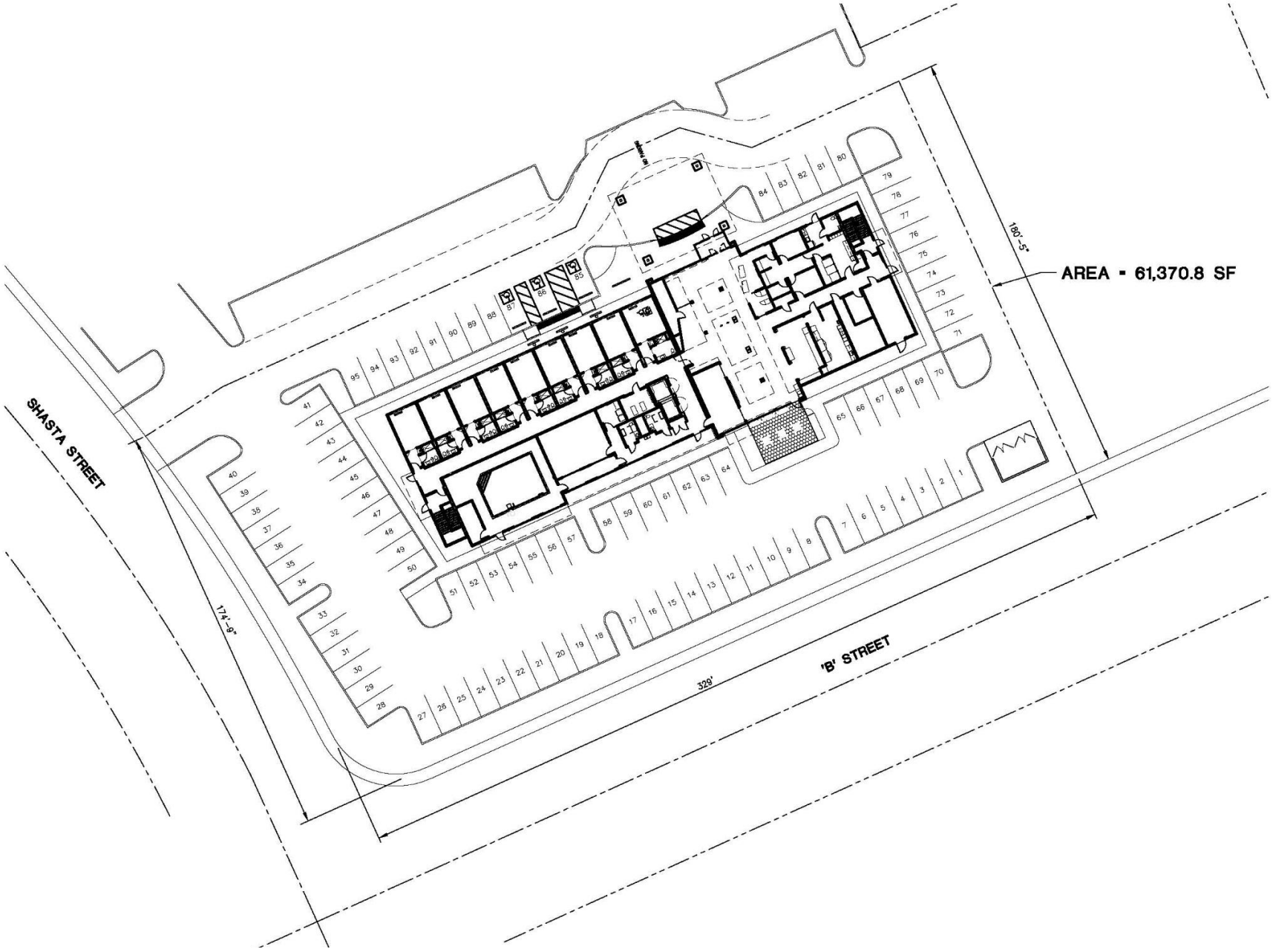
figure 1



FEATHER RIVER MILLS SITE PLAN

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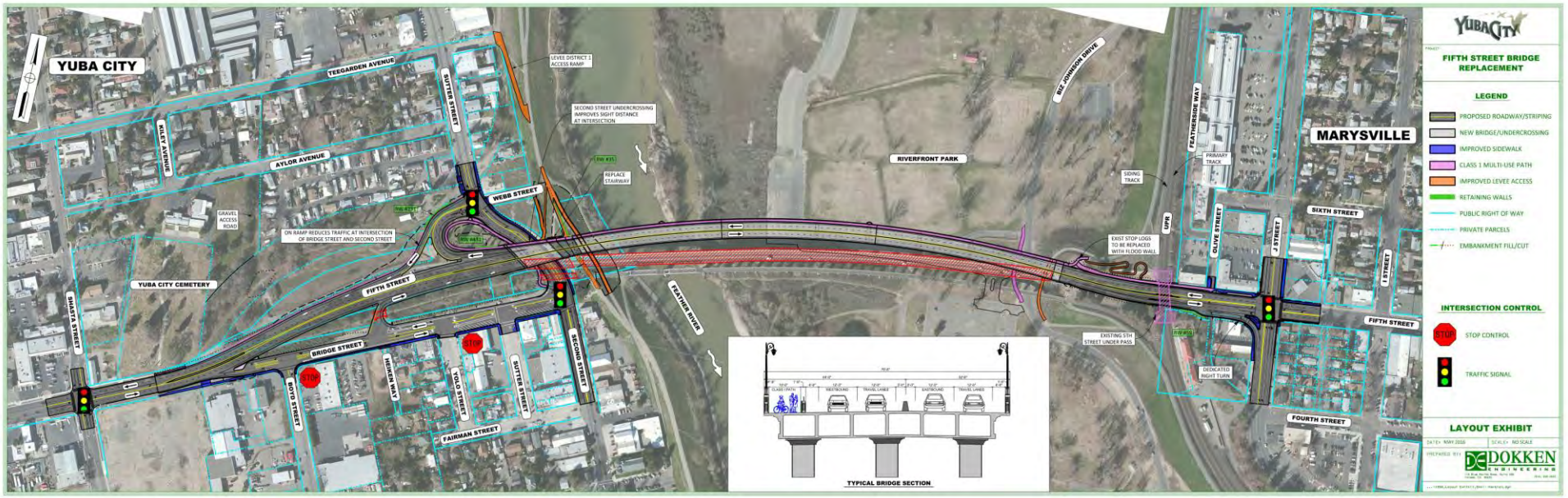
figure 2


YUBA CITY
MARYSVILLE
TEEGARDEN AVENUE
AYLOR AVENUE
RILEY AVENUE
BUTTE STREET
WEBB STREET
FIFTH STREET
BRIDGE STREET
SHASTA STREET
BOYD STREET
TOLO STREET
SECOND STREET
FAIRMAN STREET
YUBA CITY CEMETERY
GRAVEL ACCESS ROAD
LEVEE DISTRICT 1 ACCESS RAMP
SECOND STREET UNDERCROSSING IMPROVES SIGHT DISTANCE AT INTERSECTION
REPLACE STAIRWAY
ON RAMP REDUCES TRAFFIC AT INTERSECTION OF BRIDGE STREET AND SECOND STREET
RIVERFRONT PARK
BIG JOHNSON DRIVE
FEATHERSIDE WAY
PRIMARY TRACK
SIDING TRACK
UPRR
EXIST STOP LOGS TO BE REPLACED WITH FLOOD WALL
EXISTING 5TH STREET UNDER PASS
DEDICATED RIGHT TURN
OLIVE STREET
J STREET
SIXTH STREET
I STREET
FOURTH STREET
FEATHER RIVER
TYPICAL BRIDGE SECTION
YUBA CITY
FIFTH STREET BRIDGE REPLACEMENT
LEGEND
PROPOSED ROADWAY/STRIPING
NEW BRIDGE/UNDERCROSSING
IMPROVED SIDEWALK
CLASS 1 MULTI-USE PATH
IMPROVED LEVEE ACCESS
RETAINING WALLS
PUBLIC RIGHT OF WAY
PRIVATE PARCELS
EMBANKMENT FILL/CUT
INTERSECTION CONTROL
STOP CONTROL
TRAFFIC SIGNAL
LAYOUT EXHIBIT
DOKKEN ENGINEERING

EXISTING SETTING

Study Area

This traffic impact study presents analyses of traffic operating conditions at seven (7) intersections within the area that may be affected by the proposed project. The limits of the study area were identified through discussions with Yuba City staff based on their knowledge of the community and the results of previous traffic studies conducted for development in central Yuba City.

Roadways. The following information is a description of area roadways that provide vehicular access to the project site. These roadways are shown in Figure 5 (Existing Conditions).

- **Bridge Street** is an east-west arterial that extends from an intersection with Tharp Street in western Yuba City, across SR 99 to the area of the project and then across the Feather River into Marysville where the route continues as Fifth Street to SR 70. Today Bridge Street is a four-lane facility in the area of SR 99 west of Gray Avenue and in the area from Cooper Avenue easterly through the Shasta Street intersection. The road narrows to two lanes east of Shasta Avenue over the Feather River. Bridge Street has separated sidewalks in the study area, and on-street parking is prohibited. The posted speed limit on Bridge Street in the study area is 35 mph.

- **B Street** is an east–west collector street that extends from an intersection on Palora Street near SR 99 easterly through the study area to it eastern terminus on 2nd Street near the Feather River. B Street is a two-lane facility with Class II bicycle and sidewalks in most areas. On-street parking is permitted, and a prima facie 25 mph speed limit is in effect.

- **Plumas Street** is a north-south collector street that originates at an intersection with Morton Street / Percy Street in the south and extends northerly across B Street and Bridge Street through SR 20 to its northern terminus on Queens Avenue. Plumas Street is a two-lane roadway, and the City has implemented major streetscape projects in various locations to improve pedestrian access and to enhance the Downtown core area. Sidewalks exist in most areas. A prima facie 25 mph speed limit is in effect.

- **Shasta Street** is a north-south collector street that extends from B Street north across Bridge Street and SR 20. The route extends to the south as Wilbur Avenue to Garden Highway. In the immediate area of the project Shasta Street is a two-lane facility with a continuous center Two-Way Left-Turn (TWLT) lane. Sidewalks exist and on-street parking is permitted. The speed limit is posted at 25 mph.

- **Boyd Street** is a two-lane local street that connects C Street with Bridge Street along the project's eastern boundary. North of the B Street intersection Boyd Street has sidewalks and on-street parking is permitted. It has a posted speed limit of 25 mph.

Bicycle and Pedestrian Facilities, Transit

Class II bike lanes are provided along the length of B Street and on Wilbur Avenue south of B Street. Sidewalks are provided in nearly all areas, although no sidewalk exists along the north side of B Street between Shasta Street and Boyd Street. Crosswalks are marked at signalized and all-way stop controlled intersections, and button pedestrian activation is provided at each of the signalized study intersections.

Yuba-Sutter Transit provides fixed route bus service in the study area. Yuba-Sutter Transit Route 2 (Yuba City Loop) provides service on thirty minute headways in both directions along Plumas Street. Route 2 has timed transfers to Routes 1 and 5 at the Walton terminal.

Evaluation Methodology

The following text is a description of the methods used in this impact study to analyze intersection operations.

Level of Service Analysis Procedures. Level of Service (LOS) analysis provides a basis for describing existing traffic conditions and for evaluating the significance of project-related traffic impacts. Level of Service measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions, and F representing the worst conditions. The characteristics associated with the various LOS for intersections are presented in Table 1 and further discussed below.

Both signalized intersections and un-signalized stop sign controlled intersections have been analyzed using methods presented in the *Highway Capacity Manual (2010 HCM.* The analysis of existing conditions utilizes observed cycle length timing at the signalized study intersections. These cycle time parameters have also been held constant for analysis of Existing plus Project conditions. The calculations utilize a 2% heavy vehicle percentage and observed peak hour factors (PHF).

Un-signalized intersections with side street stop sign control have also been evaluated using *Highway Capacity Manual* procedures. At side street stop-sign-controlled intersections, the LOS is presented for turning movements experiencing the most delay. This is typically a left turn made from the minor street stop-sign-controlled approach onto the major street.

TABLE 1 LEVEL OF SERVICE DEFINITIONS		
Level of Service	**Signalized Intersections**	**Unsignalized Intersection**
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/veh
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh
"D"	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh
"F"	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh
Source: *Highway Capacity Manual (2010)*		

Standards of Significance / Level of Service Thresholds. In this traffic impact study, the significance of the proposed projects impact on traffic operating conditions is based on a determination of whether project generated traffic results in roadway or intersection operating conditions below acceptable standards as defined by the governing agency. A project's impact on traffic conditions is considered significant if implementation of the project would result in LOS changing from levels considered acceptable to levels considered unacceptable, or if the project would significantly worsen an already unacceptable LOS without the project. Relevant policies for the study area consist of the following.

Yuba City General Plan (Adopted April 2004)

Implementing Policy 5.2-1-12 *(Traffic Level of Service)* of the General Plan's Transportation section states the following:

- Develop and manage the roadway system to obtain LOS D or better for all major roadways and intersections in the City. This policy does not extend to residential streets (i.e., streets with direct driveway access to homes) or bridges across the Feather River nor does the policy apply to state highways and their intersections, where Caltrans policies apply. Exceptions to LOS D policy may be allowed by the City Council in areas, such as downtown, where allowing a lower LOS would result in clear public benefits.

- No new development will be approved unless it can be shown that the required level of service can be maintained on the affected roadways.

- Based upon the above, the following standards and significance criteria have been used for this analysis to identify a significant impact.

- Cause level of service at a study intersection to degrade from LOS D or better to LOS E or F.

- Exacerbate the no project level of service at a study intersection operating at LOS E or F. Based upon direction provided by City staff for past studies in this area, exacerbation of unacceptable operations at a City signalized intersection is considered an impact if the proposed project causes an increase in the average vehicle delay of 5 seconds or more.

Signal Warrants. Traffic signal warrants are a series of standards which provide guidelines for determining if a traffic signal is an appropriate control. Signal warrant analyses are typically conducted at intersections of uncontrolled major streets and stop sign-controlled minor streets. If one or more signal warrants are met, signalization of the intersection may be appropriate. However, a signal should typically not be installed if none of the warrants are met, since the installation of signals would increase delays on the previously uncontrolled major street, and may increase the occurrence of particular types of accidents.

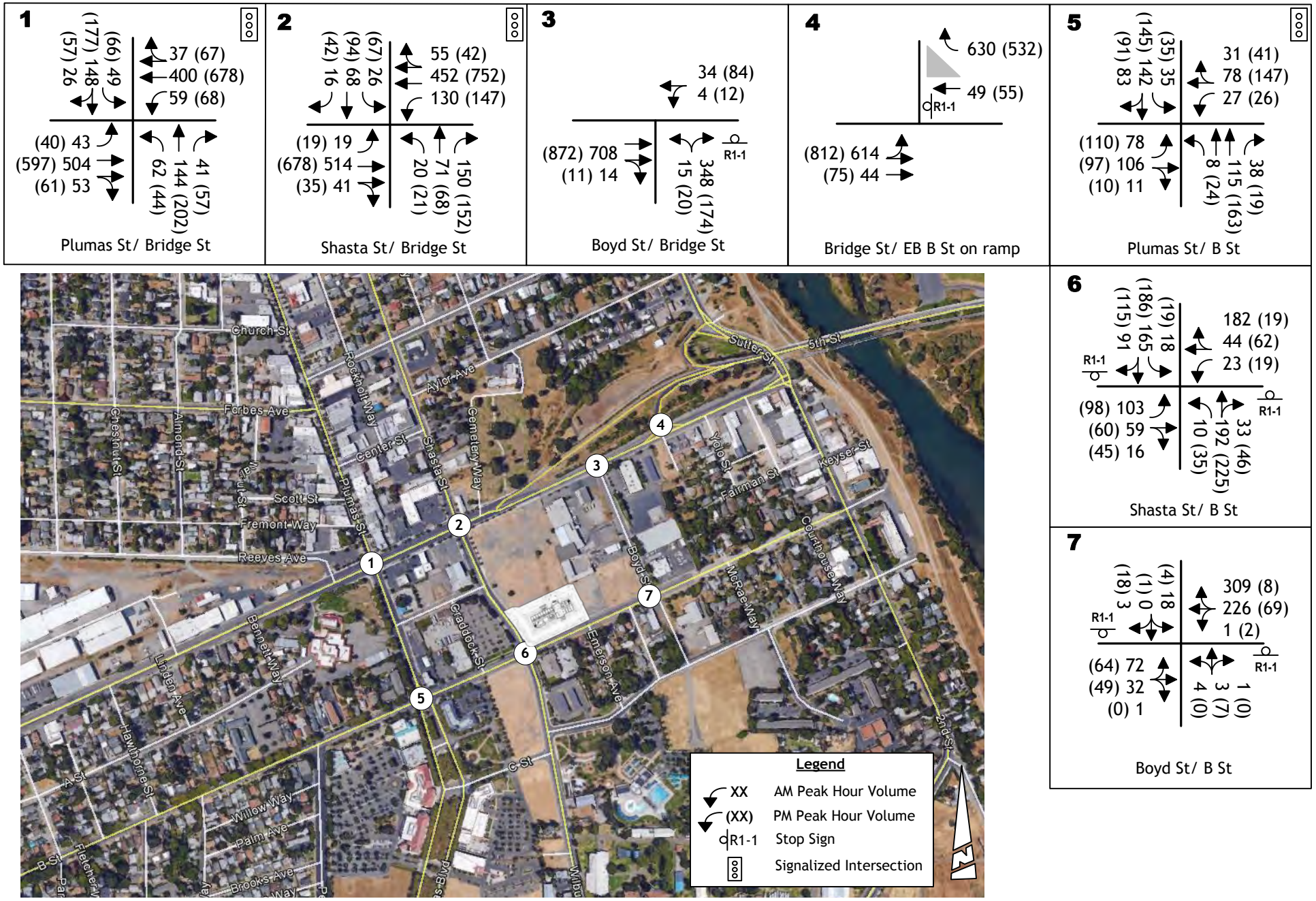
For this traffic impact study, available data is limited to peak hour volumes. Therefore, un-signalized intersections were evaluated using the Peak Hour Warrant (Warrant Number 3) from the *California Manual on Uniform Traffic Control Devices (2012)*. This warrant was applied where the minor street experiences long delays in entering or crossing the major street for at least one hour of the day. It should also be noted that even if the Peak Hour Warrant is met, a more detailed signal warrant study is typically recommended before a signal is installed. The more detailed study should consider volumes during the eight highest hours of the day, pedestrian traffic, and accident histories.

Existing Traffic Conditions and Levels of Service

The following is a description of existing traffic operating conditions in the study area.

Existing Traffic Volumes. The traffic volume data used for this report combines Bridge Street traffic counts conducted for the City's Fifth Street Bridge Replacement Project[1] with new data collected in 2017. Data was collected in 15-minute increments from 7:00 – 9:00 a.m. and 4:00 – 6:00 p.m. The contiguous one hour periods with the highest volumes within the two-hour data collection period were used in this traffic impact study as the a.m. and p.m. peak hour. Figure 4 presents the existing lane configurations and existing peak hour traffic volumes at the seven study intersections.

[1] Final Traffic Report for Fifth Street Bridge Replacement Project Study Report / Project Report, Fehr & Peers, September 15, 2011



EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 4

Existing Intersection Levels of Service. Table 2 presents a summary of existing peak hour LOS at the seven (7) study intersections. Level of Service calculations are provided in the Appendix. As shown in Table 2, with two exceptions, all study intersections currently operate satisfactorily within the minimum standards for Level of Service established by the City of Yuba City. The Bridge Street / Boyd Street intersection operates at LOS E in the a.m. peak hour. Conditions at this location will, however, be altered with the completion of the City's pending Fifth Street Bridge Replacement Project. The Bridge Street / Bridge Street EB on-ramp intersection also operates at LOS F and will also be affected by the Bridge Street Replacement Project.

Traffic Signal Warrants. Current peak hour traffic volumes were compared to MUTCD peak hour warrants requirements to determine whether traffic signals may already be justified. None of the study intersections carry volumes that satisfy peak hour warrants.

TABLE 2
EXISTING CONDITIONS
INTERSECTION LEVELS OF SERVICE

Intersection	Control	Existing				
		AM Peak Hour		PM Peak Hour		
		LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	Traffic Signal Warrants Satisfied?
1. Bridge Street / Plumas Street	Signal	B	16.2	B	16.7	n.a.
2. Bridge Street / Shasta Street	Signal	B	16.8	B	18.0	n.a.
3. Bridge Street / Boyd Street NB Left + Right Turn	Signal	**E**	**39.2**	C	18.8	No
4. Bridge Street / EB on ramp WB through	WB Stop	**E**	**39.0**	**F**	**122.6**	No
5. B Street / Plumas Street	All-Way Stop	B	11.7	B	12.9	No
6. B Street / Shasta Street / Wilbur Ave	All-Way Stop	C	17.1	B	13.2	No
7. B Street / Boyd Street SB Stop	NB/SB Stop	C	16.5	A	9.2	No

BOLD values exceed the minimum LOS D standard

PROJECT TRAFFIC IMPACTS

Development of the proposed project would attract additional traffic to the site as trips made by hotel patrons or as employee trips. This section of the traffic impact study identifies the assumptions made regarding the travel characteristics of the project and describes the impacts of project-related traffic relative to existing traffic conditions in the study area.

Project Characteristics

Trip Generation. Development of the project would generate new vehicle trips and potentially affect traffic operations at the study intersections. The number of vehicle trips that are expected to be generated by development of the proposed project has been estimated using published trip generation data. The Institute of Transportation Engineers (ITE) publication *Trip Generation Manual, 9th Edition*, has been used.

The Trip Generation Manual was reviewed to identify the land use categories that are most similar to the use planned in the proposed project. As indicated in Table 3, standard ITE rates for hotels have been employed. Because no specific uses are known for development under the current Light Industrial designation, and the average "per acre" ITE rates for Light Industrial have been employed.

TABLE 3
TRIP GENERATION RATES

Land Use / ITE Code	Unit	Trips per Unit						
			AM Peak Hour			PM Peak Hour		
		Daily	In	Out	Total	In	Out	Total
General Light industrial (110)	acre	51.80	83%	17%	7.51	22%	78%	7.26
Hotel (310)	room	8.17	59%	41%	0.53	51%	49%	0.60

The identified trip generation rates have been applied to the project's land use quantities, and the resulting trip generation estimates are presented in Table 4. As shown, the proposed Feather River Mills Hotel project is projected to generate a total of 882 daily trips with 57 trips in the a.m. peak hour and 65 trips in the p.m. peak hour.

TABLE 4 TRIP GENERATION FORECASTS								
		Trips per Unit						
			AM Peak Hour			PM Peak Hour		
Land Use / ITE Code	**Unit**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Feather River Mills								
Hotel (310)	108 room	882	34	23	57	33	32	65
Existing Light Industrial Designation								
Vacant Property	1.5 acres	78	9	2	11	2	9	11
Change in Total New Trip Generation with Retail Commercial Uses								
Commercial Total Less Existing Industrial Trips		***804***	***25***	***21***	***46***	***31***	***23***	***54***

These totals with the proposed Hotel project can be compared to the projection for build out of the area with General Light industrial uses under current zoning. As shown, the site could generate 78 daily trips with 11 trips in the a.m. peak hour and 11 trips in the p.m. peak hour.

Trip Distribution. The geographic distribution of vehicle trips associated with the proposed development has been based on existing traffic patterns, the location of probable trip destinations within the typical trade areas of identified uses. Table 5 presents the geographic trip distribution percentages for the project's new trips used for this analysis.

TABLE 5 TRIP DISTRIBUTION ASSUMPTIONS		
Direction	**Route**	**Percentage of Total New Trips**
North	Plumas Street	15%
	Shasta Street	10%
East	5th Street Bridge	20%
	B Street and Bridge Street	5%
South	Plumas Street	10%
	Shasta Street	5%
West	Bridge Street	20%
	B Street	15%
Total		100%

Trip Assignment. The trips associated with the project were directed to the study area circulation system via the identified and assumed driveways. Figure 5 displays the "project only" traffic volumes for each study intersection for the Feather River Mills Hotel alone during the a.m. and p.m. peak hours.

Existing plus Project Impacts

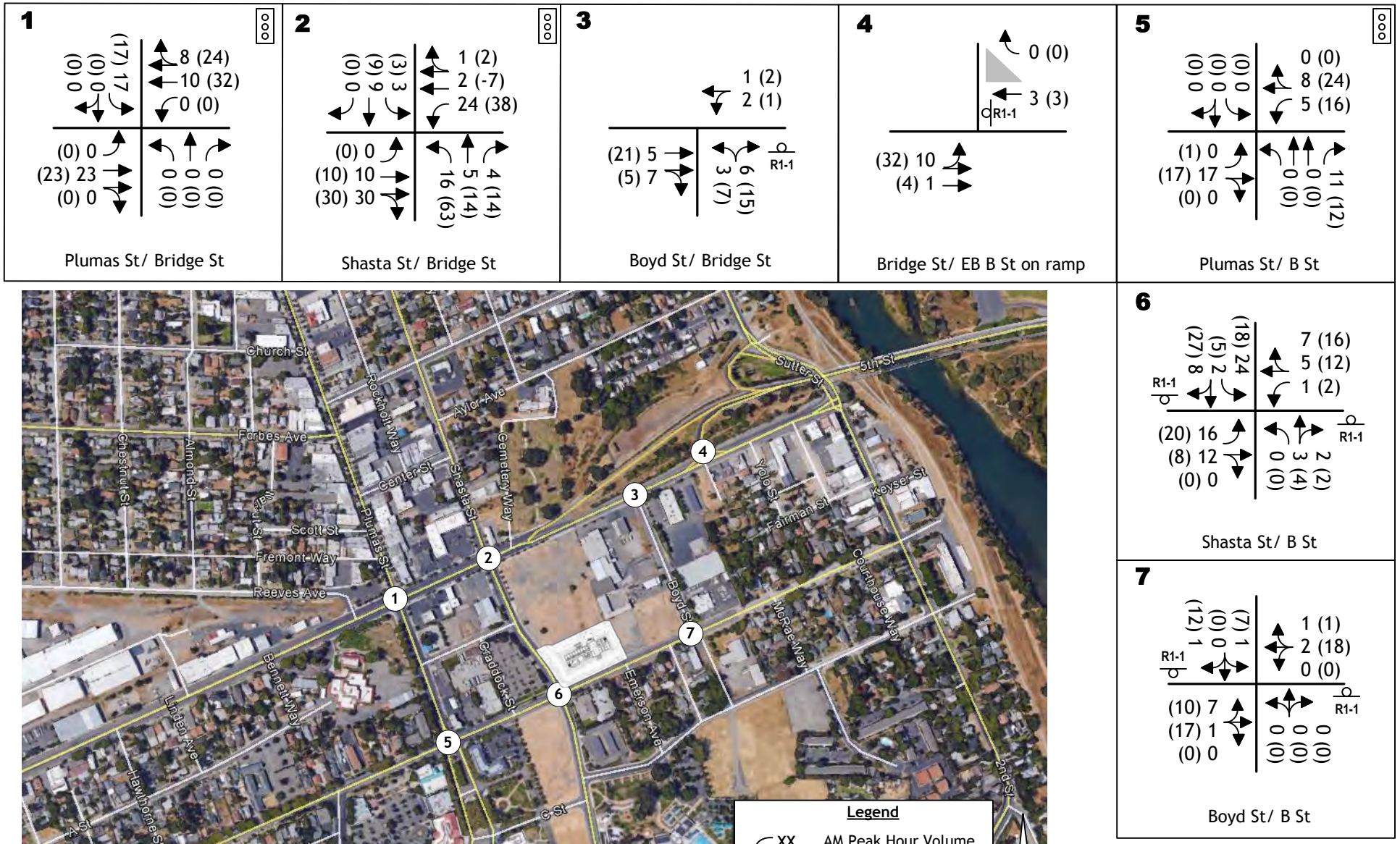
Intersection Levels of Service. To evaluate traffic impact the project's trips were superimposed onto current background traffic volumes. Figure 6 displays the resulting "Existing Plus Feather River Mills Hotel Project" traffic volumes anticipated at each study intersection during the peak hours. These volumes were then employed to calculate operating Levels of Service.

Table 6 displays the peak hour LOS at each study intersection under the Existing plus Project conditions. As shown, because the project's trip generation is relatively small, the addition of project generated traffic is projected to result in relatively minor increases in delay at each of the existing intersections. Most existing public street intersections will operate at LOS D or better. These impacts are considered less than significant based upon Yuba City and Caltrans standards of significance.

The project would increase traffic through the Bridge Street / Boyd Street intersection, and in the short term the intersection will continue to operate at LOS E in the a.m. peak hour. The addition of project trips may increase delays on the northbound approach by 0.9 seconds, which does not exceed the City's 5.0 second standard. Thus, the project's impact at this location is not significant, and no mitigation is required.

In the short term the project will exacerbate the LOS F conditions occurring at the Bridge Street / Bridge Street EB on ramp intersection. The increase in delay accompanying the project is 5.7 seconds which may normally be considered significant. However, because this issue will be resolved with the City's pending Fifth Street Bridge Replacement Project, no mitigation is required.

Traffic Signal Warrants. Projected volumes were compared to MUTCD peak hour warrants to determine whether project traffic would result in the need for traffic signals. None of the un-signalized intersection will carry traffic volumes that justify signalization.



FEATHER RIVER MILLS HOTEL ALONE
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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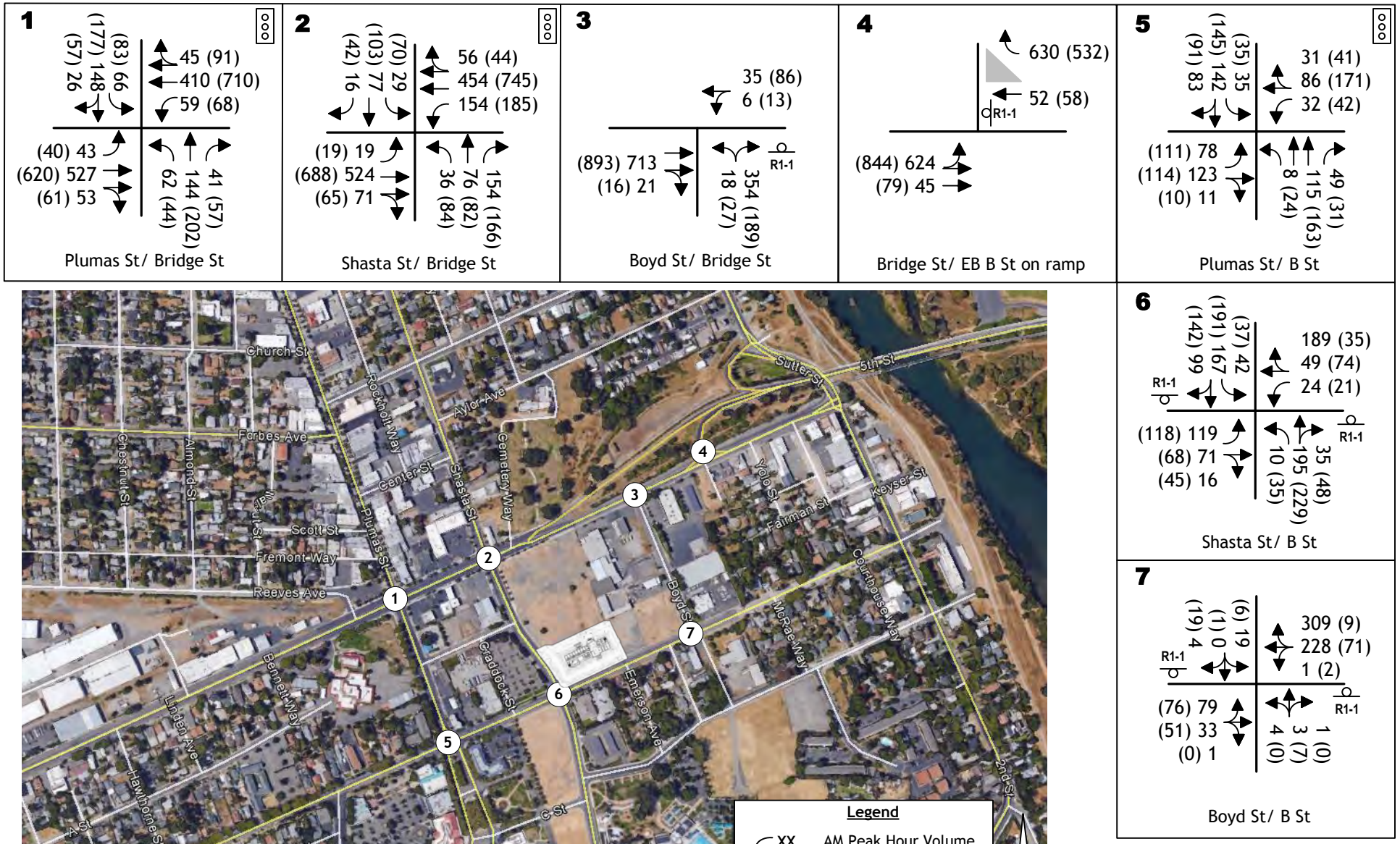

EXISTING PLUS FEATHER RIVER MILLS HOTEL
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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TABLE 6
EXISTING PLUS PROJECT CONDITIONS
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warrants Satisfied?
		Existing		Existing Plus Feather River Mills Hotel		Existing		Existing Plus Feather River Mills Hotel		
		LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	
1. Bridge Street / Plumas Street	Signal	B	16.2	B	16.4	B	16.7	B	16.7	n.a.
2. Bridge Street / Shasta Street	Signal	B	16.8	B	18.0	B	18.0	B	19.1	n.a.
3. Bridge Street / Boyd Street NB Left + Right Turn	Signal	**E**	**39.2**	**E**	**40.1**	C	18.8	C	19.1	No
4. Bridge Street / EB on ramp WB through	WB Stop	**E**	**39.0**	**E**	**39.6**	**F**	**122.6**	**F**	**128.3**	No
5. B Street / Plumas Street	All-Way Stop	B	11.7	B	11.8	B	12.9	B	13.2	No
6. B St / Shasta St / Wilbur Ave	All-Way Stop	C	17.1	C	18.0	B	13.2	B	13.7	No
7. B Street / Boyd Street SB Stop	NB/SB Stop	C	16.1	C	16.8	A	9.2	A	9.2	No

BOLD values exceed LOS D. **HIGHLIGHTED** values are a significant impact.

Site Access Evaluation

Feather River Mills Access. The proposed site plan for the Feather River Mills Hotel project identifies probable access locations on the street adjoining the project. Driveways are planned on both Shasta Street and B Street.

These key issues have been considered with regards to site design:

- Level of Service
- Adequacy of driveway throat
- Relative need for acceleration / deceleration treatments
- Need for left turn lane channelization
- Internal traffic controls adjoining public street access.

Level of Service. The Level of Service experienced by motorists waiting to exit the project site was identified for cumulative conditions, and this information is presented in Table 7. The backup calculations are included in the appendix. As shown, as the background traffic volumes increase in the future on the streets adjoining the project it may eventually become difficult to make left turns to exit the site. This will be most problematic on Shasta Street, however, access to B Street will be relatively easily. As the balance of the area is developed in the future the project site can be expected to have reciprocal access to adjoining parcels, and motorists will be able to use alternative routes that are less congested. While the City may eventually elect to limit access if a safety problem results in the future, no changes to the site plan to address Level of Service are recommended.

TABLE 7
PROJECT DRIVEWAYS
CUMULATIVE INTERSECTION LEVELS OF SERVICE

Intersection	Control	Cumulative Plus Project				
		AM Peak Hour		PM Peak Hour		Traffic Signal Warrants Satisfied?
		LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	
B Street / Access	SB Stop	B	13.4	D	25.3	No
Shasta Street / Access	WB Stop	C	24.1	D	34.0	No

Driveway Throat. The site plan for the Feather River Mills Hotel identifies the throat depth that would be expected at each driveway. In general the driveways provide limited throats that would accommodate 1 or 2 waiting vehicles before blocking inbound traffic. This available space is consistent with the short queues resulting from peak hour project traffic. In each case the project provides reciprocal access to adjoining properties, and queues could become longer in the future if the balance of the area develops. Longer throats (i.e., 100 feet) could be needed, or the city may need to restrict outbound left turns in the future to shorten queues.

Deceleration / Acceleration. The need for auxiliary treatments to accommodate traffic entering or exiting the site has also been evaluated based on the volume of traffic and speed involved. In general, the speed of travel on adjoining streets does not warrant the construction of auxiliary acceleration treatments. Deceleration treatments could be applicable at locations with high background traffic, truck access or a large number of right turns. However, the number of right turns with the project is not appreciable, and right run lanes are not recommended.

Left Turn Lanes. With the volume of traffic forecast on adjoining streets separate left turn lanes will be applicable at access locations on Shasta Street with large numbers of left turns. This is not the case with the Hotel project alone.

Internal Traffic Controls. Review of the site plan does not reveal any location where internal conflict would require an all-way stop to distribute the right of way between circulating motorists.

CUMULATIVE IMPACTS

Long Term Cumulative Conditions

Basis for Long Term Projections. The long term cumulative analysis compares two conditions:

- Future with current industrial land use designations on the project site
- Future with proposed Hotel on the project site

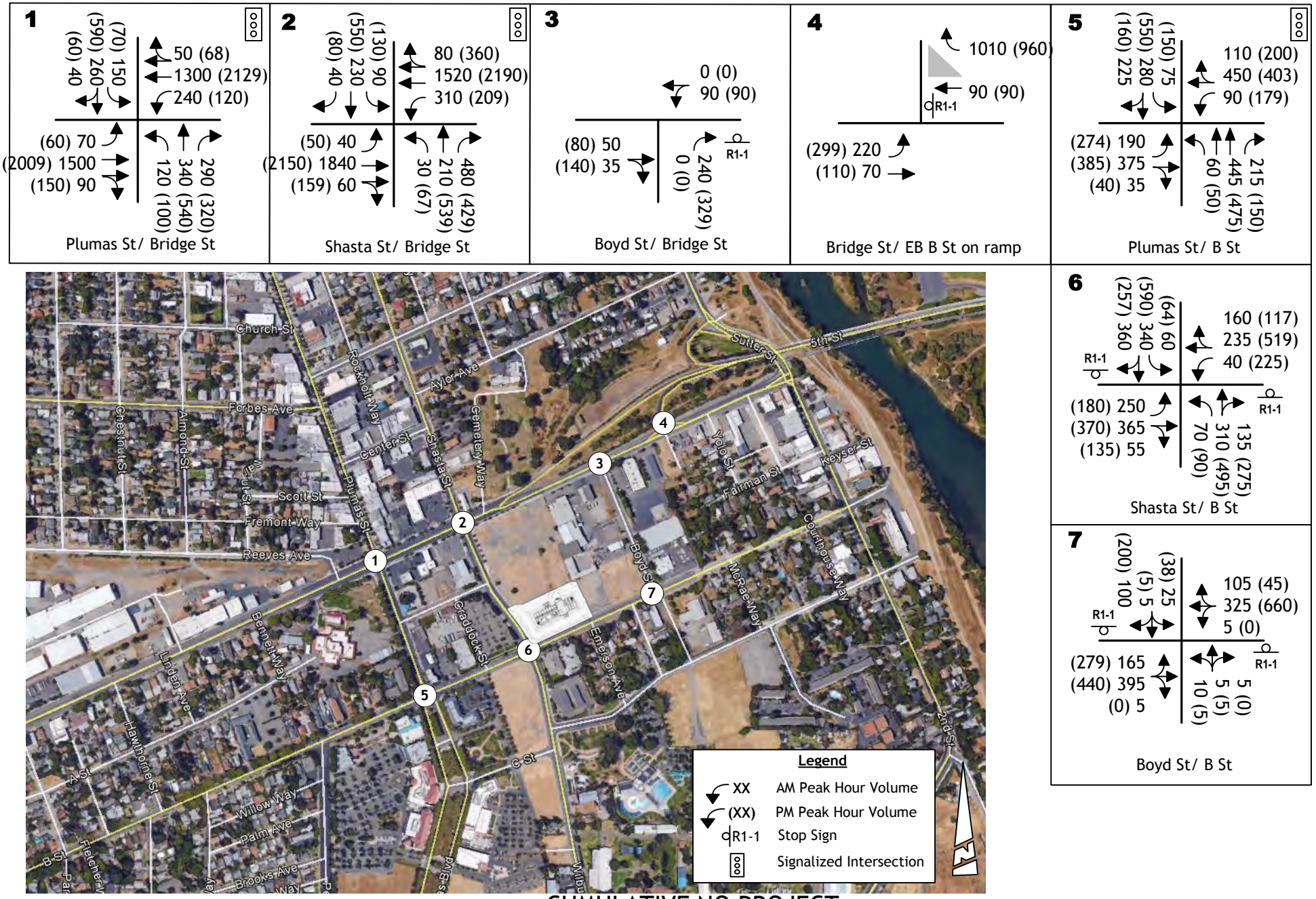
The Year 2030 travel demand forecasting model used for the City of Yuba City General Plan Update EIR and subsequently updated for various traffic studies was the basis for the cumulative impacts analysis. This tool was employed in the Fifth Street Bridge Replacement Project Report traffic study to produce future traffic volume forecasts for intersections on Bridge Street, and these published volumes have been assumed as the Cumulative No Project volumes at those locations. The Citywide traffic model was subsequently modified to reflect the Fifth Street Bridge Replacement Project and used to produce traffic volume forecasts for intersections on B Street.

The technical approach employed to use model results to create intersection turning movements for study area intersections mimics the approach used for the GPU EIR. Traffic model runs were made with the project as the basis for estimating peak hour traffic. The resulting a.m. and p.m. forecasts were compared to the model's baseline Year 2004 forecasts, and the net difference in volume was determined. These net changes were then factored to account for the fraction of growth that would occur from 2014 to 2030, and that increment was added or subtracted from the current peak hour approach and daily segment volumes observed in 2017 to create the adjusted cumulative volumes.

Existing and adjusted cumulative traffic volumes were compared to identify equivalent growth rates for intersection approaches for use in creating intersection turning movement volumes. To create peak hour intersection turning movements, the segment growth factors were applied to observed peak hour volumes and the results were balanced to best approximate conditions on each leg using the methodologies contained in the Transportation Research Board's (TRB's) NCHRP Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design.* This approach reflects the fact that the development of various land uses may affect current travel patterns while adding new traffic, while new roadways may provide alternative routes for existing traffic. Future No Project volumes were created by manually subtracting project trips.

Circulation System Assumptions. The traffic volume forecasts made for this analysis include those city-wide circulation system improvements incorporated into the General Plan traffic model and CIP. In addition to the Fifth Street Bridge Replacement Project, these include completion of Lincoln Road as a 4-lane facility between SR 99 and Garden Highway.

Traffic Volume Forecasts. Peak hour intersection turning movements were created for No Project and Plus Project Cumulative conditions. Figure 7 identifies cumulative traffic volumes at study intersections with development of industrial uses on the project site.



CUMULATIVE NO PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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9550-11 RA 9/20/2017

figure 7

Cumulative No Project Levels of Service. Table 8 identifies a.m. and p.m. peak hour Levels of Service under future conditions assuming the two analysis scenarios.

If no changes are made to current land use designations and the anticipated circulation system is available, then intersections on Bridge Street and B Street will operate at LOS F. The conditions projected on Bridge Street are consistent with the results of the Fifth Street Bridge Replacement Project traffic study which concluded that LOS F would remain in the future after the four lane bridge is in place.

Improvements would be needed at intersections on B Street to improve the anticipated Level of Service, and traffic signals or roundabout intersections would be required.

The Boyd Street / B Street intersection is projected to operate at LOS F. Intersection geometry and traffic control that is consistent with other intersections along B Street would improve the Level of Service. For example, an all-way stop with separate left turn lanes would yield LOS E in the p.m. peak hour. A traffic signal would be needed to reach the City's LOS D minimum standard.

Cumulative Plus Project Conditions. Figure 8 presents cumulative traffic volumes assuming the proposed Hotel project proceeds, and resulting Levels of Service were also presented in Table 8. As shown conditions in excess of the minimum standard are anticipated at five intersections, and because all are deficient with and without the project, the significance of project impacts is related to the relative increase in delay caused by the project.

The project would not have a significant impact at the **Bridge Street / Plumas Street intersection** as the increase in delay is 1.3 seconds in the a.m. peak hour and 2.6 seconds in the p.m. peak hour. Because the increment is less than the 5.0 second change accepted the City, the project's impact is not significant and mitigation is not required.

The project's impact is not significant at the **Bridge Street / Shasta Street** as the increase in delay is 4.4 seconds in the a.m. peak hour and 3.5 seconds in the p.m. peak hour. Because these changes fall within the increment permitted by the City, the project's impact is not significant and mitigation is note required.

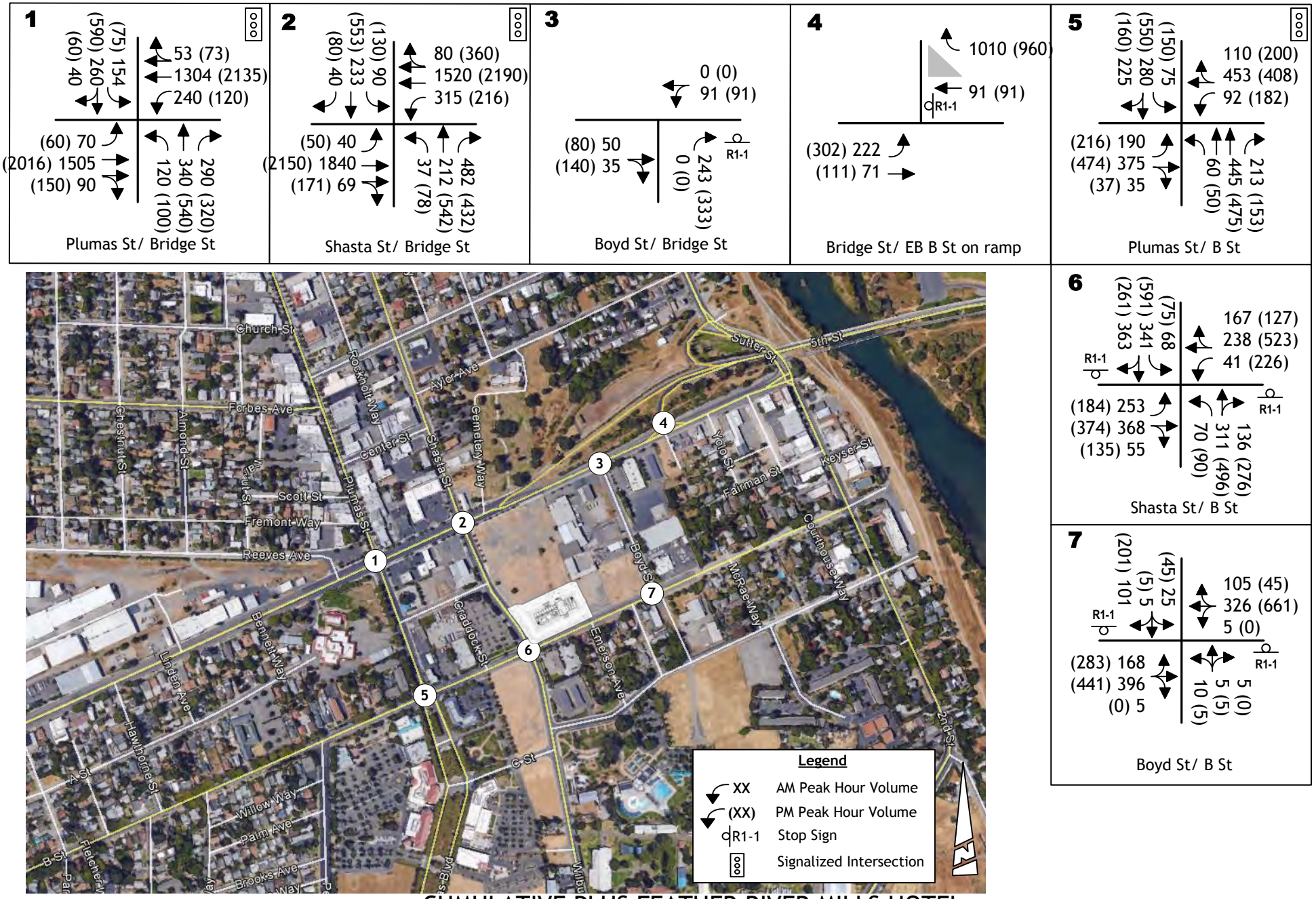
The project would add traffic to the **B Street / Plumas Street** intersection, which would continue to operate at LOS F. However, the incremental change accompanying the project is less than the 5.0 second increment allowed but the City. The project's impact is not significant and no mitigation is required.

The project would add traffic to the **B Street / Shasta Street** intersection, which would continue to operate at LOS F. However, the incremental change accompanying the project is less than the 5.0 second increment allowed but the City. The project's impact is not significant and no mitigation is required.

TABLE 8
CUMULATIVE PLUS PROJECT CONDITIONS
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	AM Peak Hour				PM Peak Hour			
		No Project		With Feather River Mills Hotel		No Project		With Feather River Mills Hotel	
		LOS	Average Delay (veh/sec)	LOS	Average Delay (veh/sec)	LOS	Average Delay (sec/veh)	LOS	Average Delay (veh/sec0
1. Bridge Street / Plumas Street	Signal	**F**	**85.7**	**F**	**87.0**	**F**	**287.7**	**F**	**290.3**
	Other Source*	**F**	**191**			**F**	**288**		
2. Bridge Street / Shasta Street	Signal	**F**	**259.0**	**F**	**263.4**	**F**	**446.2**	**F**	**449.7**
	Other Source*	**F**	**209**			**F**	**369**		
3. Bridge Street / Boyd Street NB Left + Right Turn	Signal	A	9.9	B	10.0	B	11.9	B	11.9
4. Bridge Street / EB on ramp WB through	WB Stop	B	14.1	B	14.2	C	18.2	C	18.5
5. B Street / Plumas Street	All-Way Stop	**F**	**76.9**	**F**	**76.9**	**F**	**82.6**	**F**	**82.7**
6. B Street / Shasta Street / Wilbur Ave	All-Way Stop	**F**	**71.7**	**F**	**71.9**	**F**	**69.8**	**F**	**69.8**
7. B Street / Boyd Street SB Stop	NB/SB Stop	**E**	**38.0**	**E**	**38.9**	**F**	**<300**	**F**	**<300**
	AWS and left turn lanes					**E**	**41.4**	**E**	**41.4**
	Signal							C	25.6

(*) Fifth Street Bridge Replacement Traffic Study
BOLD values exceed the LOS C minimum standard. **HIGHLIGHTED** values are s significant impact



CUMULATIVE PLUS FEATHER RIVER MILLS HOTEL
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

9550-11 RA 9/20/2017

figure 8

The project would have a significant impact at the **B Street / Boyd Street intersection.** While the forecast delay exceeds the practical limits of HCM methodology, the increase in delay in the p.m. peak hour would exceed the 5.0 second standard. At this location the improvements needed to deliver satisfactory Level of Service without the project would still be required if the project proceeds. Auxiliary left turn lanes and a traffic signal will deliver LOS D, and the proposed project should contribute its fair share to the cost of these improvements.

Table 9 identifies the derivation of potential fair share based on project trips as a percentage of the p.m. peak hour traffic at each intersection. Under Caltrans guideline typical employed by the City the calculation eliminates existing traffic from the total volume under the assumption that this traffic can be accommodated without improvements. This calculation yields the share based on Net New Traffic. Alternatively it is possible to base the calculation of the total cumulative traffic. This approach is applicable at locations where planned improvements may actually reduce traffic volume but where improvements might still be needed. The Bridge Street / Bridge Street EB on ramp intersection is an example.

As indicated, the Feather River Mills project contributes 0.5% of the Net New traffic to the B Street / Boyd Street intersection. A fair share contribution to the probable cost of identified improvements would reduce the project's cumulative impact to a less than significant level assuming a method for funding the balance of the cost is also identified.

TABLE 9
PROJECT FAIR SHARE CALCULATIONS

	PM peak Hour Traffic (VPH)			Share	
	Existing	Hotel Project Only	Cumulative Plus Project		
		B		Percent of Total Traffic (B / C)	Percent of Net New Traffic (B / (C-A))
Location	A	Feather River Mills Hotel	C	Feather River Mills Hotel	Feather River Mills
Bridge St / Plumas St	2,114	23	6,238	0.4%	0.6%
Bridge St / Shasta St	2,117	39	6,950	0.6%	0.8%
Bridge St / Boyd St	1,173	5	643	0.8%	n.a.
Bridge St / EB on ramp	1,474	5	1,484	0.3%	n.a.
B St / Plumas St	908	16	3,033	0.5%	0.8%
B St / Shasta St	929	41	3,360	1.2%	1.7%
B St / Boyd St	222	7	1,691	0.4%	0.5%

APPENDIX

ALL TRAFFIC DATA

9550-11

Yuba City
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : B Street/Boyd St
Date : 6/7/2017

Unshifted Count = All Vehicles & Uturns

	Boyd St Southbound					B St Westbound					Boyd St Northbound					B St Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	1	0	1	0	2	0	7	5	0	12	0	0	1	0	1	17	3	0	0	20	35	0
7:15	1	0	0	0	1	0	8	3	0	11	0	2	1	0	3	24	5	0	0	29	44	0
7:30	1	0	4	0	5	0	58	93	0	151	1	1	0	0	2	24	5	1	0	30	188	0
7:45	1	0	6	0	7	0	80	81	0	161	3	1	0	0	4	23	11	0	0	34	206	0
Total	4	0	11	0	15	0	153	182	0	335	4	4	2	0	10	88	24	1	0	113	473	0
8:00	1	0	4	0	5	1	40	75	0	116	0	1	0	0	1	13	8	0	0	21	143	0
8:15	0	0	4	0	4	0	48	60	0	108	0	0	1	0	1	12	8	0	0	20	133	0
8:30	1	0	7	0	8	0	40	56	0	96	0	2	0	0	2	20	6	0	0	26	132	0
8:45	2	0	9	0	11	1	71	59	0	131	0	1	0	0	1	12	10	1	0	23	166	0
Total	4	0	24	0	28	2	199	250	0	451	0	4	1	0	5	57	32	1	0	90	574	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	1	0	1	0	11	3	0	14	1	1	0	0	2	27	8	0	0	35	52	0
16:15	2	0	3	0	5	0	13	5	0	18	1	0	0	0	1	12	7	2	0	21	45	0
16:30	0	0	4	0	4	0	15	3	0	18	0	0	0	0	0	9	15	0	0	24	46	0
16:45	2	1	4	0	7	1	17	2	0	20	0	2	0	0	2	21	12	0	0	33	62	0
Total	4	1	12	0	17	1	56	13	0	70	2	3	0	0	5	69	42	2	0	113	205	0
17:00	2	0	6	0	8	1	30	1	0	32	0	2	0	0	2	13	13	0	0	26	68	0
17:15	0	0	4	0	4	0	7	2	0	9	0	3	0	0	3	21	9	0	0	30	46	0
17:30	1	2	1	0	4	1	9	1	0	11	0	2	0	0	2	14	10	0	0	24	41	0
17:45	1	1	0	0	2	1	15	1	0	17	0	0	0	0	0	18	13	0	0	31	50	0
Total	4	3	11	0	18	3	61	5	0	69	0	7	0	0	7	66	45	0	0	111	205	0
Grand Total	16	4	58	0	78	6	469	450	0	925	6	18	3	0	27	280	143	4	0	427	1457	0
Apprch %	20.5%	5.1%	74.4%	0.0%		0.6%	50.7%	48.6%	0.0%		22.2%	66.7%	11.1%	0.0%		65.6%	33.5%	0.9%	0.0%			
Total %	1.1%	0.3%	4.0%	0.0%	5.4%	0.4%	32.2%	30.9%	0.0%	63.5%	0.4%	1.2%	0.2%	0.0%	1.9%	19.2%	9.8%	0.3%	0.0%	29.3%	100.0%	

AM PEAK HOUR	Boyd St Southbound					B St Westbound					Boyd St Northbound					B St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	0	4	0	5	0	58	93	0	151	1	1	0	0	2	24	5	1	0	30	188
7:45	1	0	6	0	7	0	80	81	0	161	3	1	0	0	4	23	11	0	0	34	206
8:00	1	0	4	0	5	1	40	75	0	116	0	1	0	0	1	13	8	0	0	21	143
8:15	0	0	4	0	4	0	48	60	0	108	0	0	1	0	1	12	8	0	0	20	133
Total Volume	3	0	18	0	21	1	226	309	0	536	4	3	1	0	8	72	32	1	0	105	670
% App Total	14.3%	0.0%	85.7%	0.0%		0.2%	42.2%	57.6%	0.0%		50.0%	37.5%	12.5%	0.0%		68.6%	30.5%	1.0%	0.0%		
PHF	.750	.000	.750	.000	.750	.250	.706	.831	.000	.832	.333	.750	.250	.000	.500	.750	.727	.250	.000	.772	.813

NOON PEAK	Boyd St Southbound					B St Westbound					Boyd St Northbound					B St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	Boyd St Southbound					B St Westbound					Boyd St Northbound					B St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	4	0	4	0	15	3	0	18	0	0	0	0	0	9	15	0	0	24	46
16:45	2	1	4	0	7	1	17	2	0	20	0	2	0	0	2	21	12	0	0	33	62
17:00	2	0	6	0	8	1	30	1	0	32	0	2	0	0	2	13	13	0	0	26	68
17:15	0	0	4	0	4	0	7	2	0	9	0	3	0	0	3	21	9	0	0	30	46
Total Volume	4	1	18	0	23	2	69	8	0	79	0	7	0	0	7	64	49	0	0	113	222
% App Total	17.4%	4.3%	78.3%	0.0%		2.5%	87.3%	10.1%	0.0%		0.0%	100.0%	0.0%	0.0%		56.6%	43.4%	0.0%	0.0%		
PHF	.500	.250	.750	.000	.719	.500	.575	.667	.000	.617	.000	.583	.000	.000	.583	.762	.817	.000	.000	.856	.816

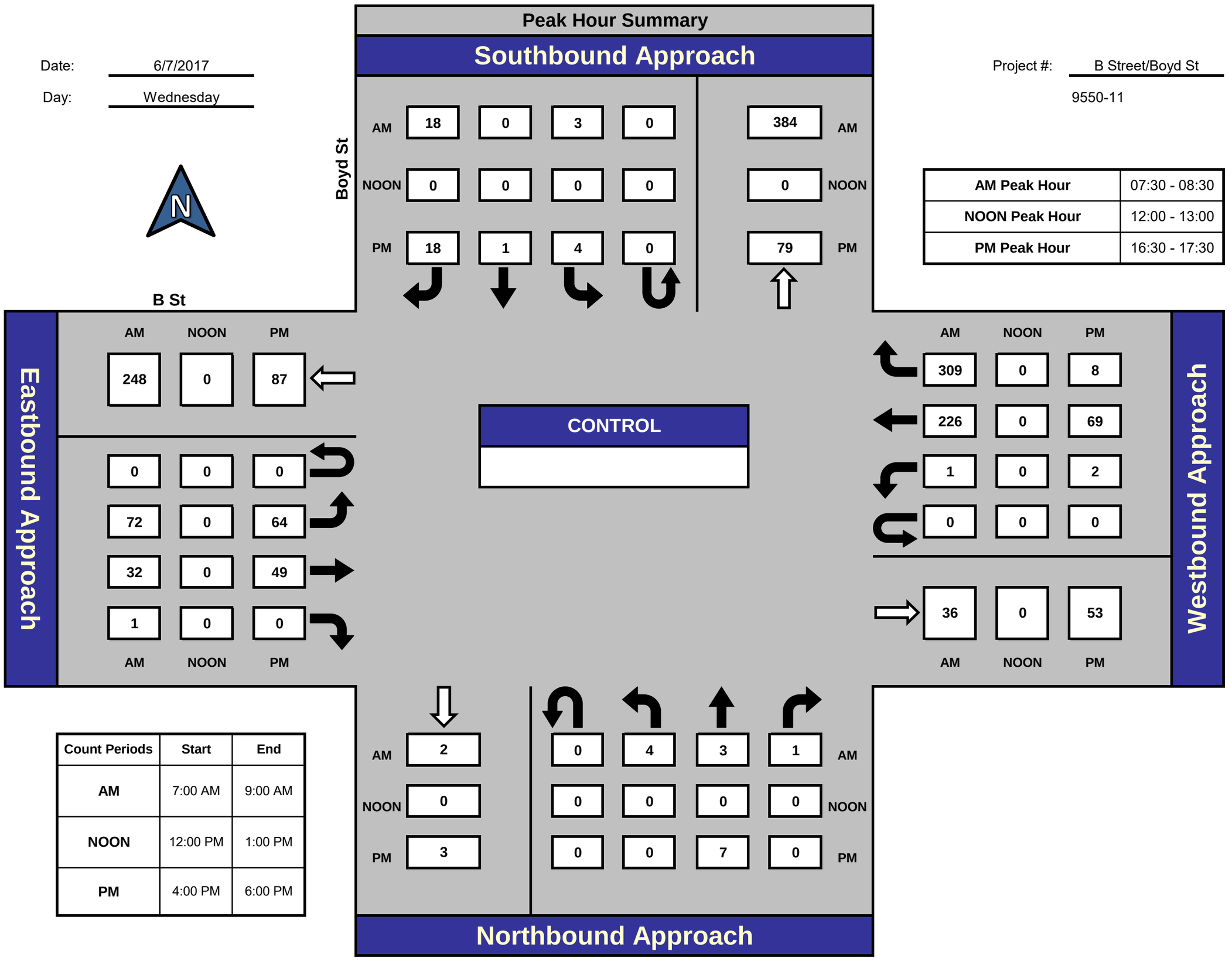
B Street/Boyd St

Date: 6/7/2017

Day: Wednesday

Project #: B Street/Boyd St

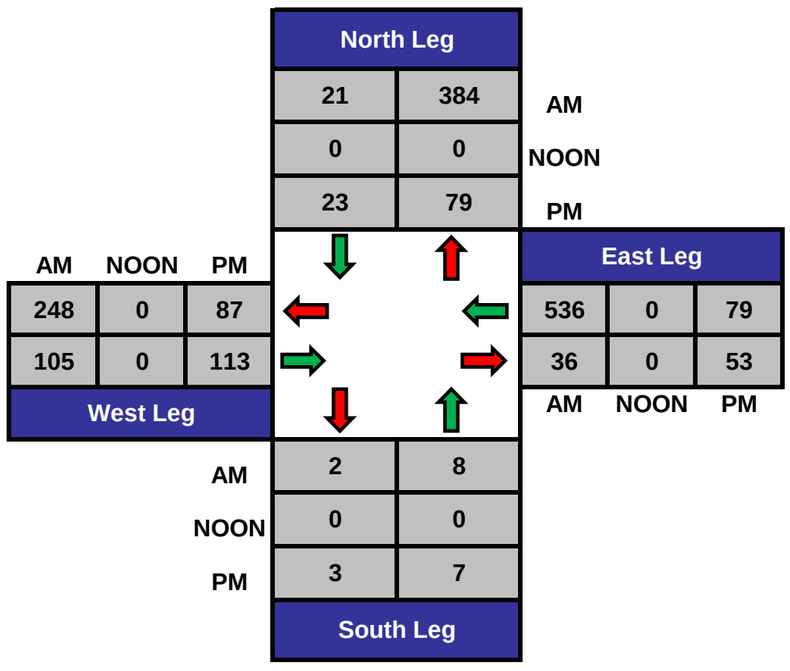
9550-11



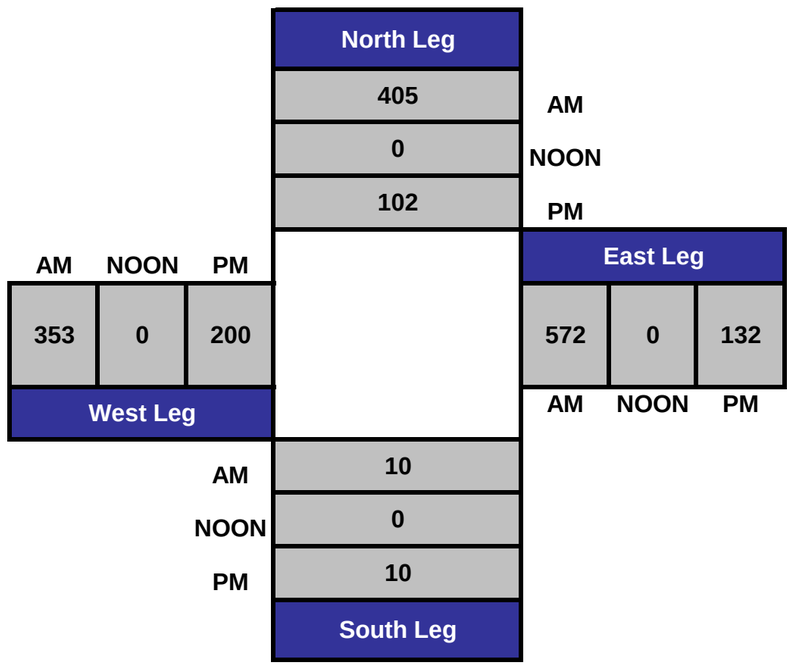
AM Peak Hour	07:30 - 08:30
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	16:30 - 17:30

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	1:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

9550-11

Yuba City
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

File Name : B Street & Plumas St
Date : 6/7/2017

Unshifted Count = All Vehicles & Uturns

	Plumas St Southbound					B St Westbound					Plumas St Northbound					B St Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	1	12	12	0	25	0	7	3	0	10	1	16	2	0	19	11	30	0	0	41	95	0
7:15	4	17	14	0	35	1	8	1	0	10	2	13	6	0	21	21	30	2	0	53	119	0
7:30	8	32	20	0	60	6	13	7	0	26	0	29	11	0	40	17	38	0	0	55	181	0
7:45	4	37	24	0	65	8	20	10	0	38	4	37	16	0	57	21	34	5	0	60	220	0
Total	17	98	70	0	185	15	48	21	0	84	7	95	35	0	137	70	132	7	0	209	615	0
8:00	11	39	16	0	66	8	22	7	0	37	0	19	5	0	24	13	20	1	0	34	161	0
8:15	9	32	23	0	64	6	17	7	0	30	2	31	7	0	40	23	27	3	0	53	187	0
8:30	11	34	20	0	65	5	19	7	0	31	2	28	10	0	40	21	25	2	0	48	184	0
8:45	7	30	28	0	65	4	27	13	0	44	3	30	6	0	39	23	24	0	0	47	195	0
Total	38	135	87	0	260	23	85	34	0	142	7	108	28	0	143	80	96	6	0	182	727	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	7	42	28	0	77	8	52	15	0	75	5	43	6	0	54	28	28	1	0	57	263	0
16:15	15	35	22	0	72	7	30	11	0	48	6	40	2	0	48	30	20	4	0	54	222	0
16:30	5	30	19	0	54	6	36	6	0	48	6	42	4	0	52	26	28	2	0	56	210	0
16:45	8	38	22	0	68	5	29	9	0	43	7	38	7	0	52	26	21	3	0	50	213	0
Total	35	145	91	0	271	26	147	41	0	214	24	163	19	0	206	110	97	10	0	217	908	0
17:00	7	48	17	0	72	6	32	4	0	42	7	52	8	0	67	26	34	3	0	63	244	0
17:15	11	34	16	0	61	7	42	5	0	54	4	36	9	0	49	21	31	2	0	54	218	0
17:30	15	34	17	0	66	5	23	7	0	35	4	38	12	0	54	17	17	0	0	34	189	0
17:45	11	30	9	0	50	6	28	0	0	34	0	24	4	0	28	12	26	1	0	39	151	0
Total	44	146	59	0	249	24	125	16	0	165	15	150	33	0	198	76	108	6	0	190	802	0
Grand Total	134	524	307	0	965	88	405	112	0	605	53	516	115	0	684	336	433	29	0	798	3052	0
Apprch %	13.9%	54.3%	31.8%	0.0%		14.5%	66.9%	18.5%	0.0%		7.7%	75.4%	16.8%	0.0%		42.1%	54.3%	3.6%	0.0%			
Total %	4.4%	17.2%	10.1%	0.0%	31.6%	2.9%	13.3%	3.7%	0.0%	19.8%	1.7%	16.9%	3.8%	0.0%	22.4%	11.0%	14.2%	1.0%	0.0%	26.1%	100.0%	

AM PEAK HOUR	Plumas St Southbound					B St Westbound					Plumas St Northbound					B St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	4	37	24	0	65	8	20	10	0	38	4	37	16	0	57	21	34	5	0	60	220
8:00	11	39	16	0	66	8	22	7	0	37	0	19	5	0	24	13	20	1	0	34	161
8:15	9	32	23	0	64	6	17	7	0	30	2	31	7	0	40	23	27	3	0	53	187
8:30	11	34	20	0	65	5	19	7	0	31	2	28	10	0	40	21	25	2	0	48	184
Total Volume	35	142	83	0	260	27	78	31	0	136	8	115	38	0	161	78	106	11	0	195	752
% App Total	13.5%	54.6%	31.9%	0.0%		19.9%	57.4%	22.8%	0.0%		5.0%	71.4%	23.6%	0.0%		40.0%	54.4%	5.6%	0.0%		
PHF	.795	.910	.865	.000	.985	.844	.886	.775	.000	.895	.500	.777	.594	.000	.706	.848	.779	.550	.000	.813	.855

NOON PEAK	Plumas St Southbound					B St Westbound					Plumas St Northbound					B St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	Plumas St Southbound					B St Westbound					Plumas St Northbound					B St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	7	42	28	0	77	8	52	15	0	75	5	43	6	0	54	28	28	1	0	57	263
16:15	15	35	22	0	72	7	30	11	0	48	6	40	2	0	48	30	20	4	0	54	222
16:30	5	30	19	0	54	6	36	6	0	48	6	42	4	0	52	26	28	2	0	56	210
16:45	8	38	22	0	68	5	29	9	0	43	7	38	7	0	52	26	21	3	0	50	213
Total Volume	35	145	91	0	271	26	147	41	0	214	24	163	19	0	206	110	97	10	0	217	908
% App Total	12.9%	53.5%	33.6%	0.0%		12.1%	68.7%	19.2%	0.0%		11.7%	79.1%	9.2%	0.0%		50.7%	44.7%	4.6%	0.0%		
PHF	.583	.863	.813	.000	.880	.813	.707	.683	.000	.713	.857	.948	.679	.000	.954	.917	.866	.625	.000	.952	.863

B Street & Plumas St

Date: 6/7/2017

Day: Wednesday

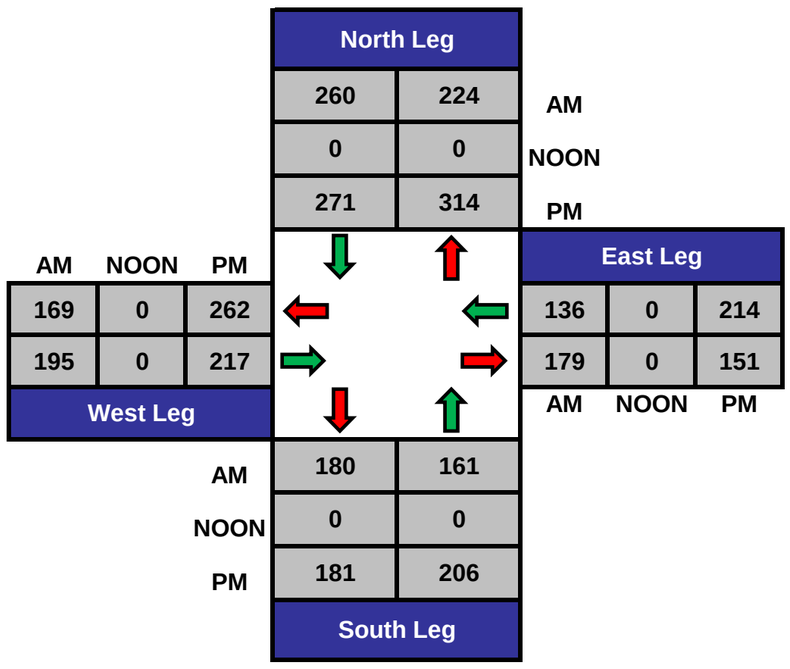
Project #: B Street & Plumas St

9550-11

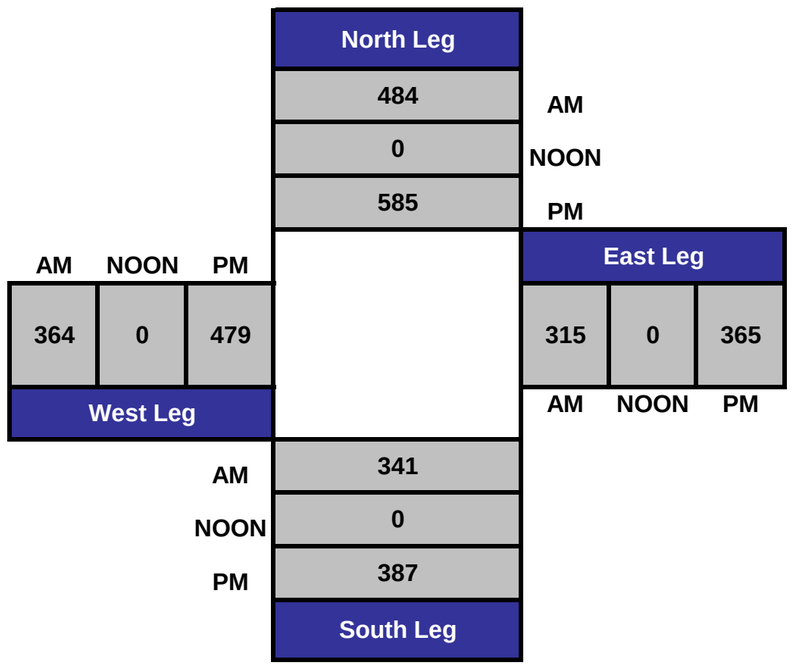
AM Peak Hour	07:45 - 08:45
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	16:00 - 17:00

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	1:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ALL TRAFFIC DATA

9550-11

Yuba City
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : Bridge Street & Boyd St
Date : 6/7/2017

Unshifted Count = All Vehicles & Uturns

	Boyd St Southbound					Bridge St Westbound					Boyd St Northbound					Bridge St Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	2	2	0	0	4	0	0	23	0	23	0	157	4	0	161	188	0
7:15	0	0	0	0	0	1	2	0	0	3	1	0	9	0	10	0	107	0	0	107	120	0
7:30	0	0	0	0	0	0	6	0	0	6	4	0	103	0	107	0	204	3	0	207	320	0
7:45	0	0	0	0	0	2	6	0	0	8	0	0	111	0	111	0	228	6	0	234	353	0
Total	0	0	0	0	0	5	16	0	0	21	5	0	246	0	251	0	696	13	0	709	981	0
8:00	0	0	0	0	0	1	10	0	0	11	4	0	61	0	65	0	128	3	0	131	207	0
8:15	0	0	0	0	0	1	12	0	0	13	7	0	73	0	80	0	148	2	0	150	243	0
8:30	0	0	0	0	0	7	14	0	0	21	6	0	78	0	84	0	132	2	0	134	239	0
8:45	0	0	0	0	0	4	13	0	0	17	5	0	79	0	84	0	120	2	0	122	223	0
Total	0	0	0	0	0	13	49	0	0	62	22	0	291	0	313	0	528	9	0	537	912	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	5	26	0	0	31	8	0	81	0	89	0	240	2	0	242	362	0
16:15	0	0	0	0	0	5	26	0	0	31	9	0	49	0	58	0	198	4	0	202	291	0
16:30	0	0	0	0	0	1	19	0	0	20	2	0	25	0	27	0	212	2	0	214	261	0
16:45	0	0	0	0	0	1	13	0	0	14	1	0	19	0	20	0	222	3	0	225	259	0
Total	0	0	0	0	0	12	84	0	0	96	20	0	174	0	194	0	872	11	0	883	1173	0
17:00	0	0	0	0	0	1	33	0	0	34	0	0	21	0	21	0	246	2	0	248	303	0
17:15	0	0	0	0	0	0	16	0	0	16	0	0	17	0	17	0	205	3	0	208	241	0
17:30	0	0	0	0	0	0	13	0	0	13	1	0	13	0	14	0	223	2	0	225	252	0
17:45	0	0	0	0	0	0	13	0	0	13	0	0	18	0	18	0	220	1	0	221	252	0
Total	0	0	0	0	0	1	75	0	0	76	1	0	69	0	70	0	894	8	0	902	1048	0
Grand Total	0	0	0	0	0	31	224	0	0	255	48	0	780	0	828	0	2990	41	0	3031	4114	0
Apprch %	0.0%	0.0%	0.0%	0.0%		12.2%	87.8%	0.0%	0.0%		5.8%	0.0%	94.2%	0.0%		0.0%	98.6%	1.4%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	5.4%	0.0%	0.0%	6.2%	1.2%	0.0%	19.0%	0.0%	20.1%	0.0%	72.7%	1.0%	0.0%	73.7%	100.0%	

AM PEAK HOUR	Boyd St Southbound					Bridge St Westbound					Boyd St Northbound					Bridge St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	0	0	0	0	0	6	0	0	6	4	0	103	0	107	0	204	3	0	207	320
7:45	0	0	0	0	0	2	6	0	0	8	0	0	111	0	111	0	228	6	0	234	353
8:00	0	0	0	0	0	1	10	0	0	11	4	0	61	0	65	0	128	3	0	131	207
8:15	0	0	0	0	0	1	12	0	0	13	7	0	73	0	80	0	148	2	0	150	243
Total Volume	0	0	0	0	0	4	34	0	0	38	15	0	348	0	363	0	708	14	0	722	1123
% App Total	0.0%	0.0%	0.0%	0.0%		10.5%	89.5%	0.0%	0.0%		4.1%	0.0%	95.9%	0.0%		0.0%	98.1%	1.9%	0.0%		
PHF	.000	.000	.000	.000	.000	.500	.708	.000	.000	.731	.536	.000	.784	.000	.818	.000	.776	.583	.000	.771	.795

NOON PEAK	Boyd St Southbound					Bridge St Westbound					Boyd St Northbound					Bridge St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	Boyd St Southbound					Bridge St Westbound					Boyd St Northbound					Bridge St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0	0	0	5	26	0	0	31	8	0	81	0	89	0	240	2	0	242	362
16:15	0	0	0	0	0	5	26	0	0	31	9	0	49	0	58	0	198	4	0	202	291
16:30	0	0	0	0	0	1	19	0	0	20	2	0	25	0	27	0	212	2	0	214	261
16:45	0	0	0	0	0	1	13	0	0	14	1	0	19	0	20	0	222	3	0	225	259
Total Volume	0	0	0	0	0	12	84	0	0	96	20	0	174	0	194	0	872	11	0	883	1173
% App Total	0.0%	0.0%	0.0%	0.0%		12.5%	87.5%	0.0%	0.0%		10.3%	0.0%	89.7%	0.0%		0.0%	98.8%	1.2%	0.0%		
PHF	.000	.000	.000	.000	.000	.600	.808	.000	.000	.774	.556	.000	.537	.000	.545	.000	.908	.688	.000	.912	.810

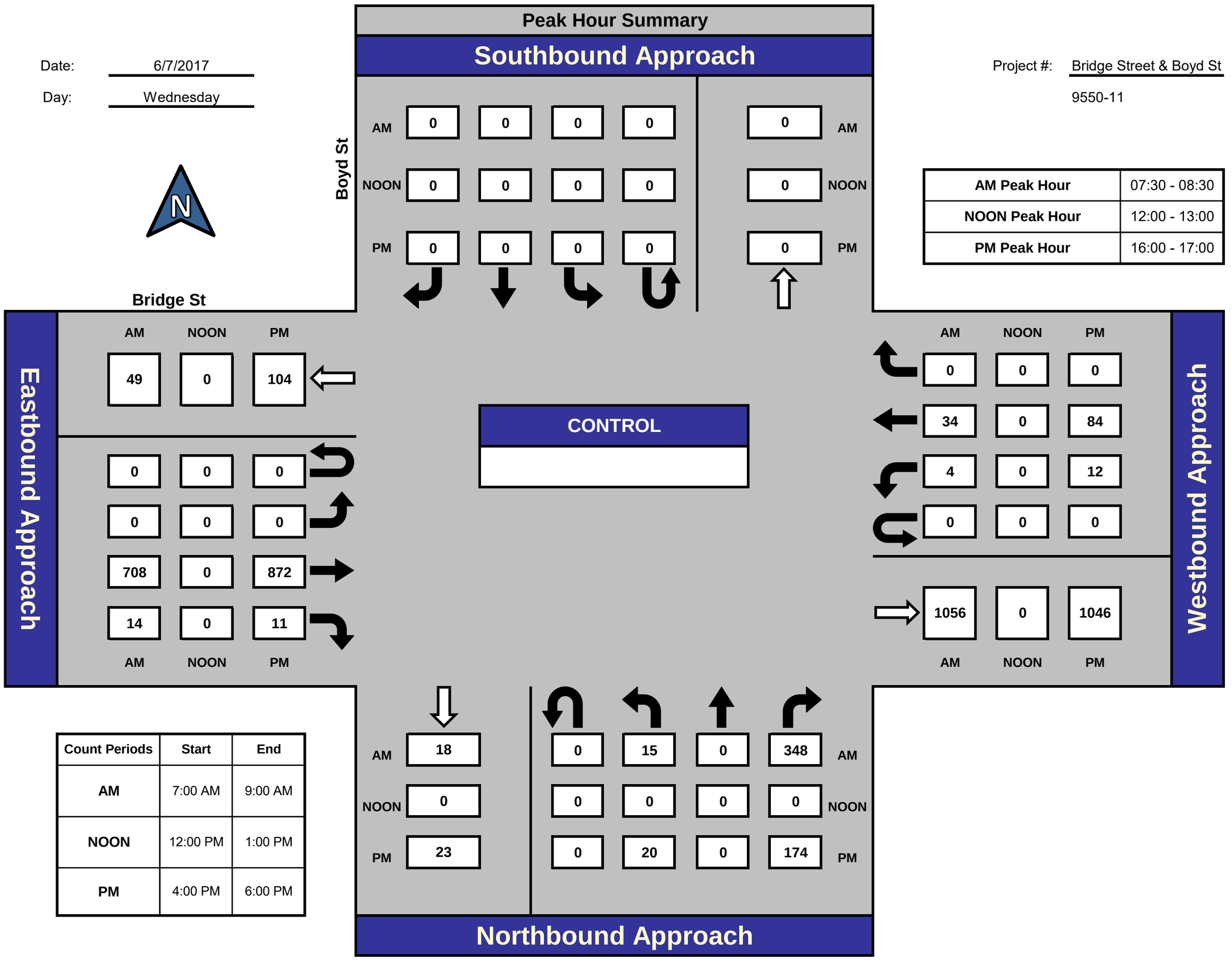
Bridge Street & Boyd St

Date: 6/7/2017

Day: Wednesday

Project #: Bridge Street & Boyd St

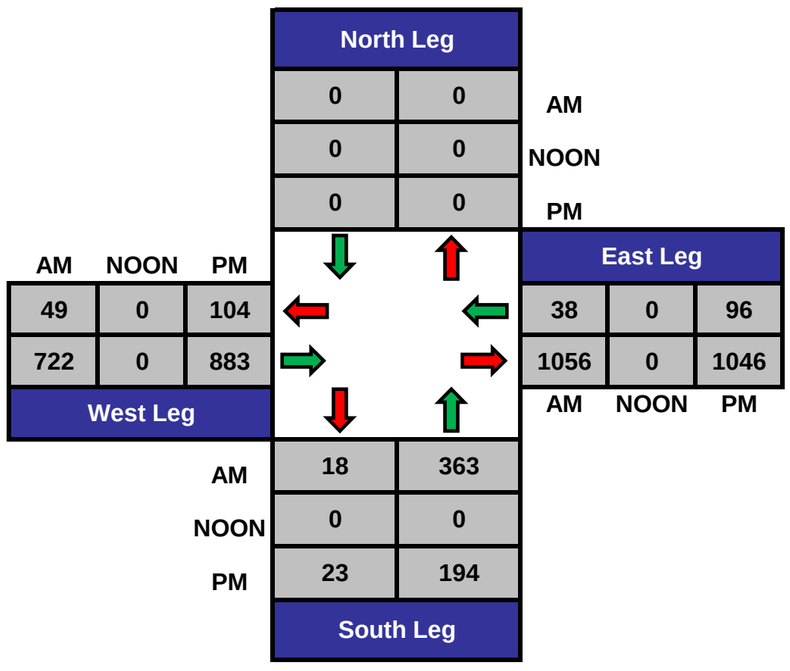
9550-11



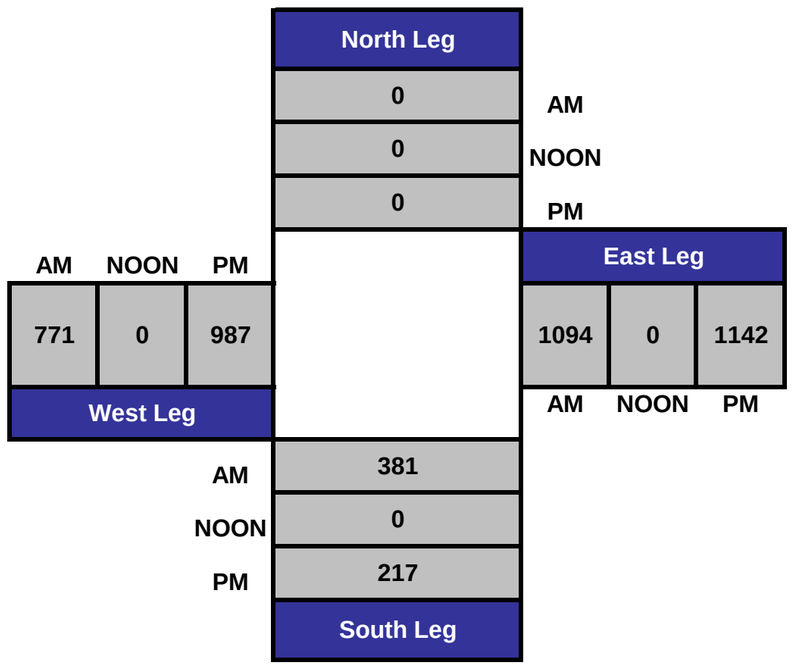
AM Peak Hour	07:30 - 08:30
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	16:00 - 17:00

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	1:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ALL TRAFFIC DATA

9550-11

Yuba City
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : Bridge Street & Wilbur Ave
Date : 6/7/2017

Unshifted Count = All Vehicles & Uturns

	Wilbur Ave Southbound					Bridge St Westbound					Wilbur Ave Northbound					Bridge St Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	1	15	3	0	19	1	4	4	0	9	0	15	6	0	21	16	11	1	0	28	77	0
7:15	2	19	7	0	28	0	4	3	0	7	0	40	13	0	53	24	10	3	0	37	125	0
7:30	5	48	15	0	68	8	15	59	0	82	5	73	12	0	90	38	18	3	0	59	299	0
7:45	7	34	16	0	57	6	9	46	0	61	2	39	8	0	49	25	12	4	0	41	208	0
Total	15	116	41	0	172	15	32	112	0	159	7	167	39	0	213	103	51	11	0	165	709	0
8:00	4	45	34	0	83	2	10	37	0	49	2	33	5	0	40	15	15	6	0	36	208	0
8:15	2	38	26	0	66	7	10	40	0	57	1	47	8	0	56	25	14	3	0	42	221	0
8:30	7	41	17	0	65	4	19	26	0	49	5	31	10	0	46	22	14	4	0	40	200	0
8:45	8	47	23	0	78	8	16	52	0	76	3	30	7	0	40	18	10	3	0	31	225	0
Total	21	171	100	0	292	21	55	155	0	231	11	141	30	0	182	80	53	16	0	149	854	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	6	33	14	0	53	2	9	7	0	18	11	52	14	0	77	21	24	12	0	57	205	0
16:15	3	47	24	0	74	6	11	6	0	23	4	37	8	0	49	24	12	7	0	43	189	0
16:30	4	45	31	0	80	3	12	6	0	21	8	57	11	0	76	21	14	12	0	47	224	0
16:45	10	54	27	0	91	6	14	1	0	21	9	55	12	0	76	22	13	12	0	47	235	0
Total	23	179	96	0	298	17	46	20	0	83	32	201	45	0	278	88	63	43	0	194	853	0
17:00	3	48	28	0	79	7	30	6	0	43	12	60	10	0	82	39	20	7	0	66	270	0
17:15	2	39	29	0	70	3	6	6	0	15	6	53	13	0	72	16	13	14	0	43	200	0
17:30	3	41	8	0	52	2	8	1	0	11	3	48	7	0	58	27	14	11	0	52	173	0
17:45	1	38	15	0	54	1	7	8	0	16	4	59	12	0	75	13	14	12	0	39	184	0
Total	9	166	80	0	255	13	51	21	0	85	25	220	42	0	287	95	61	44	0	200	827	0
Grand Total	68	632	317	0	1017	66	184	308	0	558	75	729	156	0	960	366	228	114	0	708	3243	0
Apprch %	6.7%	62.1%	31.2%	0.0%		11.8%	33.0%	55.2%	0.0%		7.8%	75.9%	16.3%	0.0%		51.7%	32.2%	16.1%	0.0%			
Total %	2.1%	19.5%	9.8%	0.0%	31.4%	2.0%	5.7%	9.5%	0.0%	17.2%	2.3%	22.5%	4.8%	0.0%	29.6%	11.3%	7.0%	3.5%	0.0%	21.8%	100.0%	

AM PEAK HOUR	Wilbur Ave Southbound					Bridge St Westbound					Wilbur Ave Northbound					Bridge St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	5	48	15	0	68	8	15	59	0	82	5	73	12	0	90	38	18	3	0	59	299
7:45	7	34	16	0	57	6	9	46	0	61	2	39	8	0	49	25	12	4	0	41	208
8:00	4	45	34	0	83	2	10	37	0	49	2	33	5	0	40	15	15	6	0	36	208
8:15	2	38	26	0	66	7	10	40	0	57	1	47	8	0	56	25	14	3	0	42	221
Total Volume	18	165	91	0	274	23	44	182	0	249	10	192	33	0	235	103	59	16	0	178	936
% App Total	6.6%	60.2%	33.2%	0.0%		9.2%	17.7%	73.1%	0.0%		4.3%	81.7%	14.0%	0.0%		57.9%	33.1%	9.0%	0.0%		
PHF	.643	.859	.669	.000	.825	.719	.733	.771	.000	.759	.500	.658	.688	.000	.653	.678	.819	.667	.000	.754	.783

NOON PEAK	Wilbur Ave Southbound					Bridge St Westbound					Wilbur Ave Northbound					Bridge St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	Wilbur Ave Southbound					Bridge St Westbound					Wilbur Ave Northbound					Bridge St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	4	45	31	0	80	3	12	6	0	21	8	57	11	0	76	21	14	12	0	47	224
16:45	10	54	27	0	91	6	14	1	0	21	9	55	12	0	76	22	13	12	0	47	235
17:00	3	48	28	0	79	7	30	6	0	43	12	60	10	0	82	39	20	7	0	66	270
17:15	2	39	29	0	70	3	6	6	0	15	6	53	13	0	72	16	13	14	0	43	200
Total Volume	19	186	115	0	320	19	62	19	0	100	35	225	46	0	306	98	60	45	0	203	929
% App Total	5.9%	58.1%	35.9%	0.0%		19.0%	62.0%	19.0%	0.0%		11.4%	73.5%	15.0%	0.0%		48.3%	29.6%	22.2%	0.0%		
PHF	.475	.861	.927	.000	.879	.679	.517	.792	.000	.581	.729	.938	.885	.000	.933	.628	.750	.804	.000	.769	.860

Bridge Street & Wilbur Ave

Date: 6/7/2017

Day: Wednesday

Project #: Bridge Street & Wilbur Ave

9550-11

Peak Hour Summary

Southbound Approach

Wilbur Ave

AM	91	165	18	0	477 AM
NOON	0	0	0	0	0 NOON
PM	115	186	19	0	342 PM

AM Peak Hour	07:30 - 08:30
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	16:30 - 17:30

Bridge St

Eastbound Approach

	AM	NOON	PM
	145	0	212
	0	0	0
	103	0	98
	59	0	60
	16	0	45
	AM	NOON	PM

Westbound Approach

	AM	NOON	PM
	182	0	19
	44	0	62
	23	0	19
	0	0	0
	110	0	125
	AM	NOON	PM

CONTROL

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	1:00 PM
PM	4:00 PM	6:00 PM

Northbound Approach

AM	204	0	10	192	33 AM
NOON	0	0	0	0	0 NOON
PM	250	0	35	225	46 PM

Total Ins & Outs

North Leg		
274	477	AM
0	0	NOON
320	342	PM

West Leg			East Leg		
AM	NOON	PM			
145	0	212	249	0	100
178	0	203	110	0	125
			AM	NOON	PM

South Leg		
204	235	AM
0	0	NOON
250	306	PM

Total Volume Per Leg

North Leg		
751		AM
0		NOON
662		PM

West Leg			East Leg		
AM	NOON	PM			
323	0	415	359	0	225
			AM	NOON	PM

South Leg	
439	AM
0	NOON
556	PM

1: Plumas St & Bridge st

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	504	53	59	400	37	62	144	41	49	148	26
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	54	630	66	74	500	46	78	180	51	61	185	32
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	1072	112	96	1120	103	99	378	321	85	302	52
Arrive On Green	0.04	0.33	0.33	0.05	0.34	0.34	0.06	0.20	0.20	0.05	0.19	0.19
Sat Flow, veh/h	1774	3234	338	1774	3279	301	1774	1863	1583	1774	1548	268
Grp Volume(v), veh/h	54	344	352	74	269	277	78	180	51	61	0	217
Grp Sat Flow(s),veh/h/ln	1774	1770	1803	1774	1770	1810	1774	1863	1583	1774	0	1815
Q Serve(g_s), s	1.3	7.1	7.1	1.8	5.2	5.2	1.9	3.8	1.2	1.5	0.0	4.8
Cycle Q Clear(g_c), s	1.3	7.1	7.1	1.8	5.2	5.2	1.9	3.8	1.2	1.5	0.0	4.8
Prop In Lane	1.00		0.19	1.00		0.17	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	78	587	598	96	605	618	99	378	321	85	0	354
V/C Ratio(X)	0.69	0.59	0.59	0.77	0.45	0.45	0.79	0.48	0.16	0.72	0.00	0.61
Avail Cap(c_a), veh/h	161	1247	1270	242	1327	1357	202	1355	1152	202	0	1320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	12.2	12.2	20.5	11.2	11.3	20.5	15.5	14.4	20.7	0.0	16.2
Incr Delay (d2), s/veh	10.5	0.9	0.9	12.2	0.5	0.5	12.8	0.9	0.2	10.8	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.6	3.7	1.2	2.6	2.7	1.3	2.0	0.5	1.0	0.0	2.6
LnGrp Delay(d),s/veh	31.2	13.1	13.1	32.7	11.8	11.8	33.3	16.4	14.7	31.5	0.0	17.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C		B
Approach Vol, veh/h		750			620			309			278	
Approach Delay, s/veh		14.4			14.3			20.4			20.9	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	18.6	6.5	12.6	5.9	19.0	6.1	12.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	31.0	5.0	32.0	4.0	33.0	5.0	32.0
Max Q Clear Time (g_c+I1), s	3.8	9.1	3.9	6.8	3.3	7.2	3.5	5.8
Green Ext Time (p_c), s	0.0	5.5	0.0	1.8	0.0	5.7	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

2: Shasta St & Bridge St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	514	41	130	452	55	20	71	150	26	68	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	24	642	51	162	565	69	25	89	188	32	85	20
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1071	85	195	1300	158	42	348	295	52	358	304
Arrive On Green	0.02	0.32	0.32	0.11	0.41	0.41	0.02	0.19	0.19	0.03	0.19	0.19
Sat Flow, veh/h	1774	3322	264	1774	3177	387	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	24	342	351	162	314	320	25	89	188	32	85	20
Grp Sat Flow(s),veh/h/ln	1774	1770	1816	1774	1770	1794	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.6	7.4	7.4	4.1	5.8	5.8	0.6	1.9	5.0	0.8	1.8	0.5
Cycle Q Clear(g_c), s	0.6	7.4	7.4	4.1	5.8	5.8	0.6	1.9	5.0	0.8	1.8	0.5
Prop In Lane	1.00		0.15	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	570	585	195	724	734	42	348	295	52	358	304
V/C Ratio(X)	0.59	0.60	0.60	0.83	0.43	0.44	0.59	0.26	0.64	0.62	0.24	0.07
Avail Cap(c_a), veh/h	195	973	999	195	973	987	156	1229	1045	156	1229	1045
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	12.9	12.9	19.8	9.6	9.7	22.0	15.8	17.1	21.8	15.6	15.0
Incr Delay (d2), s/veh	12.7	1.0	1.0	25.0	0.4	0.4	12.5	0.4	2.3	11.3	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.8	3.9	3.3	2.9	2.9	0.5	1.0	2.3	0.6	0.9	0.2
LnGrp Delay(d),s/veh	34.7	14.0	13.9	44.8	10.1	10.1	34.5	16.2	19.3	33.1	15.9	15.1
LnGrp LOS	C	B	B	D	B	B	C	B	B	C	B	B
Approach Vol, veh/h		717			796			302			137	
Approach Delay, s/veh		14.6			17.1			19.7			19.8	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	18.7	5.1	12.7	5.0	22.6	5.3	12.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	25.0	4.0	30.0	5.0	25.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	6.1	9.4	2.6	3.8	2.6	7.8	2.8	7.0
Green Ext Time (p_c), s	0.0	5.3	0.0	1.6	0.0	5.5	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	12.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	708	14	4	34	15	348
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	885	18	5	42	19	435

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	903	0	947	451
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	53	-
Critical Hdwy	-	-	4.14	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.22	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	749	-	274	556
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	969	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	749	-	272	556
Mov Cap-2 Maneuver	-	-	-	-	272	-
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	39.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	533	-	-	749	-
HCM Lane V/C Ratio	0.851	-	-	0.007	-
HCM Control Delay (s)	39.2	-	-	9.8	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	9	-	-	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	614	44	0	0	0	630	49	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	200	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	667	48	0	0	0	685	53	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	0	0	0	48	0	0	1383	1383	48
Stage 1	-	-	-	-	-	-	1383	1383	-
Stage 2	-	-	-	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1559	-	0	158	144	1021
Stage 1	-	-	-	-	-	0	233	211	-
Stage 2	-	-	-	-	-	0	-	-	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1559	-	-	158	0	1021
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	0	-
Stage 1	-	-	-	-	-	-	233	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s		0	39
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	158	-	-	-	1559	-
HCM Lane V/C Ratio	0.337	-	-	-	-	-
HCM Control Delay (s)	39	-	-	-	0	-
HCM Lane LOS	E	-	-	-	A	-
HCM 95th %tile Q(veh)	1.4	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	78	106	11	0	27	78	31	0	8	115	38
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	92	125	13	0	32	92	36	0	9	135	45
Number of Lanes	0	1	1	1	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	11.2	11.1	10.4
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	50%	0%	100%	0%	0%	72%	0%	63%
Vol Right, %	0%	0%	50%	0%	0%	100%	0%	28%	0%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	77	76	78	106	11	27	109	35	225
LT Vol	8	0	0	78	0	0	27	0	35	0
Through Vol	0	77	38	0	106	0	0	78	0	142
RT Vol	0	0	38	0	0	11	0	31	0	83
Lane Flow Rate	9	90	90	92	125	13	32	128	41	265
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.019	0.166	0.157	0.18	0.227	0.021	0.064	0.232	0.078	0.447
Departure Headway (Hd)	7.144	6.639	6.286	7.072	6.567	5.86	7.231	6.524	6.844	6.08
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	499	538	568	506	545	608	494	548	522	590
Service Time	4.911	4.406	4.053	4.837	4.332	3.625	4.999	4.292	4.603	3.838
HCM Lane V/C Ratio	0.018	0.167	0.158	0.182	0.229	0.021	0.065	0.234	0.079	0.449
HCM Control Delay	10.1	10.7	10.2	11.4	11.3	8.8	10.5	11.3	10.2	13.7
HCM Lane LOS	B	B	B	B	B	A	B	B	B	B
HCM 95th-tile Q	0.1	0.6	0.6	0.7	0.9	0.1	0.2	0.9	0.3	2.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	35	142	83
Peak Hour Factor	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	41	167	98
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	13.2
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	17.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	103	59	16	0	23	44	182	0	10	192	33
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	132	76	21	0	29	56	233	0	13	246	42
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	13.1	16.5	18.2
HCM LOS	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	85%	0%	79%	0%	19%	0%	64%
Vol Right, %	0%	15%	0%	21%	0%	81%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	225	103	75	23	226	18	256
LT Vol	10	0	103	0	23	0	18	0
Through Vol	0	192	0	59	0	44	0	165
RT Vol	0	33	0	16	0	182	0	91
Lane Flow Rate	13	288	132	96	29	290	23	328
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.027	0.563	0.292	0.195	0.064	0.538	0.048	0.619
Departure Headway (Hd)	7.638	7.021	7.967	7.3	7.775	6.685	7.553	6.787
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	468	513	450	490	460	539	473	532
Service Time	5.401	4.783	5.735	5.068	5.535	4.444	5.313	4.546
HCM Lane V/C Ratio	0.028	0.561	0.293	0.196	0.063	0.538	0.049	0.617
HCM Control Delay	10.6	18.5	14	11.8	11.1	17	10.7	20
HCM Lane LOS	B	C	B	B	B	C	B	C
HCM 95th-tile Q	0.1	3.4	1.2	0.7	0.2	3.2	0.2	4.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	18	165	91
Peak Hour Factor	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	23	212	117
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	19.4
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	72	32	1	1	226	309	4	3	1	18	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	89	40	1	1	279	381	5	4	1	22	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	660	0	0	41	0	0	692	881	40	692	691	470
Stage 1	-	-	-	-	-	-	218	218	-	472	472	-
Stage 2	-	-	-	-	-	-	474	663	-	220	219	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	928	-	-	1568	-	-	358	285	1031	358	368	594
Stage 1	-	-	-	-	-	-	784	723	-	573	559	-
Stage 2	-	-	-	-	-	-	571	459	-	782	722	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	928	-	-	1568	-	-	329	257	1031	327	332	594
Mov Cap-2 Maneuver	-	-	-	-	-	-	329	257	-	327	332	-
Stage 1	-	-	-	-	-	-	707	652	-	517	558	-
Stage 2	-	-	-	-	-	-	567	459	-	701	651	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.4	0	16.5	16.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	323	928	-	-	1568	-	-	349
HCM Lane V/C Ratio	0.031	0.096	-	-	0.001	-	-	0.074
HCM Control Delay (s)	16.5	9.3	0	-	7.3	0	-	16.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	0.2

Two Way Analysis cannot be performed on Signalized Intersection.

Two Way Analysis cannot be performed on Signalized Intersection.

Intersection	
Int Delay, s/veh	12.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	708	14	4	34	15	348
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	885	18	5	42	19	435

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	903	0	947	451
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	53	-
Critical Hdwy	-	-	4.14	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.22	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	749	-	274	556
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	969	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	749	-	272	556
Mov Cap-2 Maneuver	-	-	-	-	272	-
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	39.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	533	-	-	749	-
HCM Lane V/C Ratio	0.851	-	-	0.007	-
HCM Control Delay (s)	39.2	-	-	9.8	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	9	-	-	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	614	44	0	0	0	630	49	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	200	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	667	48	0	0	0	685	53	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	0	0	0	48	0	0	1383	1383	48
Stage 1	-	-	-	-	-	-	1383	1383	-
Stage 2	-	-	-	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1559	-	0	158	144	1021
Stage 1	-	-	-	-	-	0	233	211	-
Stage 2	-	-	-	-	-	0	-	-	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1559	-	-	158	0	1021
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	0	-
Stage 1	-	-	-	-	-	-	233	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s		0	39
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	158	-	-	-	1559	-
HCM Lane V/C Ratio	0.337	-	-	-	-	-
HCM Control Delay (s)	39	-	-	-	0	-
HCM Lane LOS	E	-	-	-	A	-
HCM 95th %tile Q(veh)	1.4	-	-	-	0	-

Two Way Analysis cannot be performed on an All Way Stop Intersection.

Two Way Analysis cannot be performed on an All Way Stop Intersection.

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	72	32	1	1	226	309	4	3	1	18	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	89	40	1	1	279	381	5	4	1	22	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	660	0	0	41	0	0	692	881	40	692	691	470
Stage 1	-	-	-	-	-	-	218	218	-	472	472	-
Stage 2	-	-	-	-	-	-	474	663	-	220	219	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	928	-	-	1568	-	-	358	285	1031	358	368	594
Stage 1	-	-	-	-	-	-	784	723	-	573	559	-
Stage 2	-	-	-	-	-	-	571	459	-	782	722	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	928	-	-	1568	-	-	329	257	1031	327	332	594
Mov Cap-2 Maneuver	-	-	-	-	-	-	329	257	-	327	332	-
Stage 1	-	-	-	-	-	-	707	652	-	517	558	-
Stage 2	-	-	-	-	-	-	567	459	-	701	651	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.4	0	16.5	16.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	323	928	-	-	1568	-	-	349
HCM Lane V/C Ratio	0.031	0.096	-	-	0.001	-	-	0.074
HCM Control Delay (s)	16.5	9.3	0	-	7.3	0	-	16.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	0.2

9: north access & Bridge st

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	722	0	0	49	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	902	0	0	61	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	903	0	964	451
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	61	-
Critical Hdwy	-	-	4.14	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.22	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	749	-	268	556
Stage 1	-	-	-	-	357	-
Stage 2	-	-	-	-	961	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	749	-	268	556
Mov Cap-2 Maneuver	-	-	-	-	268	-
Stage 1	-	-	-	-	357	-
Stage 2	-	-	-	-	961	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	749	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM research does not support more than two 'Free' approaches at the intersection.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	105	233	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	131	291	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	291	0	-	0	422	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	131	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1271	-	-	-	588	748
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	895	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1271	-	-	-	588	748
Mov Cap-2 Maneuver	-	-	-	-	588	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	895	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1271	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	105	233	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	131	291	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	291	0	-	0	422	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	131	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1271	-	-	-	588	748
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	895	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1271	-	-	-	588	748
Mov Cap-2 Maneuver	-	-	-	-	588	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	895	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1271	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	477	0	274	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	596	0	342	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1281	596	0	0	596	0
Stage 1	596	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	183	504	-	-	980	-
Stage 1	550	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	119	504	-	-	980	-
Mov Cap-2 Maneuver	119	-	-	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	325	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	980	-
HCM Lane V/C Ratio	-	-	-	0.349	-
HCM Control Delay (s)	-	-	0	10.6	0
HCM Lane LOS	-	-	A	B	A
HCM 95th %tile Q(veh)	-	-	-	1.6	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	477	0	0	274
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	596	0	0	342

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	939	596	0	0	596	0
Stage 1	596	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	293	504	-	-	980	-
Stage 1	550	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	293	504	-	-	980	-
Mov Cap-2 Maneuver	293	-	-	-	-	-
Stage 1	550	-	-	-	-	-
Stage 2	719	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	980	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	384	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	417	23	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	440	23	23	0	-	0
Stage 1	23	-	-	-	-	-
Stage 2	417	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	574	1054	1592	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	574	1054	1592	-	-	-
Mov Cap-2 Maneuver	574	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	665	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1592	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

1: Plumas St & Bridge st

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	597	61	68	678	67	44	202	57	66	177	57
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	43	649	66	74	737	73	48	220	62	72	192	62
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	1156	117	93	1211	120	70	382	325	91	293	95
Arrive On Green	0.04	0.36	0.36	0.05	0.37	0.37	0.04	0.21	0.21	0.05	0.22	0.22
Sat Flow, veh/h	1774	3245	330	1774	3253	322	1774	1863	1583	1774	1350	436
Grp Volume(v), veh/h	43	354	361	74	401	409	48	220	62	72	0	254
Grp Sat Flow(s),veh/h/ln	1774	1770	1805	1774	1770	1806	1774	1863	1583	1774	0	1786
Q Serve(g_s), s	1.1	7.7	7.7	2.0	8.8	8.8	1.3	5.1	1.5	1.9	0.0	6.2
Cycle Q Clear(g_c), s	1.1	7.7	7.7	2.0	8.8	8.8	1.3	5.1	1.5	1.9	0.0	6.2
Prop In Lane	1.00		0.18	1.00		0.18	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	65	631	643	93	659	672	70	382	325	91	0	388
V/C Ratio(X)	0.67	0.56	0.56	0.80	0.61	0.61	0.69	0.58	0.19	0.79	0.00	0.65
Avail Cap(c_a), veh/h	148	1110	1132	223	1184	1209	223	1247	1060	223	0	1195
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.7	12.4	12.4	22.4	12.2	12.2	22.7	17.1	15.7	22.4	0.0	17.1
Incr Delay (d2), s/veh	11.2	0.8	0.8	14.2	0.9	0.9	11.3	1.4	0.3	13.8	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.9	4.0	1.3	4.4	4.5	0.8	2.8	0.7	1.3	0.0	3.2
LnGrp Delay(d),s/veh	33.9	13.2	13.2	36.6	13.1	13.1	33.9	18.5	16.0	36.2	0.0	19.0
LnGrp LOS	C	B	B	D	B	B	C	B	B	D		B
Approach Vol, veh/h		758			884			330			326	
Approach Delay, s/veh		14.3			15.0			20.3			22.8	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	21.0	5.9	14.4	5.7	21.8	6.5	13.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	30.0	6.0	32.0	4.0	32.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	4.0	9.7	3.3	8.2	3.1	10.8	3.9	7.1
Green Ext Time (p_c), s	0.0	6.9	0.0	2.2	0.0	7.0	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

2: Shasta St & Bridge St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	678	35	147	752	42	21	68	152	67	94	42
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	737	38	160	817	46	23	74	165	73	102	46
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	1199	62	181	1472	83	39	315	268	91	370	314
Arrive On Green	0.02	0.35	0.35	0.10	0.43	0.43	0.02	0.17	0.17	0.05	0.20	0.20
Sat Flow, veh/h	1774	3425	177	1774	3407	192	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	21	381	394	160	424	439	23	74	165	73	102	46
Grp Sat Flow(s),veh/h/ln	1774	1770	1832	1774	1770	1829	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.6	8.7	8.7	4.4	8.8	8.8	0.6	1.7	4.7	2.0	2.3	1.2
Cycle Q Clear(g_c), s	0.6	8.7	8.7	4.4	8.8	8.8	0.6	1.7	4.7	2.0	2.3	1.2
Prop In Lane	1.00		0.10	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	619	641	181	764	790	39	315	268	91	370	314
V/C Ratio(X)	0.58	0.61	0.62	0.88	0.56	0.56	0.59	0.24	0.62	0.80	0.28	0.15
Avail Cap(c_a), veh/h	145	905	937	181	941	973	145	1143	972	145	1143	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	13.2	13.2	21.7	10.4	10.4	23.7	17.6	18.8	22.9	16.6	16.2
Incr Delay (d2), s/veh	14.1	1.0	1.0	36.0	0.6	0.6	13.4	0.4	2.3	14.9	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.4	4.6	3.9	4.4	4.5	0.4	0.9	2.2	1.3	1.2	0.5
LnGrp Delay(d),s/veh	37.8	14.2	14.1	57.6	11.0	11.0	37.1	18.0	21.1	37.8	17.0	16.4
LnGrp LOS	D	B	B	E	B	B	D	B	C	D	B	B
Approach Vol, veh/h		796			1023			262			221	
Approach Delay, s/veh		14.8			18.3			21.6			23.8	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	21.1	5.1	13.7	5.0	25.1	6.5	12.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	25.0	4.0	30.0	4.0	26.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	6.4	10.7	2.6	4.3	2.6	10.8	4.0	6.7
Green Ext Time (p_c), s	0.0	6.4	0.0	1.6	0.0	6.6	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	872	11	12	84	20	174
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	948	12	13	91	22	189

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	960	0	1071	480
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	117	-
Critical Hdwy	-	-	4.14	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.22	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	712	-	230	533
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	907	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	712	-	226	533
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	890	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	18.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	468	-	-	712	-
HCM Lane V/C Ratio	0.451	-	-	0.018	-
HCM Control Delay (s)	18.8	-	-	10.2	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	2.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	812	75	0	0	0	532	55	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	883	82	0	0	0	578	60	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	0	0	0	82	0	0	1847	1847	82
Stage 1	-	-	-	-	-	-	1847	1847	-
Stage 2	-	-	-	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1515	-	0	82	75	978
Stage 1	-	-	-	-	-	0	137	125	-
Stage 2	-	-	-	-	-	0	-	-	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1515	-	-	82	0	978
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	0	-
Stage 1	-	-	-	-	-	-	137	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s		0	122.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	82	-	-	-	1515	-
HCM Lane V/C Ratio	0.729	-	-	-	-	-
HCM Control Delay (s)	122.6	-	-	-	0	-
HCM Lane LOS	F	-	-	-	A	-
HCM 95th %tile Q(veh)	3.5	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	110	97	10	0	26	147	41	0	24	163	19
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	120	105	11	0	28	160	45	0	26	177	21
Number of Lanes	0	1	1	1	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	12.1	13.4	11.4
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	74%	0%	100%	0%	0%	78%	0%	61%
Vol Right, %	0%	0%	26%	0%	0%	100%	0%	22%	0%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	109	73	110	97	10	26	188	35	236
LT Vol	24	0	0	110	0	0	26	0	35	0
Through Vol	0	109	54	0	97	0	0	147	0	145
RT Vol	0	0	19	0	0	10	0	41	0	91
Lane Flow Rate	26	118	80	120	105	11	28	204	38	257
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.055	0.232	0.153	0.251	0.206	0.019	0.058	0.385	0.077	0.463
Departure Headway (Hd)	7.591	7.084	6.9	7.553	7.046	6.336	7.554	6.893	7.392	6.613
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	474	509	522	478	511	567	477	525	488	549
Service Time	5.303	4.795	4.611	5.264	4.757	4.048	5.254	4.593	5.092	4.313
HCM Lane V/C Ratio	0.055	0.232	0.153	0.251	0.205	0.019	0.059	0.389	0.078	0.468
HCM Control Delay	10.7	11.9	10.9	12.8	11.6	9.2	10.7	13.8	10.7	14.9
HCM Lane LOS	B	B	B	B	B	A	B	B	B	B
HCM 95th-tile Q	0.2	0.9	0.5	1	0.8	0.1	0.2	1.8	0.2	2.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	35	145	91
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	38	158	99
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.4
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	98	60	45	0	19	62	19	0	35	225	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	107	65	49	0	21	67	21	0	38	245	50
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	11.3	10.7	13.9
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	83%	0%	57%	0%	77%	0%	62%
Vol Right, %	0%	17%	0%	43%	0%	23%	0%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	271	98	105	19	81	19	301
LT Vol	35	0	98	0	19	0	19	0
Through Vol	0	225	0	60	0	62	0	186
RT Vol	0	46	0	45	0	19	0	115
Lane Flow Rate	38	295	107	114	21	88	21	327
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.07	0.489	0.212	0.201	0.042	0.164	0.038	0.528
Departure Headway (Hd)	6.602	5.975	7.165	6.35	7.404	6.726	6.593	5.815
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	541	601	500	563	482	531	542	618
Service Time	4.358	3.731	4.929	4.114	5.18	4.501	4.349	3.57
HCM Lane V/C Ratio	0.07	0.491	0.214	0.202	0.044	0.166	0.039	0.529
HCM Control Delay	9.9	14.4	11.9	10.7	10.5	10.8	9.6	14.9
HCM Lane LOS	A	B	B	B	B	B	A	B
HCM 95th-tile Q	0.2	2.7	0.8	0.7	0.1	0.6	0.1	3.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	19	186	115
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	21	202	125
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	14.6
HCM LOS	B

Lane

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	64	49	0	2	69	8	0	7	0	4	1	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	53	0	2	75	9	0	8	0	4	1	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	84	0	0	53	0	0	286	280	53	280	276	79
Stage 1	-	-	-	-	-	-	192	192	-	84	84	-
Stage 2	-	-	-	-	-	-	94	88	-	196	192	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1513	-	-	1553	-	-	666	628	1014	672	632	981
Stage 1	-	-	-	-	-	-	810	742	-	924	825	-
Stage 2	-	-	-	-	-	-	913	822	-	806	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1513	-	-	1553	-	-	627	597	1014	641	601	981
Mov Cap-2 Maneuver	-	-	-	-	-	-	627	597	-	641	601	-
Stage 1	-	-	-	-	-	-	771	706	-	880	824	-
Stage 2	-	-	-	-	-	-	893	821	-	759	706	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.2	0.2	11.1	9.2
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	597	1513	-	-	1553	-	-	876
HCM Lane V/C Ratio	0.013	0.046	-	-	0.001	-	-	0.029
HCM Control Delay (s)	11.1	7.5	0	-	7.3	0	-	9.2
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

1: Plumas St & Bridge st

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	527	53	59	405	40	62	144	41	54	148	26
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	54	659	66	74	506	50	78	180	51	68	185	32
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	1102	110	95	1137	112	98	369	314	90	300	52
Arrive On Green	0.04	0.34	0.34	0.05	0.35	0.35	0.06	0.20	0.20	0.05	0.19	0.19
Sat Flow, veh/h	1774	3250	325	1774	3255	321	1774	1863	1583	1774	1548	268
Grp Volume(v), veh/h	54	359	366	74	274	282	78	180	51	68	0	217
Grp Sat Flow(s),veh/h/ln	1774	1770	1805	1774	1770	1806	1774	1863	1583	1774	0	1815
Q Serve(g_s), s	1.3	7.5	7.5	1.8	5.3	5.4	1.9	3.8	1.2	1.7	0.0	4.9
Cycle Q Clear(g_c), s	1.3	7.5	7.5	1.8	5.3	5.4	1.9	3.8	1.2	1.7	0.0	4.9
Prop In Lane	1.00		0.18	1.00		0.18	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	78	600	612	95	618	631	98	369	314	90	0	352
V/C Ratio(X)	0.70	0.60	0.60	0.78	0.44	0.45	0.79	0.49	0.16	0.75	0.00	0.62
Avail Cap(c_a), veh/h	159	1227	1251	238	1306	1333	198	1333	1133	198	0	1299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.1	12.2	12.3	20.9	11.2	11.2	20.9	15.9	14.9	20.9	0.0	16.5
Incr Delay (d2), s/veh	10.7	1.0	0.9	12.5	0.5	0.5	13.2	1.0	0.2	11.8	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.7	3.8	1.2	2.7	2.7	1.3	2.1	0.5	1.1	0.0	2.6
LnGrp Delay(d),s/veh	31.8	13.2	13.2	33.4	11.7	11.7	34.1	16.9	15.1	32.7	0.0	18.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C		B
Approach Vol, veh/h		779			630			309			285	
Approach Delay, s/veh		14.5			14.3			20.9			21.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	19.2	6.5	12.7	6.0	19.6	6.3	12.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	31.0	5.0	32.0	4.0	33.0	5.0	32.0
Max Q Clear Time (g_c+I1), s	3.8	9.5	3.9	6.9	3.3	7.4	3.7	5.8
Green Ext Time (p_c), s	0.0	5.6	0.0	1.8	0.0	5.9	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B

2: Shasta St & Bridge St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	514	53	137	452	55	28	73	152	26	71	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	24	642	66	171	565	69	35	91	190	32	89	20
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1056	108	193	1308	159	56	350	298	52	346	294
Arrive On Green	0.02	0.33	0.33	0.11	0.41	0.41	0.03	0.19	0.19	0.03	0.19	0.19
Sat Flow, veh/h	1774	3241	333	1774	3177	387	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	24	350	358	171	314	320	35	91	190	32	89	20
Grp Sat Flow(s),veh/h/ln	1774	1770	1804	1774	1770	1794	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.6	7.6	7.7	4.4	5.8	5.9	0.9	1.9	5.1	0.8	1.9	0.5
Cycle Q Clear(g_c), s	0.6	7.6	7.7	4.4	5.8	5.9	0.9	1.9	5.1	0.8	1.9	0.5
Prop In Lane	1.00		0.18	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	577	588	193	728	739	56	350	298	52	346	294
V/C Ratio(X)	0.59	0.61	0.61	0.89	0.43	0.43	0.63	0.26	0.64	0.62	0.26	0.07
Avail Cap(c_a), veh/h	193	963	982	193	963	976	154	1216	1034	154	1216	1034
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	13.0	13.0	20.2	9.7	9.7	22.0	15.9	17.2	22.0	16.0	15.4
Incr Delay (d2), s/veh	12.8	1.0	1.0	35.2	0.4	0.4	11.1	0.4	2.3	11.4	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.9	3.9	4.0	2.9	2.9	0.6	1.0	2.4	0.6	1.0	0.2
LnGrp Delay(d),s/veh	35.0	14.1	14.0	55.4	10.1	10.1	33.1	16.3	19.5	33.4	16.4	15.5
LnGrp LOS	D	B	B	E	B	B	C	B	B	C	B	B
Approach Vol, veh/h		732			805			316			141	
Approach Delay, s/veh		14.7			19.7			20.1			20.1	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	19.0	5.4	12.5	5.1	22.9	5.3	12.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	25.0	4.0	30.0	5.0	25.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	6.4	9.7	2.9	3.9	2.6	7.9	2.8	7.1
Green Ext Time (p_c), s	0.0	5.3	0.0	1.6	0.0	5.5	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	13.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	708	14	5	34	15	351
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	885	18	6	42	19	439

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	903	0	949	451
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	55	-
Critical Hdwy	-	-	4.14	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.22	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	749	-	273	556
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	967	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	749	-	271	556
Mov Cap-2 Maneuver	-	-	-	-	271	-
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	959	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	40.1
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	533	-	-	749	-
HCM Lane V/C Ratio	0.858	-	-	0.008	-
HCM Control Delay (s)	40.1	-	-	9.8	0
HCM Lane LOS	E	-	-	A	A
HCM 95th %tile Q(veh)	9.2	-	-	0	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	616	45	0	0	0	630	50	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	670	49	0	0	0	685	54	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	0	0	0	49	0	0	1388	1388	49
Stage 1	-	-	-	-	-	-	1388	1388	-
Stage 2	-	-	-	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1558	-	0	157	143	1020
Stage 1	-	-	-	-	-	0	231	210	-
Stage 2	-	-	-	-	-	0	-	-	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1558	-	-	157	0	1020
Mov Cap-2 Maneuver	-	-	-	-	-	-	157	0	-
Stage 1	-	-	-	-	-	-	231	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s		0	39.6
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	157	-	-	-	1558	-
HCM Lane V/C Ratio	0.346	-	-	-	-	-
HCM Control Delay (s)	39.6	-	-	-	0	-
HCM Lane LOS	E	-	-	-	A	-
HCM 95th %tile Q(veh)	1.4	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	78	111	11	0	29	81	31	0	8	115	41
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	92	131	13	0	34	95	36	0	9	135	48
Number of Lanes	0	1	1	1	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	11.4	11.2	10.5
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	48%	0%	100%	0%	0%	72%	0%	63%
Vol Right, %	0%	0%	52%	0%	0%	100%	0%	28%	0%	37%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	77	79	78	111	11	29	112	35	225
LT Vol	8	0	0	78	0	0	29	0	35	0
Through Vol	0	77	38	0	111	0	0	81	0	142
RT Vol	0	0	41	0	0	11	0	31	0	83
Lane Flow Rate	9	90	93	92	131	13	34	132	41	265
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.019	0.168	0.164	0.181	0.24	0.021	0.069	0.24	0.079	0.451
Departure Headway (Hd)	7.192	6.686	6.32	7.109	6.604	5.898	7.267	6.565	6.898	6.133
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	496	534	565	503	541	603	491	544	518	585
Service Time	4.967	4.461	4.095	4.881	4.376	3.668	5.043	4.341	4.662	3.898
HCM Lane V/C Ratio	0.018	0.169	0.165	0.183	0.242	0.022	0.069	0.243	0.079	0.453
HCM Control Delay	10.1	10.8	10.3	11.5	11.5	8.8	10.6	11.4	10.3	13.9
HCM Lane LOS	B	B	B	B	B	A	B	B	B	B
HCM 95th-tile Q	0.1	0.6	0.6	0.7	0.9	0.1	0.2	0.9	0.3	2.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	35	142	83
Peak Hour Factor	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	41	167	98
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	13.4
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	107	63	16	0	24	47	189	0	10	193	34
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	137	81	21	0	31	60	242	0	13	247	44
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	13.5	17.7	19.1
HCM LOS	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	85%	0%	80%	0%	20%	0%	64%
Vol Right, %	0%	15%	0%	20%	0%	80%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	227	107	79	24	236	29	260
LT Vol	10	0	107	0	24	0	29	0
Through Vol	0	193	0	63	0	47	0	166
RT Vol	0	34	0	16	0	189	0	94
Lane Flow Rate	13	291	137	101	31	303	37	333
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.028	0.581	0.309	0.21	0.068	0.573	0.079	0.641
Departure Headway (Hd)	7.811	7.19	8.119	7.458	7.909	6.821	7.695	6.924
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	457	501	442	479	452	526	464	520
Service Time	5.581	4.96	5.897	5.236	5.676	4.587	5.463	4.691
HCM Lane V/C Ratio	0.028	0.581	0.31	0.211	0.069	0.576	0.08	0.64
HCM Control Delay	10.8	19.5	14.5	12.2	11.3	18.4	11.1	21.3
HCM Lane LOS	B	C	B	B	B	C	B	C
HCM 95th-tile Q	0.1	3.6	1.3	0.8	0.2	3.6	0.3	4.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	29	166	94
Peak Hour Factor	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	37	213	121
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	20.3
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	75	33	1	1	227	309	4	3	1	18	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	93	41	1	1	280	381	5	4	1	22	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	662	0	0	42	0	0	703	891	41	702	700	471
Stage 1	-	-	-	-	-	-	227	227	-	473	473	-
Stage 2	-	-	-	-	-	-	476	664	-	229	227	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	927	-	-	1567	-	-	352	282	1030	353	363	593
Stage 1	-	-	-	-	-	-	776	716	-	572	558	-
Stage 2	-	-	-	-	-	-	570	458	-	774	716	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	927	-	-	1567	-	-	321	253	1030	321	325	593
Mov Cap-2 Maneuver	-	-	-	-	-	-	321	253	-	321	325	-
Stage 1	-	-	-	-	-	-	696	642	-	513	557	-
Stage 2	-	-	-	-	-	-	565	458	-	689	642	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.4	0	16.8	16.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	316	927	-	-	1567	-	-	350
HCM Lane V/C Ratio	0.031	0.1	-	-	0.001	-	-	0.078
HCM Control Delay (s)	16.8	9.3	0	-	7.3	0	-	16.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	0.3

1: Plumas St & Bridge st

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	604	61	68	684	72	44	202	57	71	177	57
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	43	657	66	74	743	78	48	220	62	77	192	62
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	1167	117	93	1214	127	70	375	319	97	292	94
Arrive On Green	0.04	0.36	0.36	0.05	0.38	0.38	0.04	0.20	0.20	0.05	0.22	0.22
Sat Flow, veh/h	1774	3249	326	1774	3233	339	1774	1863	1583	1774	1350	436
Grp Volume(v), veh/h	43	358	365	74	407	414	48	220	62	77	0	254
Grp Sat Flow(s),veh/h/ln	1774	1770	1805	1774	1770	1803	1774	1863	1583	1774	0	1786
Q Serve(g_s), s	1.2	7.8	7.8	2.0	9.0	9.0	1.3	5.2	1.6	2.1	0.0	6.3
Cycle Q Clear(g_c), s	1.2	7.8	7.8	2.0	9.0	9.0	1.3	5.2	1.6	2.1	0.0	6.3
Prop In Lane	1.00		0.18	1.00		0.19	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	64	636	649	93	664	677	70	375	319	97	0	387
V/C Ratio(X)	0.67	0.56	0.56	0.80	0.61	0.61	0.69	0.59	0.19	0.79	0.00	0.66
Avail Cap(c_a), veh/h	147	1102	1125	221	1176	1198	221	1238	1052	221	0	1187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.9	12.4	12.4	22.6	12.2	12.2	22.8	17.4	16.0	22.5	0.0	17.2
Incr Delay (d2), s/veh	11.2	0.8	0.8	14.1	0.9	0.9	11.3	1.5	0.3	13.5	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.9	4.0	1.3	4.5	4.5	0.8	2.8	0.7	1.4	0.0	3.2
LnGrp Delay(d),s/veh	34.2	13.2	13.2	36.7	13.1	13.1	34.2	18.9	16.3	35.9	0.0	19.1
LnGrp LOS	C	B	B	D	B	B	C	B	B	D		B
Approach Vol, veh/h		766			895			330			331	
Approach Delay, s/veh		14.3			15.1			20.6			23.0	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	21.3	5.9	14.4	5.7	22.1	6.6	13.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	30.0	6.0	32.0	4.0	32.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	4.0	9.8	3.3	8.3	3.2	11.0	4.1	7.2
Green Ext Time (p_c), s	0.0	7.0	0.0	2.2	0.0	7.1	0.0	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

2: Shasta St & Bridge St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	678	47	154	752	42	32	71	155	67	97	42
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	737	51	167	817	46	35	77	168	73	105	46
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	1183	82	180	1476	83	55	319	271	91	357	303
Arrive On Green	0.02	0.35	0.35	0.10	0.43	0.43	0.03	0.17	0.17	0.05	0.19	0.19
Sat Flow, veh/h	1774	3359	232	1774	3407	192	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	21	388	400	167	424	439	35	77	168	73	105	46
Grp Sat Flow(s),veh/h/ln	1774	1770	1822	1774	1770	1829	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	0.6	9.0	9.0	4.6	8.8	8.8	1.0	1.8	4.9	2.0	2.4	1.2
Cycle Q Clear(g_c), s	0.6	9.0	9.0	4.6	8.8	8.8	1.0	1.8	4.9	2.0	2.4	1.2
Prop In Lane	1.00		0.13	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	36	623	642	180	767	792	55	319	271	91	357	303
V/C Ratio(X)	0.58	0.62	0.62	0.93	0.55	0.55	0.64	0.24	0.62	0.80	0.29	0.15
Avail Cap(c_a), veh/h	144	896	923	180	932	963	144	1132	962	144	1132	962
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	13.3	13.3	22.0	10.4	10.4	23.6	17.7	19.0	23.2	17.1	16.6
Incr Delay (d2), s/veh	14.1	1.0	1.0	47.1	0.6	0.6	11.7	0.4	2.3	15.5	0.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.5	4.6	4.6	4.4	4.5	0.6	0.9	2.3	1.4	1.3	0.5
LnGrp Delay(d),s/veh	38.1	14.3	14.3	69.1	11.1	11.0	35.3	18.1	21.3	38.6	17.5	16.8
LnGrp LOS	D	B	B	E	B	B	D	B	C	D	B	B
Approach Vol, veh/h		809			1030			280			224	
Approach Delay, s/veh		14.9			20.5			22.2			24.3	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	21.4	5.5	13.5	5.0	25.4	6.5	12.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	25.0	4.0	30.0	4.0	26.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	6.6	11.0	3.0	4.4	2.6	10.8	4.0	6.9
Green Ext Time (p_c), s	0.0	6.4	0.0	1.6	0.0	6.7	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	872	11	13	84	20	178
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	948	12	14	91	22	193

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	960	0	1074	480
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	120	-
Critical Hdwy	-	-	4.14	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.22	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	712	-	229	533
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	905	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	712	-	224	533
Mov Cap-2 Maneuver	-	-	-	-	224	-
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	19.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	468	-	-	712	-
HCM Lane V/C Ratio	0.46	-	-	0.02	-
HCM Control Delay (s)	19.1	-	-	10.2	0
HCM Lane LOS	C	-	-	B	A
HCM 95th %tile Q(veh)	2.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	815	76	0	0	0	532	56	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	886	83	0	0	0	578	61	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	0	0	0	83	0	0	1854	1854	83
Stage 1	-	-	-	-	-	-	1854	1854	-
Stage 2	-	-	-	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1514	-	0	81	74	976
Stage 1	-	-	-	-	-	0	136	124	-
Stage 2	-	-	-	-	-	0	-	-	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1514	-	-	81	0	976
Mov Cap-2 Maneuver	-	-	-	-	-	-	81	0	-
Stage 1	-	-	-	-	-	-	136	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s		0	128.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	81	-	-	-	1514	-
HCM Lane V/C Ratio	0.751	-	-	-	-	-
HCM Control Delay (s)	128.3	-	-	-	0	-
HCM Lane LOS	F	-	-	-	A	-
HCM 95th %tile Q(veh)	3.7	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	110	102	10	0	29	152	41	0	24	163	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	120	111	11	0	32	165	45	0	26	177	24
Number of Lanes	0	1	1	1	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	12.2	13.9	11.5
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	71%	0%	100%	0%	0%	79%	0%	61%
Vol Right, %	0%	0%	29%	0%	0%	100%	0%	21%	0%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	109	76	110	102	10	29	193	35	236
LT Vol	24	0	0	110	0	0	29	0	35	0
Through Vol	0	109	54	0	102	0	0	152	0	145
RT Vol	0	0	22	0	0	10	0	41	0	91
Lane Flow Rate	26	118	83	120	111	11	32	210	38	257
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.055	0.235	0.16	0.253	0.219	0.019	0.066	0.403	0.079	0.475
Departure Headway (Hd)	7.655	7.148	6.943	7.608	7.101	6.391	7.578	6.921	7.441	6.662
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	468	503	517	472	506	560	473	520	482	541
Service Time	5.396	4.888	4.683	5.346	4.839	4.128	5.315	4.658	5.175	4.395
HCM Lane V/C Ratio	0.056	0.235	0.161	0.254	0.219	0.02	0.068	0.404	0.079	0.475
HCM Control Delay	10.8	12.1	11	12.9	11.8	9.3	10.9	14.3	10.8	15.3
HCM Lane LOS	B	B	B	B	B	A	B	B	B	C
HCM 95th-tile Q	0.2	0.9	0.6	1	0.8	0.1	0.2	1.9	0.3	2.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	35	145	91
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	38	158	99
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.7
HCM LOS	B

Lane

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	102	64	45	0	20	66	29	0	35	226	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	111	70	49	0	22	72	32	0	38	246	51
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	11.6	11.1	14.4
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	83%	0%	59%	0%	69%	0%	61%
Vol Right, %	0%	17%	0%	41%	0%	31%	0%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	273	102	109	20	95	30	306
LT Vol	35	0	102	0	20	0	30	0
Through Vol	0	226	0	64	0	66	0	187
RT Vol	0	47	0	45	0	29	0	119
Lane Flow Rate	38	297	111	118	22	103	33	333
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.071	0.504	0.224	0.213	0.045	0.194	0.061	0.548
Departure Headway (Hd)	6.744	6.114	7.28	6.476	7.509	6.78	6.711	5.928
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	529	588	491	551	474	526	532	605
Service Time	4.508	3.878	5.057	4.253	5.297	4.567	4.474	3.69
HCM Lane V/C Ratio	0.072	0.505	0.226	0.214	0.046	0.196	0.062	0.55
HCM Control Delay	10	15	12.2	11	10.7	11.2	9.9	15.7
HCM Lane LOS	A	B	B	B	B	B	A	C
HCM 95th-tile Q	0.2	2.8	0.9	0.8	0.1	0.7	0.2	3.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	30	187	119
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	33	203	129
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	15.2
HCM LOS	C

Lane

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	68	50	0	2	70	8	0	7	0	4	1	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	54	0	2	76	9	0	8	0	4	1	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	85	0	0	54	0	0	298	291	54	291	287	80
Stage 1	-	-	-	-	-	-	202	202	-	85	85	-
Stage 2	-	-	-	-	-	-	96	89	-	206	202	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1512	-	-	1551	-	-	654	619	1013	661	623	980
Stage 1	-	-	-	-	-	-	800	734	-	923	824	-
Stage 2	-	-	-	-	-	-	911	821	-	796	734	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1512	-	-	1551	-	-	614	587	1013	629	591	980
Mov Cap-2 Maneuver	-	-	-	-	-	-	614	587	-	629	591	-
Stage 1	-	-	-	-	-	-	760	697	-	877	823	-
Stage 2	-	-	-	-	-	-	890	820	-	748	697	-

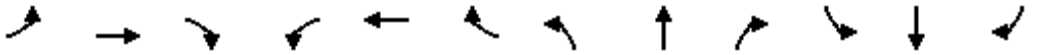
Approach	EB	WB	NB	SB
HCM Control Delay, s	4.3	0.2	11.2	9.2
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	587	1512	-	-	1551	-	-	875
HCM Lane V/C Ratio	0.013	0.049	-	-	0.001	-	-	0.03
HCM Control Delay (s)	11.2	7.5	0	-	7.3	0	-	9.2
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	1500	90	240	1300	50	120	340	290	150	260	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	74	1579	95	253	1368	53	126	358	305	158	274	42
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1409	631	137	1473	57	114	475	404	114	402	62
Arrive On Green	0.05	0.40	0.40	0.08	0.42	0.42	0.06	0.25	0.25	0.06	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	3474	134	1774	1863	1583	1774	1578	242
Grp Volume(v), veh/h	74	1579	95	253	696	725	126	358	305	158	0	316
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1839	1774	1863	1583	1774	0	1820
Q Serve(g_s), s	3.2	31.0	3.0	6.0	29.1	29.2	5.0	13.8	13.8	5.0	0.0	12.2
Cycle Q Clear(g_c), s	3.2	31.0	3.0	6.0	29.1	29.2	5.0	13.8	13.8	5.0	0.0	12.2
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	91	1409	631	137	750	780	114	475	404	114	0	464
V/C Ratio(X)	0.81	1.12	0.15	1.85	0.93	0.93	1.11	0.75	0.76	1.39	0.00	0.68
Avail Cap(c_a), veh/h	91	1409	631	137	750	780	114	766	651	114	0	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.6	23.4	15.0	35.9	21.3	21.3	36.4	26.7	26.8	36.4	0.0	26.1
Incr Delay (d2), s/veh	40.6	64.2	0.1	409.4	17.7	17.6	115.6	2.5	2.9	219.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	27.4	1.3	18.4	17.8	18.5	6.1	7.4	6.3	9.3	0.0	6.3
LnGrp Delay(d),s/veh	77.1	87.6	15.1	445.3	39.0	38.9	152.0	29.2	29.7	255.4	0.0	27.9
LnGrp LOS	E	F	B	F	D	D	F	C	C	F		C
Approach Vol, veh/h		1748			1674			789			474	
Approach Delay, s/veh		83.2			100.3			49.0			103.7	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	35.0	9.0	23.8	8.0	37.0	9.0	23.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	31.0	5.0	32.0	4.0	33.0	5.0	32.0
Max Q Clear Time (g_c+I1), s	8.0	33.0	7.0	14.2	5.2	31.2	7.0	15.8
Green Ext Time (p_c), s	0.0	0.0	0.0	4.1	0.0	1.7	0.0	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	85.7
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	1840	60	310	1520	80	30	210	480	90	230	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	1937	63	326	1600	84	32	221	505	95	242	42
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	1129	37	115	1220	64	46	660	561	92	709	602
Arrive On Green	0.03	0.32	0.32	0.06	0.36	0.36	0.03	0.35	0.35	0.05	0.38	0.38
Sat Flow, veh/h	1774	3499	113	1774	3422	179	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	42	974	1026	326	824	860	32	221	505	95	242	42
Grp Sat Flow(s),veh/h/ln	1774	1770	1843	1774	1770	1831	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.8	25.0	25.0	5.0	27.6	27.6	1.4	6.7	23.4	4.0	7.2	1.3
Cycle Q Clear(g_c), s	1.8	25.0	25.0	5.0	27.6	27.6	1.4	6.7	23.4	4.0	7.2	1.3
Prop In Lane	1.00		0.06	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	571	595	115	631	653	46	660	561	92	709	602
V/C Ratio(X)	0.77	1.71	1.72	2.85	1.31	1.32	0.70	0.33	0.90	1.04	0.34	0.07
Avail Cap(c_a), veh/h	115	571	595	115	631	653	92	721	613	92	721	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	26.2	26.2	36.2	24.9	24.9	37.4	18.3	23.7	36.7	17.1	15.3
Incr Delay (d2), s/veh	20.1	325.1	333.0	854.6	148.7	153.5	17.7	0.3	15.5	104.4	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	63.6	67.6	29.6	39.4	41.6	0.9	3.5	12.5	4.6	3.8	0.6
LnGrp Delay(d),s/veh	57.3	351.3	359.3	890.8	173.6	178.4	55.2	18.6	39.2	141.8	17.4	15.3
LnGrp LOS	E	F	F	F	F	F	E	B	D	F	B	B
Approach Vol, veh/h		2042			2010			758			379	
Approach Delay, s/veh		349.3			292.0			33.9			48.3	
Approach LOS		F			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.0	6.0	33.5	6.4	31.6	8.0	31.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	25.0	4.0	30.0	5.0	25.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	7.0	27.0	3.4	9.2	3.8	29.6	6.0	25.4
Green Ext Time (p_c), s	0.0	0.0	0.0	4.7	0.0	0.0	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	259.0
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	7.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	50	35	90	0	0	240
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	38	98	0	0	261

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	92	0	269	73
Stage 1	-	-	-	-	73	-
Stage 2	-	-	-	-	196	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1503	-	720	989
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	837	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1503	-	673	989
Mov Cap-2 Maneuver	-	-	-	-	673	-
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	783	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.6	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	989	-	-	1503	-
HCM Lane V/C Ratio	0.264	-	-	0.065	-
HCM Control Delay (s)	9.9	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	1.1	-	-	0.2	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	220	70	0	0	0	1010	90	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	200	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	239	76	0	0	0	1098	98	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	0	0	0	76	0	0	554	554	76
Stage 1	-	-	-	-	-	-	554	554	-
Stage 2	-	-	-	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1523	-	0	493	440	985
Stage 1	-	-	-	-	-	0	575	514	-
Stage 2	-	-	-	-	-	0	-	-	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1523	-	-	493	0	985
Mov Cap-2 Maneuver	-	-	-	-	-	-	493	0	-
Stage 1	-	-	-	-	-	-	575	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s		0	14.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	493	-	-	-	1523	-
HCM Lane V/C Ratio	0.198	-	-	-	-	-
HCM Control Delay (s)	14.1	-	-	-	0	-
HCM Lane LOS	B	-	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	76.9
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	190	374	35	0	90	450	110	0	60	445	210
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	224	440	41	0	106	529	129	0	71	524	247
Number of Lanes	0	1	1	1	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	69.4	79.2	79.1
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	41%	0%	100%	0%	0%	80%	0%	55%
Vol Right, %	0%	0%	59%	0%	0%	100%	0%	20%	0%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	297	358	190	374	35	90	560	75	505
LT Vol	60	0	0	190	0	0	90	0	75	0
Through Vol	0	297	148	0	374	0	0	450	0	280
RT Vol	0	0	210	0	0	35	0	110	0	225
Lane Flow Rate	71	349	422	224	440	41	106	659	88	594
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.231	1	1	0.755	1	0.125	0.37	1	0.31	1
Departure Headway (Hd)	11.797	11.299	10.891	12.165	11.666	10.967	12.588	11.953	12.652	11.844
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	304	321	333	297	312	327	286	310	284	309
Service Time	9.579	9.081	8.673	9.919	9.421	8.722	10.363	9.729	10.432	9.624
HCM Lane V/C Ratio	0.234	1.087	1.267	0.754	1.41	0.125	0.371	2.126	0.31	1.922
HCM Control Delay	18.1	85.6	83.9	44.6	87	15.3	22.6	88.3	21.1	87.9
HCM Lane LOS	C	F	F	E	F	C	C	F	C	F
HCM 95th-tile Q	0.9	10.9	11.1	5.7	10.7	0.4	1.6	10.6	1.3	10.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	75	280	225
Peak Hour Factor	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	88	329	265
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	79.3
HCM LOS	F

Lane

Intersection	
Intersection Delay, s/veh	71.7
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	250	365	55	0	40	235	160	0	70	310	135
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	321	468	71	0	51	301	205	0	90	397	173
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	71.8	72.3	69.8
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	70%	0%	87%	0%	59%	0%	49%
Vol Right, %	0%	30%	0%	13%	0%	41%	0%	51%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	445	250	420	40	395	60	700
LT Vol	70	0	250	0	40	0	60	0
Through Vol	0	310	0	365	0	235	0	340
RT Vol	0	135	0	55	0	160	0	360
Lane Flow Rate	90	571	321	538	51	506	77	897
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.257	1	0.911	1	0.147	1	0.22	1
Departure Headway (Hd)	10.292	9.581	10.237	9.646	10.323	9.541	10.304	9.446
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	349	382	356	382	347	380	348	395
Service Time	8.046	7.335	7.955	7.365	8.103	7.321	8.062	7.204
HCM Lane V/C Ratio	0.258	1.495	0.902	1.408	0.147	1.332	0.221	2.271
HCM Control Delay	16.6	78.2	60.8	78.3	14.9	78.1	16	77.6
HCM Lane LOS	C	F	F	F	B	F	C	F
HCM 95th-tile Q	1	11.8	9.2	11.8	0.5	11.8	0.8	11.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	60	340	360
Peak Hour Factor	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	77	436	462
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	72.7
HCM LOS	F

Lane

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	165	395	5	5	325	105	10	5	5	25	5	100
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	204	488	6	6	401	130	12	6	6	31	6	123

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	531	0	0	494	0	0	1441	1441	491	1382	1379	466
Stage 1	-	-	-	-	-	-	898	898	-	478	478	-
Stage 2	-	-	-	-	-	-	543	543	-	904	901	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1036	-	-	1070	-	-	110	133	578	121	144	597
Stage 1	-	-	-	-	-	-	334	358	-	568	556	-
Stage 2	-	-	-	-	-	-	524	520	-	331	357	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1036	-	-	1070	-	-	66	96	578	90	104	597
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	96	-	90	104	-
Stage 1	-	-	-	-	-	-	243	261	-	414	552	-
Stage 2	-	-	-	-	-	-	408	516	-	233	260	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	0.1	56.4	38
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	94	1036	-	-	1070	-	-	263
HCM Lane V/C Ratio	0.263	0.197	-	-	0.006	-	-	0.61
HCM Control Delay (s)	56.4	9.3	0	-	8.4	0	-	38
HCM Lane LOS	F	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	1	0.7	-	-	0	-	-	3.7

1: Plumas St & Bridge st

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	2009	150	120	2129	68	100	540	320	70	590	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	65	2184	163	130	2314	74	109	587	348	76	641	65
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	1219	545	118	1284	41	99	664	564	97	592	60
Arrive On Green	0.04	0.34	0.34	0.07	0.37	0.37	0.06	0.36	0.36	0.05	0.36	0.36
Sat Flow, veh/h	1774	3539	1583	1774	3501	111	1774	1863	1583	1774	1664	169
Grp Volume(v), veh/h	65	2184	163	130	1163	1225	109	587	348	76	0	706
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1843	1774	1863	1583	1774	0	1833
Q Serve(g_s), s	3.3	31.0	6.8	6.0	33.0	33.0	5.0	26.7	16.3	3.8	0.0	32.0
Cycle Q Clear(g_c), s	3.3	31.0	6.8	6.0	33.0	33.0	5.0	26.7	16.3	3.8	0.0	32.0
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	79	1219	545	118	649	676	99	664	564	97	0	652
V/C Ratio(X)	0.82	1.79	0.30	1.10	1.79	1.81	1.11	0.88	0.62	0.78	0.00	1.08
Avail Cap(c_a), veh/h	79	1219	545	118	649	676	99	664	564	99	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.7	29.5	21.6	42.0	28.5	28.5	42.5	27.2	23.9	42.0	0.0	29.0
Incr Delay (d2), s/veh	48.2	359.5	0.3	111.9	363.0	371.3	122.1	13.5	2.0	31.9	0.0	59.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	75.9	3.0	6.6	81.5	86.4	5.8	16.2	7.5	2.7	0.0	27.0
LnGrp Delay(d),s/veh	90.9	389.0	21.9	153.9	391.5	399.8	164.6	40.7	25.9	73.9	0.0	88.9
LnGrp LOS	F	F	C	F	F	F	F	D	C	E		F
Approach Vol, veh/h		2412			2518			1044			782	
Approach Delay, s/veh		356.2			383.3			48.7			87.5	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	35.0	9.0	36.0	8.0	37.0	8.9	36.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	31.0	5.0	32.0	4.0	33.0	5.0	32.0
Max Q Clear Time (g_c+I1), s	8.0	33.0	7.0	34.0	5.3	35.0	5.8	28.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	287.7
HCM 2010 LOS	F

2: Shasta St & Bridge St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	2150	159	209	2190	360	67	539	429	130	550	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	54	2337	173	227	2380	391	73	586	466	141	598	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	1063	78	113	1048	168	90	679	577	90	679	577
Arrive On Green	0.04	0.32	0.32	0.06	0.34	0.34	0.05	0.36	0.36	0.05	0.36	0.36
Sat Flow, veh/h	1774	3345	245	1774	3057	489	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	54	1223	1287	227	1350	1421	73	586	466	141	598	87
Grp Sat Flow(s),veh/h/ln	1774	1770	1820	1774	1770	1776	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.4	25.0	25.0	5.0	27.0	27.0	3.2	22.9	20.9	4.0	23.6	2.9
Cycle Q Clear(g_c), s	2.4	25.0	25.0	5.0	27.0	27.0	3.2	22.9	20.9	4.0	23.6	2.9
Prop In Lane	1.00		0.13	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	562	578	113	607	609	90	679	577	90	679	577
V/C Ratio(X)	0.79	2.17	2.23	2.01	2.23	2.33	0.81	0.86	0.81	1.56	0.88	0.15
Avail Cap(c_a), veh/h	113	562	578	113	607	609	90	710	604	90	710	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	26.8	26.8	36.8	25.8	25.8	37.0	23.2	22.5	37.3	23.4	16.8
Incr Delay (d2), s/veh	17.9	534.3	557.3	485.7	556.8	605.2	40.4	10.4	7.7	300.1	12.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	95.5	101.9	17.6	106.8	115.4	2.6	13.7	10.3	9.5	14.4	1.3
LnGrp Delay(d),s/veh	55.4	561.1	584.1	522.5	582.6	631.1	77.3	33.6	30.2	337.5	35.5	16.9
LnGrp LOS	E	F	F	F	F	F	E	C	C	F	D	B
Approach Vol, veh/h		2564			2998			1125			826	
Approach Delay, s/veh		562.0			601.0			35.0			85.1	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.0	8.0	32.7	7.0	31.0	8.0	32.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	25.0	4.0	30.0	5.0	25.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	7.0	27.0	5.2	25.6	4.4	29.0	6.0	24.9
Green Ext Time (p_c), s	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.4

Intersection Summary	
HCM 2010 Ctrl Delay	446.2
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	7.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	80	140	90	0	0	330
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	87	152	98	0	0	359

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	239	0	359	163
Stage 1	-	-	-	-	163	-
Stage 2	-	-	-	-	196	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1328	-	640	882
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	837	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1328	-	593	882
Mov Cap-2 Maneuver	-	-	-	-	593	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	775	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.9	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	882	-	-	1328	-
HCM Lane V/C Ratio	0.407	-	-	0.074	-
HCM Control Delay (s)	11.9	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2	-	-	0.2	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	299	110	0	0	0	960	90	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	200	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	325	120	0	0	0	1043	98	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	0	0	0	120	0	0	770	770	120
Stage 1	-	-	-	-	-	-	770	770	-
Stage 2	-	-	-	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1468	-	0	369	331	931
Stage 1	-	-	-	-	-	0	457	410	-
Stage 2	-	-	-	-	-	0	-	-	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1468	-	-	369	0	931
Mov Cap-2 Maneuver	-	-	-	-	-	-	369	0	-
Stage 1	-	-	-	-	-	-	457	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s		0	18.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	-	1468	-
HCM Lane V/C Ratio	0.265	-	-	-	-	-
HCM Control Delay (s)	18.2	-	-	-	0	-
HCM Lane LOS	C	-	-	-	A	-
HCM 95th %tile Q(veh)	1.1	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	82.6
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	275	385	40	0	180	405	200	0	50	475	150
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	299	418	43	0	196	440	217	0	54	516	163
Number of Lanes	0	1	1	1	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	86.3	79.8	83.6
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	51%	0%	100%	0%	0%	67%	0%	77%
Vol Right, %	0%	0%	49%	0%	0%	100%	0%	33%	0%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	317	308	275	385	40	180	605	150	710
LT Vol	50	0	0	275	0	0	180	0	150	0
Through Vol	0	317	158	0	385	0	0	405	0	550
RT Vol	0	0	150	0	0	40	0	200	0	160
Lane Flow Rate	54	344	335	299	418	43	196	658	163	772
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.193	1	1	1	1	0.141	0.721	1	0.608	1
Departure Headway (Hd)	12.809	12.31	11.971	12.855	12.357	11.658	13.274	12.544	13.422	12.766
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	282	296	305	284	297	309	274	296	271	293
Service Time	10.53	10.031	9.691	10.576	10.077	9.379	10.986	10.256	11.135	10.479
HCM Lane V/C Ratio	0.191	1.162	1.098	1.053	1.407	0.139	0.715	2.223	0.601	2.635
HCM Control Delay	18.6	89.5	88.1	91.7	89.7	16.3	44	90.4	35	91.3
HCM Lane LOS	C	F	F	F	F	C	E	F	D	F
HCM 95th-tile Q	0.7	10.5	10.6	10.2	10.4	0.5	5.1	10.4	3.6	10.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	150	550	160
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	163	598	174
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	81.5
HCM LOS	F

Lane

6: Shasta St & B St

Intersection	
Intersection Delay, s/veh	69.8
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	180	370	135	0	225	520	120	0	90	495	275
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	196	402	147	0	245	565	130	0	98	538	299
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	64.5	67	72.3
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	64%	0%	73%	0%	81%	0%	69%
Vol Right, %	0%	36%	0%	27%	0%	19%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	770	180	505	225	640	75	850
LT Vol	90	0	180	0	225	0	75	0
Through Vol	0	495	0	370	0	520	0	590
RT Vol	0	275	0	135	0	120	0	260
Lane Flow Rate	98	837	196	549	245	696	82	924
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.283	1	0.561	1	0.7	1	0.236	1
Departure Headway (Hd)	10.413	9.665	10.324	9.639	10.306	9.676	10.437	9.725
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	344	385	350	379	352	383	343	379
Service Time	8.2	7.452	8.08	7.395	8.05	7.421	8.234	7.522
HCM Lane V/C Ratio	0.285	2.174	0.56	1.449	0.696	1.817	0.239	2.438
HCM Control Delay	17.3	78.7	25.6	78.4	34	78.6	16.5	79
HCM Lane LOS	C	F	D	F	D	F	C	F
HCM 95th-tile Q	1.1	11.8	3.3	11.8	5	11.8	0.9	11.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	75	590	260
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	82	641	283
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	73.9
HCM LOS	F

Lane

Intersection	
Int Delay, s/veh	92.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	280	440	0	0	660	45	5	5	0	45	5	200
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	304	478	0	0	717	49	5	5	0	49	5	217

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	766	0	0	478	0	0	1940	1853	478	1832	1829	742
Stage 1	-	-	-	-	-	-	1087	1087	-	742	742	-
Stage 2	-	-	-	-	-	-	853	766	-	1090	1087	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	847	-	-	1084	-	-	49	74	587	59	77	416
Stage 1	-	-	-	-	-	-	262	292	-	408	422	-
Stage 2	-	-	-	-	-	-	354	412	-	261	292	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	847	-	-	1084	-	-	13	38	587	~ 33	39	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	13	38	-	~ 33	39	-
Stage 1	-	-	-	-	-	-	134	149	-	208	422	-
Stage 2	-	-	-	-	-	-	167	412	-	129	149	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.5	0	$ 339.1	$ 594.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	19	847	-	-	1084	-	-	127
HCM Lane V/C Ratio	0.572	0.359	-	-	-	-	-	2.14
HCM Control Delay (s)	$ 339.1	11.6	0	-	0	-	-	$ 594.8
HCM Lane LOS	F	B	A	-	A	-	-	F
HCM 95th %tile Q(veh)	1.6	1.6	-	-	0	-	-	22.6

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	1505	90	240	1304	53	120	340	290	154	260	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	74	1584	95	253	1373	56	126	358	305	162	274	42
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1409	631	137	1469	60	114	475	404	114	402	62
Arrive On Green	0.05	0.40	0.40	0.08	0.42	0.42	0.06	0.25	0.25	0.06	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	3466	141	1774	1863	1583	1774	1578	242
Grp Volume(v), veh/h	74	1584	95	253	700	729	126	358	305	162	0	316
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1838	1774	1863	1583	1774	0	1820
Q Serve(g_s), s	3.2	31.0	3.0	6.0	29.3	29.5	5.0	13.8	13.8	5.0	0.0	12.2
Cycle Q Clear(g_c), s	3.2	31.0	3.0	6.0	29.3	29.5	5.0	13.8	13.8	5.0	0.0	12.2
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	91	1409	631	137	750	779	114	475	404	114	0	464
V/C Ratio(X)	0.81	1.12	0.15	1.85	0.93	0.94	1.11	0.75	0.76	1.42	0.00	0.68
Avail Cap(c_a), veh/h	91	1409	631	137	750	779	114	766	651	114	0	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.6	23.4	15.0	35.9	21.4	21.4	36.4	26.7	26.8	36.4	0.0	26.1
Incr Delay (d2), s/veh	40.6	65.6	0.1	409.4	18.5	18.5	115.6	2.5	2.9	233.1	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	27.7	1.3	18.4	18.1	18.8	6.1	7.4	6.3	9.8	0.0	6.3
LnGrp Delay(d),s/veh	77.1	89.0	15.1	445.3	39.9	39.9	152.0	29.2	29.7	269.6	0.0	27.9
LnGrp LOS	E	F	B	F	D	D	F	C	C	F		C
Approach Vol, veh/h		1753			1682			789			478	
Approach Delay, s/veh		84.5			100.9			49.0			109.8	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	35.0	9.0	23.8	8.0	37.0	9.0	23.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	31.0	5.0	32.0	4.0	33.0	5.0	32.0
Max Q Clear Time (g_c+I1), s	8.0	33.0	7.0	14.2	5.2	31.5	7.0	15.8
Green Ext Time (p_c), s	0.0	0.0	0.0	4.1	0.0	1.4	0.0	4.0

Intersection Summary	
HCM 2010 Ctrl Delay	87.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	1840	69	315	1520	80	37	212	482	90	233	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	42	1937	73	332	1600	84	39	223	507	95	245	42
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	54	1121	42	114	1219	64	52	662	563	91	703	598
Arrive On Green	0.03	0.32	0.32	0.06	0.36	0.36	0.03	0.36	0.36	0.05	0.38	0.38
Sat Flow, veh/h	1774	3479	130	1774	3422	179	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	42	979	1031	332	824	860	39	223	507	95	245	42
Grp Sat Flow(s),veh/h/ln	1774	1770	1840	1774	1770	1831	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.8	25.0	25.0	5.0	27.6	27.6	1.7	6.8	23.6	4.0	7.3	1.3
Cycle Q Clear(g_c), s	1.8	25.0	25.0	5.0	27.6	27.6	1.7	6.8	23.6	4.0	7.3	1.3
Prop In Lane	1.00		0.07	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	54	570	593	114	630	652	52	662	563	91	703	598
V/C Ratio(X)	0.77	1.72	1.74	2.90	1.31	1.32	0.75	0.34	0.90	1.04	0.35	0.07
Avail Cap(c_a), veh/h	114	570	593	114	630	652	91	721	612	91	721	612
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	26.3	26.3	36.3	25.0	25.0	37.4	18.3	23.7	36.8	17.3	15.4
Incr Delay (d2), s/veh	20.1	329.9	339.2	879.7	149.5	154.3	19.2	0.3	15.7	104.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	64.3	68.4	30.4	39.5	41.7	1.1	3.5	12.7	4.6	3.8	0.6
LnGrp Delay(d),s/veh	57.4	356.2	365.4	915.9	174.5	179.2	56.5	18.6	39.4	142.4	17.6	15.5
LnGrp LOS	E	F	F	F	F	F	E	B	D	F	B	B
Approach Vol, veh/h		2052			2016			769			382	
Approach Delay, s/veh		354.7			298.6			34.3			48.4	
Approach LOS		F			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.0	6.3	33.3	6.4	31.6	8.0	31.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	25.0	4.0	30.0	5.0	25.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	7.0	27.0	3.7	9.3	3.8	29.6	6.0	25.6
Green Ext Time (p_c), s	0.0	0.0	0.0	4.7	0.0	0.0	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	263.4
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	7.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	50	35	91	0	0	243
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	54	38	99	0	0	264

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	92	0	271	73
Stage 1	-	-	-	-	73	-
Stage 2	-	-	-	-	198	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1503	-	718	989
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	835	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1503	-	671	989
Mov Cap-2 Maneuver	-	-	-	-	671	-
Stage 1	-	-	-	-	950	-
Stage 2	-	-	-	-	780	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.6	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	989	-	-	1503	-
HCM Lane V/C Ratio	0.267	-	-	0.066	-
HCM Control Delay (s)	10	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.1	-	-	0.2	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	222	71	0	0	0	1010	91	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	200	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	241	77	0	0	0	1098	99	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	0	0	0	77	0	0	560	560	77
Stage 1	-	-	-	-	-	-	560	560	-
Stage 2	-	-	-	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1522	-	0	489	437	984
Stage 1	-	-	-	-	-	0	572	511	-
Stage 2	-	-	-	-	-	0	-	-	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1522	-	-	489	0	984
Mov Cap-2 Maneuver	-	-	-	-	-	-	489	0	-
Stage 1	-	-	-	-	-	-	572	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s		0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	489	-	-	-	1522	-
HCM Lane V/C Ratio	0.202	-	-	-	-	-
HCM Control Delay (s)	14.2	-	-	-	0	-
HCM Lane LOS	B	-	-	-	A	-
HCM 95th %tile Q(veh)	0.7	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	76.9
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	190	379	35	0	92	453	110	0	60	445	213
Peak Hour Factor	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	224	446	41	0	108	533	129	0	71	524	251
Number of Lanes	0	1	1	1	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	69.6	79.1	79.2
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	41%	0%	100%	0%	0%	80%	0%	55%
Vol Right, %	0%	0%	59%	0%	0%	100%	0%	20%	0%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	297	361	190	379	35	92	563	75	505
LT Vol	60	0	0	190	0	0	92	0	75	0
Through Vol	0	297	148	0	379	0	0	453	0	280
RT Vol	0	0	213	0	0	35	0	110	0	225
Lane Flow Rate	71	349	425	224	446	41	108	662	88	594
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.231	1	1	0.756	1	0.126	0.379	1	0.31	1
Departure Headway (Hd)	11.806	11.308	10.898	12.173	11.675	10.976	12.59	11.956	12.663	11.855
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	304	321	336	297	312	327	286	311	284	309
Service Time	9.588	9.091	8.68	9.928	9.429	8.73	10.365	9.731	10.445	9.637
HCM Lane V/C Ratio	0.234	1.087	1.265	0.754	1.429	0.125	0.378	2.129	0.31	1.922
HCM Control Delay	18.1	85.7	84	44.7	87.1	15.3	22.9	88.3	21.1	87.9
HCM Lane LOS	C	F	F	E	F	C	C	F	C	F
HCM 95th-tile Q	0.9	10.9	11.1	5.7	10.7	0.4	1.7	10.6	1.3	10.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	75	280	225
Peak Hour Factor	0.92	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	88	329	265
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	79.3
HCM LOS	F

Lane

Intersection	
Intersection Delay, s/veh	71.9
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	253	368	55	0	41	238	167	0	70	311	136
Peak Hour Factor	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	324	472	71	0	53	305	214	0	90	399	174
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	72.6	72.4	69.9
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	70%	0%	87%	0%	59%	0%	48%
Vol Right, %	0%	30%	0%	13%	0%	41%	0%	52%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	447	253	423	41	405	68	704
LT Vol	70	0	253	0	41	0	68	0
Through Vol	0	311	0	368	0	238	0	341
RT Vol	0	136	0	55	0	167	0	363
Lane Flow Rate	90	573	324	542	53	519	87	903
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.257	1	0.923	1	0.151	1	0.25	1
Departure Headway (Hd)	10.302	9.591	10.24	9.65	10.335	9.548	10.307	9.448
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	349	384	357	380	346	379	349	388
Service Time	8.063	7.352	7.96	7.371	8.122	7.336	8.066	7.207
HCM Lane V/C Ratio	0.258	1.492	0.908	1.426	0.153	1.369	0.249	2.327
HCM Control Delay	16.6	78.3	63.2	78.3	15	78.2	16.5	77.6
HCM Lane LOS	C	F	F	F	B	F	C	F
HCM 95th-tile Q	1	11.8	9.5	11.8	0.5	11.8	1	11.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	68	341	363
Peak Hour Factor	0.92	0.78	0.78	0.78
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	87	437	465
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	72.2
HCM LOS	F

Lane

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	168	396	5	5	326	105	10	5	5	25	5	101
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	207	489	6	6	402	130	12	6	6	31	6	125

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	532	0	0	495	0	0	1452	1451	492	1393	1390	467
Stage 1	-	-	-	-	-	-	907	907	-	480	480	-
Stage 2	-	-	-	-	-	-	545	544	-	913	910	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1036	-	-	1069	-	-	108	131	577	119	142	596
Stage 1	-	-	-	-	-	-	330	355	-	567	554	-
Stage 2	-	-	-	-	-	-	523	519	-	328	353	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1036	-	-	1069	-	-	64	94	577	88	102	596
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	94	-	88	102	-
Stage 1	-	-	-	-	-	-	239	257	-	411	550	-
Stage 2	-	-	-	-	-	-	406	515	-	229	256	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.8	0.1	57.9	38.9
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	92	1036	-	-	1069	-	-	261
HCM Lane V/C Ratio	0.268	0.2	-	-	0.006	-	-	0.62
HCM Control Delay (s)	57.9	9.3	0	-	8.4	0	-	38.9
HCM Lane LOS	F	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	1	0.7	-	-	0	-	-	3.8

1: Bridge st & Plumas St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	2016	150	120	2135	73	100	540	320	75	590	60
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	65	2191	163	130	2321	79	109	587	348	82	641	65
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	1219	545	118	1281	43	99	662	563	99	592	60
Arrive On Green	0.04	0.34	0.34	0.07	0.37	0.37	0.06	0.36	0.36	0.06	0.36	0.36
Sat Flow, veh/h	1774	3539	1583	1774	3493	118	1774	1863	1583	1774	1664	169
Grp Volume(v), veh/h	65	2191	163	130	1169	1231	109	587	348	82	0	706
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1842	1774	1863	1583	1774	0	1833
Q Serve(g_s), s	3.3	31.0	6.8	6.0	33.0	33.0	5.0	26.7	16.3	4.1	0.0	32.0
Cycle Q Clear(g_c), s	3.3	31.0	6.8	6.0	33.0	33.0	5.0	26.7	16.3	4.1	0.0	32.0
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	79	1219	545	118	649	675	99	662	563	99	0	652
V/C Ratio(X)	0.82	1.80	0.30	1.10	1.80	1.82	1.11	0.89	0.62	0.83	0.00	1.08
Avail Cap(c_a), veh/h	79	1219	545	118	649	675	99	662	563	99	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.7	29.5	21.6	42.0	28.5	28.5	42.5	27.3	24.0	42.1	0.0	29.0
Incr Delay (d2), s/veh	48.2	362.1	0.3	111.9	367.0	375.9	122.1	13.7	2.1	42.6	0.0	59.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	76.4	3.0	6.6	82.2	87.2	5.8	16.2	7.5	3.2	0.0	27.0
LnGrp Delay(d),s/veh	90.9	391.6	21.9	153.9	395.5	404.4	164.6	41.0	26.0	84.7	0.0	88.9
LnGrp LOS	F	F	C	F	F	F	F	D	C	F		F
Approach Vol, veh/h		2419			2530			1044			788	
Approach Delay, s/veh		358.6			387.4			48.9			88.5	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	35.0	9.0	36.0	8.0	37.0	9.0	36.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	31.0	5.0	32.0	4.0	33.0	5.0	32.0
Max Q Clear Time (g_c+I1), s	8.0	33.0	7.0	34.0	5.3	35.0	6.1	28.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	290.3
HCM 2010 LOS	F

2: Shasta St & Bridge St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	2150	171	216	2190	360	78	542	432	130	553	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	54	2337	186	235	2380	391	85	589	470	141	601	87
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	1056	83	113	1047	167	90	680	578	90	680	578
Arrive On Green	0.04	0.32	0.32	0.06	0.34	0.34	0.05	0.37	0.37	0.05	0.37	0.37
Sat Flow, veh/h	1774	3325	261	1774	3057	489	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	54	1229	1294	235	1350	1421	85	589	470	141	601	87
Grp Sat Flow(s),veh/h/ln	1774	1770	1817	1774	1770	1776	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.4	25.0	25.0	5.0	27.0	27.0	3.8	23.1	21.1	4.0	23.8	2.9
Cycle Q Clear(g_c), s	2.4	25.0	25.0	5.0	27.0	27.0	3.8	23.1	21.1	4.0	23.8	2.9
Prop In Lane	1.00		0.14	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	562	577	113	606	608	90	680	578	90	680	578
V/C Ratio(X)	0.79	2.19	2.24	2.09	2.23	2.34	0.94	0.87	0.81	1.56	0.88	0.15
Avail Cap(c_a), veh/h	113	562	577	113	606	608	90	710	603	90	710	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	26.9	26.9	36.9	25.9	25.9	37.3	23.2	22.6	37.4	23.4	16.8
Incr Delay (d2), s/veh	17.9	540.4	565.1	517.8	558.0	606.4	76.0	10.7	8.1	300.9	12.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	96.3	102.9	18.6	106.9	115.5	3.7	13.8	10.4	9.5	14.5	1.3
LnGrp Delay(d),s/veh	55.4	567.3	592.0	554.7	583.9	632.3	113.3	33.9	30.7	338.2	35.8	16.9
LnGrp LOS	E	F	F	F	F	F	F	C	C	F	D	B
Approach Vol, veh/h		2577			3006			1144			829	
Approach Delay, s/veh		569.0			604.5			38.5			85.3	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.0	8.0	32.7	7.0	31.0	8.0	32.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	25.0	4.0	30.0	5.0	25.0	4.0	30.0
Max Q Clear Time (g_c+I1), s	7.0	27.0	5.8	25.8	4.4	29.0	6.0	25.1
Green Ext Time (p_c), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	449.7
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	7.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	80	140	91	0	0	333
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	87	152	99	0	0	362

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	239	0	361	163
Stage 1	-	-	-	-	163	-
Stage 2	-	-	-	-	198	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1328	-	638	882
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	835	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1328	-	590	882
Mov Cap-2 Maneuver	-	-	-	-	590	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.9	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	882	-	-	1328	-
HCM Lane V/C Ratio	0.41	-	-	0.074	-
HCM Control Delay (s)	11.9	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	2	-	-	0.2	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	302	111	0	0	0	960	91	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	None
Storage Length	300	-	-	-	-	200	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	328	121	0	0	0	1043	99	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	0	0	0	121	0	0	777	777	121
Stage 1	-	-	-	-	-	-	777	777	-
Stage 2	-	-	-	-	-	-	0	0	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	1467	-	0	365	328	930
Stage 1	-	-	-	-	-	0	453	407	-
Stage 2	-	-	-	-	-	0	-	-	-
Platoon blocked, %		-	-		-				
Mov Cap-1 Maneuver	-	-	-	1467	-	-	365	0	930
Mov Cap-2 Maneuver	-	-	-	-	-	-	365	0	-
Stage 1	-	-	-	-	-	-	453	0	-
Stage 2	-	-	-	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s		0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT
Capacity (veh/h)	365	-	-	-	1467	-
HCM Lane V/C Ratio	0.271	-	-	-	-	-
HCM Control Delay (s)	18.5	-	-	-	0	-
HCM Lane LOS	C	-	-	-	A	-
HCM 95th %tile Q(veh)	1.1	-	-	-	0	-

Intersection	
Intersection Delay, s/veh	82.7
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	275	390	40	0	182	408	200	0	50	475	153
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	299	424	43	0	198	443	217	0	54	516	166
Number of Lanes	0	1	1	1	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	3	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	86.4	79.9	83.7
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	51%	0%	100%	0%	0%	67%	0%	77%
Vol Right, %	0%	0%	49%	0%	0%	100%	0%	33%	0%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	317	311	275	390	40	182	608	150	710
LT Vol	50	0	0	275	0	0	182	0	150	0
Through Vol	0	317	158	0	390	0	0	408	0	550
RT Vol	0	0	153	0	0	40	0	200	0	160
Lane Flow Rate	54	344	338	299	424	43	198	661	163	772
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.194	1	1	1	1	0.141	0.729	1	0.608	1
Departure Headway (Hd)	12.82	12.321	11.978	12.866	12.367	11.669	13.274	12.545	13.434	12.778
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	281	296	305	284	297	309	273	297	271	293
Service Time	10.54	10.041	9.697	10.587	10.088	9.389	10.987	10.258	11.146	10.49
HCM Lane V/C Ratio	0.192	1.162	1.108	1.053	1.428	0.139	0.725	2.226	0.601	2.635
HCM Control Delay	18.6	89.6	88.2	91.7	89.8	16.3	44.9	90.4	35	91.4
HCM Lane LOS	C	F	F	F	F	C	E	F	D	F
HCM 95th-tile Q	0.7	10.5	10.6	10.2	10.4	0.5	5.2	10.4	3.6	10.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	150	550	160
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	163	598	174
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	81.6
HCM LOS	F

Lane

Intersection	
Intersection Delay, s/veh	69.8
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	184	374	135	0	226	523	127	0	90	496	276
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	200	407	147	0	246	568	138	0	98	539	300
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	2
HCM Control Delay	64.6	67.1	72.3
HCM LOS	F	F	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	64%	0%	73%	0%	80%	0%	69%
Vol Right, %	0%	36%	0%	27%	0%	20%	0%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	772	184	509	226	650	75	852
LT Vol	90	0	184	0	226	0	75	0
Through Vol	0	496	0	374	0	523	0	591
RT Vol	0	276	0	135	0	127	0	261
Lane Flow Rate	98	839	200	553	246	707	82	926
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.283	1	0.574	1	0.703	1	0.237	1
Departure Headway (Hd)	10.419	9.671	10.326	9.642	10.309	9.674	10.444	9.731
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	344	378	350	382	351	382	342	380
Service Time	8.207	7.459	8.082	7.398	8.054	7.418	8.242	7.529
HCM Lane V/C Ratio	0.285	2.22	0.571	1.448	0.701	1.851	0.24	2.437
HCM Control Delay	17.3	78.7	26.2	78.5	34.2	78.5	16.5	79
HCM Lane LOS	C	F	D	F	D	F	C	F
HCM 95th-tile Q	1.1	11.8	3.4	11.8	5.1	11.8	0.9	11.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	75	591	261
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	82	642	284
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	73.9
HCM LOS	F

Lane

7: Boyd ST\t & B Street

Intersection	
Int Delay, s/veh	96.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	283	441	0	0	661	45	5	5	0	45	5	201
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	308	479	0	0	718	49	5	5	0	49	5	218

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	767	0	0	479	0	0	1950	1862	479	1840	1838	743
Stage 1	-	-	-	-	-	-	1095	1095	-	743	743	-
Stage 2	-	-	-	-	-	-	855	767	-	1097	1095	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	847	-	-	1083	-	-	48	73	587	58	76	415
Stage 1	-	-	-	-	-	-	259	290	-	407	422	-
Stage 2	-	-	-	-	-	-	353	411	-	258	290	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	847	-	-	1083	-	-	12	37	587	~ 32	38	415
Mov Cap-2 Maneuver	-	-	-	-	-	-	12	37	-	~ 32	38	-
Stage 1	-	-	-	-	-	-	131	146	-	205	422	-
Stage 2	-	-	-	-	-	-	165	411	-	125	146	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.6	0	$ 365.5	$ 622.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	18	847	-	-	1083	-	-	124
HCM Lane V/C Ratio	0.604	0.363	-	-	-	-	-	2.2
HCM Control Delay (s)	$ 365.5	11.7	0	-	0	-	-	$ 622.9
HCM Lane LOS	F	B	A	-	A	-	-	F
HCM 95th %tile Q(veh)	1.6	1.7	-	-	0	-	-	23

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

1 June 2016

Diana Langley
Public Works Director
City of Yuba City
1201 Civic Center Boulevard
Yuba City, CA 95993

CONCURRENCE WITH FINAL FEASIBILITY STUDY/REMEDIAL ACTION PLAN, FORMER FEATHER RIVER MILLS SITE, YUBA CITY, SUTTER COUNTY

Central Valley Water Board staff has reviewed the 1 June 2016 final *Feasibility Study/Remedial Action Plan* (final FS/RAP) prepared by Geosyntec on behalf of the City of Yuba City (the City) for the former Feather River Mills site (Site) in Yuba City. The FS/RAP was submitted as discussed during our meeting with the City on 8 February 2016, our review and comments on an administrative draft FS/RAP, and a 30-day public comment period on the draft FS/RAP that ended on 31 May 2016. No public comments were received.

The final FS/RAP includes an analysis of remedial alternatives for cleanup of shallow Site soils that are contaminated primarily with petroleum hydrocarbons, metals (antimony, arsenic, and lead), and pesticides. The selected remedial alternative is excavation of the contaminated soils with offsite disposal at a permitted landfill. Confirmation samples will be collected and compared with remedial goals included in section 6.2 of the FS/RAP. Over-excavation will be conducted in areas where confirmation samples exceed the remedial goals. The project will also consist of removal of any asbestos containing material, rail and ties, burn debris, and construction and demolition debris for proper offsite disposal following waste characterization. The Site will be secured with perimeter fencing and signage during the project.

Central Valley Water Board staff concurs with the final FS/RAP. Please provide us with a minimum of 72 hours' notice prior to initiation of field work so that we have an opportunity to observe the work.

Feel free to contact me with any questions of concerns regarding this letter at (916) 464-4622 or Bill.Brattain@waterboards.ca.gov.

Original signed by

William Brattain, P.E.
Water Resource Control Engineer
Private Sites Cleanup Unit

cc: Arthur Forma, P.G., C.E.G., C.H.G, Geosyntec Consultants, Rancho Cordova

Attachment 7 - Appendix B2_Remedial Plan.

Due to the size of this file it is not included in Item #4. If you would like a copy of this report, please let us know and we will provide a copy.

Environmental Assessment 16-13
Initial Study and Negative Declaration for General Plan Amendment 16-06 and Specific Plan Amendment 16-04 (Central City Specific Plan) for the Feather River Mills Hotel

Prepared for:

City of Yuba City
1201 Civic Center Blvd.
Yuba City, CA 95993

Prepared By:

Denis Cook
Land Use Planning Consulting
&
City of Yuba City
Development Services Department
Planning Division
1201 Civic Center Blvd.
Yuba City, CA 95993

November 30, 2017

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1. Table of Contents

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2. Introduction

2.1. Introduction

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared to identify any potential environmental impacts in the City of Yuba City, California (City), from amendments to both the text and land use map of the Central City Specific Plan and the Yuba City General Plan land use map. This SPA and GPA is considered a project under the California Environmental Quality Act (CEQA), and the City has discretionary authority over the project.

This IS/MND has been prepared in conformance with CEQA Guidelines Section 15070. The purpose of the IS/MND is to determine the potential significant impacts associated with Specific Plan and General Plan Amendments and for a future hotel. In addition, this document is intended to provide the basis for input from public agencies, organizations, and interested members of the public.

2.2. Regulatory Information

An Initial Study (IS) is an environmental assessment document prepared by a lead agency to determine if a project may have a significant effect on the environment. In accordance with the California Code of Regulations Title 14 (Chapter 3, §15000 et seq.)-- also known as the CEQA Guidelines-- Section 15064 (a)(1) states an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant. A negative declaration may be prepared instead; if the lead agency finds that there is no substantial evidence, in light of the whole record that the project may have a significant effect on the environment. A negative declaration is a written statement describing the reasons why a proposed project, not exempt from CEQA pursuant to §15300 et seq. of Article 19 of the Guidelines, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a negative declaration shall be prepared for a project subject to CEQA when either:

A. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed project may have a significant effect on the environment, or

B. The IS identified potentially significant effects, but:

    a. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration and initial study is released for public review would

avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and

b. There is no substantial evidence, in light of the whole record before the agency, that the proposed project as revised may have a significant effect on the environment. If revisions are adopted by the Lead Agency into the proposed project in accordance with the CEQA Guidelines Section 15070(b), a Mitigated Negative Declaration (MND) is prepared.

2.3. Document Format

This IS/MND contains five chapters, and three technical appendices. Chapter 1, Introduction, provides an overview of the proposed Project and the CEQA environmental documentation process. Chapter 2, Project Description, provides a detailed description of proposed Project objectives and components. Chapter 3, Impact Analysis, presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible measures. If the proposed Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the proposed Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. Chapter 4, Mitigation
Monitoring and Reporting Program (MMRP), provides the proposed mitigation measures, completion timeline, and person/agency responsible for implementation and Chapter 5, List of Preparers, provides a list of key personnel involved in the preparation of the IS/MND.

2.4. Purpose of Document

The proposed amendment to the Yuba City General Plan and Central City Specific Plan is to amend the land use designations to accommodate a proposed hotel. The site is an approximately 1.5 acre property located at the northeast corner of Shasta Street and B Street, as shown in Figure 1.
Specific Plan Amendment 16-04 includes an addition to the text of a Community Commercial (CC) land use designation and an amendment to the land use map to redesignate approximately 1.5 acres from Storefront Commercial to Community Commercial (CC), as shown in Figure 2.

General Plan Amendment 16-06 is to redesignate the land use map for the same property. The redesignation is from a Business, Technology, and Light Industrial (BT&LI) designation to a CC designation, as shown in Figure 3.

This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Pub. Res. Code, Section 21000 et seq.) and the State CEQA Guidelines (Title 14 CCR §15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The initial study is a public document used by the decision-making lead agency to determine whether a project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead

agency is required to use a previously prepared EIR and supplement that EIR, or prepare a subsequent EIR to analyze at hand. If the agency finds no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, a negative declaration shall be prepared. If in the course of the analysis, it is recognized that the project may have a significant impact on the environment, but that with specific recommended mitigation measures incorporated into the project, these impacts shall be reduced to less than significant, a mitigated negative declaration shall be prepared.

In reviewing all of the available information for the above referenced project, the City of Yuba City Planning Division has analyzed the potential environmental impacts created by this project and a mitigated negative declaration has been prepared for this project.

2.5. Intended Uses of this Document

In accordance with CEQA, a good-faith effort has been made during preparation of this IS/MND to contact affected public agencies, organizations, and persons who may have an interest in the proposed project. In reviewing the Draft IS/MND, affected and interested parties should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the effects of the rezone and annexation would be avoided or mitigated.

The Draft IS/ND and associated appendixes will be available for review on the City of Yuba City website at http://www.yubacity.net. The Draft IS/MND and associated appendixes also will be available for review during regular business hours at the City of Yuba City Development Services Department (1201 Civic Center Boulevard, Yuba City, California 95993).

Written comments on the Draft IS/MND should be sent to the following address:

City of Yuba City
Attn: Arnoldo Rodriguez
Development Services Department
1201 Civic Center Boulevard
Yuba City, CA 95991

e-mail: arodriguez@yubacity.net
Phone: 530.822.3231

3. Project Description

3.1. Project Title

General Plan Amendment (GPA) 16-06 and Specific Plan Amendment 16-04; Feather River Mills Hotel

3.2. Lead Agency Name and Address

City of Yuba City
Development Services Department, Planning Division
1201 Civic Center Blvd.
Yuba City, CA 95993

3.3. Contact Person and Phone Number

Arnoldo Rodriguez, AICP, Development Services Director
(530) 822-3231
arodrigu@yubacity.net

3.4. Project Location

The property is located on the northeast corner of Shasta Street and B Street. See Figure 1.

3.5. Assessors Parcel Number

52-324-23 (a portion of)

3.6. Project Applicant

City of Yuba City
1201 Civic Center Boulevard
Yuba City, CA 95993

3.7. Property owner

City of Yuba City
1201 Civic Center Boulevard
Yuba City, CA 95993

3.8. General Plan Designation

The property is presently designated as Business, Technology and Light Industrial (BT&LI). The proposal is to re-designate the property Community Commercial (CC).

3.9. Specific Plan Designation

The Central City Specific Plan land use plan designates this site as Storefront Commercial. The proposal is to re-designate the property to Community Commercial.

3.10. Zoning

C-2, Community Commercial. No change is proposed.

3.11. Project description

Specific Plan Amendment 16-04 proposes to amend both the text and land use map of the Central City Specific Plan (CCSP). The land use map amendment is to add the new Community Commercial (CC) designation to the land use map for an approximately 1.5 acre area.

The text amendment is to add a CC land use designation to the Specific Plan. The CC designation is defined as follows:

"Applied to areas intended for retail and service commercial uses that are primarily conducted indoors, as well as office uses. The allowed uses and development standards shall be the same as in the C-2 Zone District, except modifications can be made to reflect the area's downtown characteristics, if approved by the Planning Commission. Mixed-use development could include residential development at a density of up to 36 units per acre provided that the units are secondary to the commercial uses, but not necessarily in the same building as commercial uses. Building design shall meet the standards in the adopted citywide design guidelines. However, new and remodeled buildings shall also be respectful to the appearance of the Plumas Street storefront commercial uses or the Plumas Boulevard office uses, whichever is nearer."

General Plan Amendment 16-06 proposes to re-designate the land use map for the approximately 1.5 acre site from a Business, Technology, and Light Industrial (BT&LI) land use designation to a Community Commercial (CC) land use designation in order to bring the General Plan into conformance with the Central City Specific Plan and the zoning.

The site is currently zoned C-2 (Community Commercial) which is consistent with the proposed CC designation.

3.12. Surrounding Land Uses & Setting

Table 1: Bordering Uses	
North:	Remaining City-owned vacant property, Bridge Street.
South:	Medical office, single-family residence (a corner residence that does not directly face the site).
East:	Vacant property and light industrial buildings
West:	Church

3.13. Other Public Agencies Whose Approval May be Required

The Central Valley Regional Water Quality Control Board, in their letter to the City dated June 1, 2016, concurred with the final feasibility study/remedial action plan for the subject site.

3.14. Project Location

Figure 1: Location Map Figure 1

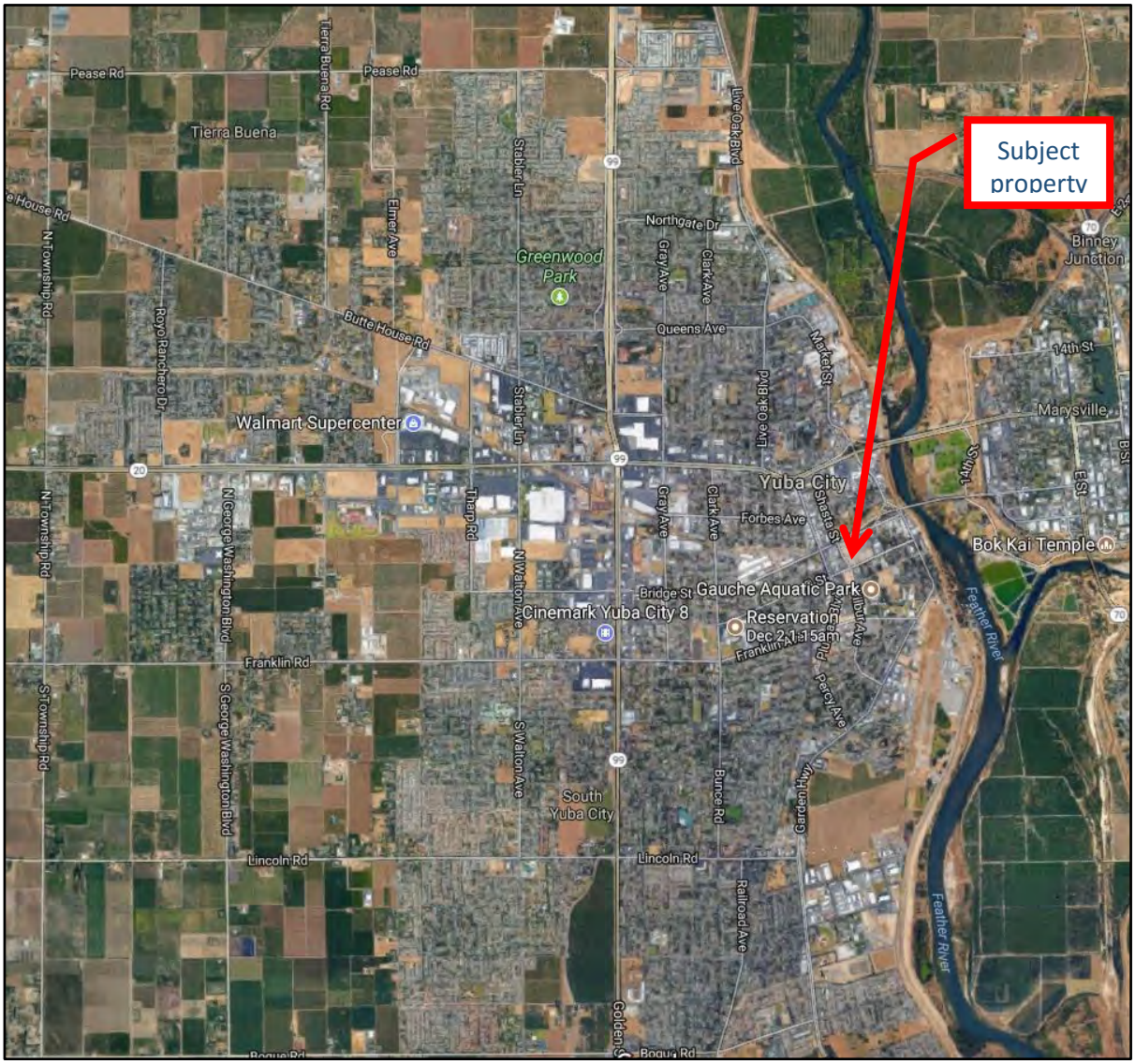


Figure 2 : Specific Plan Amendment Map

Figure 3: General Plan Amendment Map

Note that the map depicts existing plan land uses, not proposed.

3.15. Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and subsequent discussion on the following pages.

☒ Aesthetics	☐ Agriculture & Forestry Resources	☐ Air Quality
☐ Biological Resources	☒ Cultural Resources	☐ Geology/Soils
☒ Greenhouse Gas Emissions	☒ Hazards & Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☒ Transportation/Traffic	☒ Tribal Cultural Resources	☐ Utilities/Service Systems
☐ Mandatory Findings of Significance		

Determination: On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that, although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that, although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

/s/	December 5, 2017
Signature	Date
Arnoldo Rodriguez, Development Services Director	
Printed Name/Position	

3.16. Evaluation of Environmental Impacts:

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

"Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described below, may be cross referenced). A Mitigated Negative Declaration also requires preparation and adoption of a Mitigation Monitoring and Reporting Program (MMRP)

Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. In this case, a brief discussion should identify the following:

Earlier Analysis Used. Identify and state where they are available for review.
Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they addressed site-specific conditions for the project.

Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts. Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

4. Environmental Checklist and Impact Evaluation

The following section presents the initial study checklist recommended by the California Environmental Quality Act (CEQA; Appendix G) to determine potential impacts of a project. Explanations of all answers are provided following each question, as necessary.

4.1. Aesthetics

Table 4-1: Aesthetics				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?				X

4.1.1. Environmental Setting/Affected Environment

Background views are generally considered to be long range views in excess of 3 to 5 miles from a vantage point. Background views surrounding the project site are limited due to the flat nature of the site and the surrounding urban landscape. Overall, the vast majority of Sutter County is relatively flat, with the Sutter Buttes being the exception. The Sutter Buttes, located approximately 7.5 miles northwest of the project site, are visibly prominent throughout and can be seen from all over Yuba City and Sutter County. The Sutter Buttes comprise the long range views to the northwest and are visible on a clear day from the majority of the City, except in areas where trees or intervening structures block views of the mountain range.

The City's General Plan, more specifically, the Community Design Element "establishes policies to ensure the creation of public and private improvements that will maintain and enhance the image, livability, and aesthetics of Yuba City in the years to come."

The following principles and policies are applicable:

- Maintain the identity of Yuba City as a small town community, commercial hub, and residential community, surrounded by agricultural land and convey, through land uses and design amenities, Yuba City's character and place in the Sacramento Valley.
- Recognizing the livability and beauty of peer communities with highly designed visual landscapes, commit to a focus on the visual landscape of Yuba City.

- Maintain, develop, and enhance connections between existing and planned neighborhoods.
- Create and build upon a structured open space and parks network, centered on two large urban parks and the Feather River Corridor.
- Strive for lush, landscaped public areas marked by extensive tree plantings.
- Design commercial and industrial centers to be visually appealing, to serve both pedestrians and automobiles, and to integrate into the adjacent urban fabric.

In addition to the City's General Plan, the Central City Specific Plan, City provides Design Guidelines. The goal of the City's design guidelines is to ensure the highest quality of building design: designs that are aesthetically pleasing; designs that are compatible with the surroundings in terms of scale, mass, detailing, and building patterns; designs that accommodate the pedestrian, automobile, bicycle, and transit circulation; and designs that consider public safety, public interaction, and historic resources. The design guidelines apply to all commercial and industrial new construction and renovation projects, new multifamily projects, and new single-family subdivisions. At the time of project submittal, staff will review the building design to ensure that it complies with the General Plan and the City's Design Guidelines.

4.1.2. Federal Regulatory Setting

Federal regulations relating to aesthetics include: Organic Administration Act (1897), Multiple Use – Sustained Yield Act (1960), Wilderness Act (1964), Federal Lands Policy and Management Act (1976), Wild and Scenic Rivers Act. The proposed Project is not subject to these regulations since there are no federally designated lands or rivers in the vicinity.

4.1.3. State Regulatory Setting

The California State Scenic Highway Program was created by the California Legislature in 1963 to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. When a city or county nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. A scenic corridor is the land generally adjacent to and visible from the highway. A scenic corridor is identified using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. The corridor protection program does not preclude development, but seeks to encourage quality development that does not degrade the scenic value of the corridor. Jurisdictional boundaries of the nominating agency are also considered. The agency must also adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program. County roads can also become part of the Scenic Highway System. To receive official designation, the county must follow the same process required for official designation of state scenic highways. There are no designated state scenic highways in or in the vicinity of the project site.

California Building Code Title 24 Outdoor Lighting Standards: The requirements vary according to which "Lighting Zone" the equipment is in. The Standards contain lighting power allowances for newly installed equipment and specific alterations that are dependent on which Lighting Zone the project is located in. Existing outdoor lighting systems are not required to meet these lighting power allowances. However, alterations that increase the connected load, or replace more than 50 percent of the existing luminaires, for each outdoor lighting application that is regulated by the Standards, must meet the lighting power allowances for newly installed equipment.

An important part of the Standards is to base the lighting power that is allowed on how bright the surrounding conditions are. The eyes adapt to darker surrounding conditions, and less light is needed to properly see; when the surrounding conditions get brighter, more light is needed to see. The least power is allowed in Lighting Zone 1 and increasingly more power is allowed in Lighting Zones 2, 3, and 4. By default, government designated parks, recreation areas and wildlife preserves are Lighting Zone 1; rural areas are Lighting Zone 2; and urban areas are Lighting Zone 3. Lighting Zone 4 is a special use district that may be adopted by a local government. The proposed Project is located in an urban area; thereby, it is in Lighting Zone 3.

4.1.4. Impact Assessment/Environmental Consequences:

a) Have a substantial adverse effect on a scenic vista?

There are no scenic vistas within the vicinity of the proposed Project. Rather, the proposal is located within the urban area. Existing development in all directions prevents any distant views.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The property is undeveloped, previously being scraped cleared of any buildings and vegetation. There are no remaining native trees, landmark type rocks, etc. Moreover, there are no designated scenic resources on the project site. Additional, there is no Officially Designated or Eligible Scenic Highway in the City, according to the State of California Scenic Mapping System.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

The vacant site is located between the historic buildings on Plumas Street and the newer office buildings on Plumas Boulevard. This project could potentially allow a hotel (or another type building) to be built that could aesthetically conflict with the historical nature of the Plumas Street buildings or the new office type buildings on Plumas Boulevard that meet distinct architectural criteria. A mitigation measure is provided below to reduce to less than significant.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Building out the vacant property will create additional lighting. However, the property is located within the urban area for which there already exists significant lighting. Any new lighting will complement what already exists. The City's Zoning Regulations requires screening of new lighting to minimize or prevent off-site glare.

4.1.5. Aesthetics Mitigation Measure

1. All new buildings constructed in this area shall be designed to be respectful in appearance to the historical nature of the Plumas Street commercial buildings or the newer office buildings constructed on Plumas Boulevard to the south of this site, depending on which is closer. The intent of this mitigation is not to attempt to match the hotel building (or other building that may be built) with the existing nearby buildings but to utilize a design that is not out of character with those buildings.

4.2. Agricultural and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model prepared (1997)by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

Table 4-2: Agricultural and Forestry Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

4.2.1. Environmental Setting/Affected Environment

Sutter County is located within the northern portion of California's Central Valley in the area known as the Sacramento Valley. It contains some of the richest soils in the State. These soils, combined with abundant surface and subsurface water supplies and a long, warm growing season, make Sutter County's agricultural resources very productive. Sutter County is one of California's leading agricultural counties, with 83 percent of the County's total land acreage currently being used for agricultural purposes. However, while Sutter County provides rich agricultural opportunities, the subject site is in an urban area that developed slightly more than 100 years ago. Moreover, the site was previously developed and was recently cleared for new urban development.

4.2.2. Federal Regulatory Setting

Farmland Protection Policy Act: The Natural Resources Conservation Service (NRCS), a federal agency within the U.S. Department of Agriculture (USDA), is the agency primarily responsible for implementation of the Farmland Protection Policy Act (FPPA). The FPPA was enacted after the 1981 Congressional report, Compact Cities: Energy-Saving Strategies for the Eighties indicated that a great

deal of urban sprawl was the result of programs funded by the federal government. The purpose of the FPPA is to minimize federal programs' contribution to the conversion of farmland to non-agricultural uses by ensuring that federal programs are administered in a manner that is compatible with state, local, and private programs designed to protect farmland. Federal agencies are required to develop and review their policies and procures to implement the FPPA every two years (USDA-NRCS, 2011).

2014 Farm Bill: The Agricultural Act of 2014 (the Act), also known as the 2014 Farm Bill, was signed by President Obama on Feb. 7, 2014. The Act repeals certain programs, continues some programs with modifications, and authorizes several new programs administered by the Farm Service Agency (FSA). Most of these programs are authorized and funded through 2018.

The Farm Bill builds on historic economic gains in rural America over the past five years, while achieving meaningful reform and billions of dollars in savings for the taxpayer. It allows USDA to continue record accomplishments on behalf of the American people, while providing new opportunity and creating jobs across rural America. Additionally, it enables the USDA to further expand markets for agricultural products at home and abroad, strengthen conservation efforts, create new opportunities for local and regional food systems and grow the biobased economy. It provides a dependable safety net for America's farmers, ranchers and growers. It maintains important agricultural research, and ensure access to safe and nutritious food for all Americans.

Forestry Resources: Federal regulations regarding forestry resources are not relevant to the proposed Project because no forestry resources exist on the project site or in the proposed Project's vicinity.

4.2.3. State Regulatory Setting

California Environmental Quality Act (CEQA) Definition of Agricultural Lands: Public Resources Code Section 21060.1 defines "agricultural land" for the purposes of assessing environmental impacts using the Farmland Mapping & Monitoring Program (FMMP). The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California.

California Department of Conservation, Division of Land Resource Protection: The California Department of Conservation (DOC) applies the NRCS soil classifications to identify agricultural lands, and these agricultural designations are used in planning for the present and future of California's agricultural land resources. Pursuant to the DOC's FMMP, these designated agricultural lands are included in the Important Farmland Maps (IFM) used in planning for the present and future of California's agricultural land resources. The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides analysis of agricultural land use and land use changes throughout California. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications.

The list below provides a comprehensive description of all the categories mapped by the DOC. Collectively, lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland is referred to as Farmland.

- Prime Farmland. Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and

moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- Farmland of Statewide Importance. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- Unique Farmland. Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date. Farmland of Local Importance. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

- Grazing Land. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

- Urban and Built-up Land. Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. T his land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- Other Land. Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act (Williamson Act): The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is promulgated in California Government Code Section 51200-51297.4, and therefore is applicable only to specific land parcels within the State of California. The Williamson Act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses in return for reduced property tax assessments. Private land within locally designated agricultural preserve areas is eligible for enrollment under Williamson Act contracts. However, an agricultural preserve must consist of no less than 100 acres. In order to meet this requirement two or more parcels may be combined if they are contiguous, or if they are in common ownership.

The Williamson Act program is administered by the Department of Conservation (DOC), in conjunction with local governments, which administer the individual contract arrangements with landowners. The landowner commits the parcel to a 10-year period, or a 20-year period for property restricted by a Farmland Security Zone Contract, wherein no conversion out of agricultural use is permitted. Each year the contract automatically renews unless a notice of non-renewal or cancellation is filed. In return, the

land is taxed at a rate based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. An application for immediate cancellation can also be requested by the landowner, provided that the proposed immediate cancellation application is consistent with the cancellation criteria stated in the California Land Conservation Act and those adopted by the affected county or city. Non-renewal or immediate cancellation does not change the zoning of the property. Participation in the Williamson Act program is dependent on county adoption and implementation of the program and is voluntary for landowners.

Farmland Security Zone Act: The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy. Farmland Security Zone Act contracts are sometimes referred to as "Super Williamson Act Contracts." Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for a further 35% reduction in the taxable value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into nonagricultural uses.

Forestry Resources: State regulations regarding forestry resources are not relevant to the proposed Project because no forestry resources exist on the project site or in the proposed Project's vicinity.

4.2.4. Impact Assessment/Environmental Consequences:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Pursuant to CEQA Statute §21060.1, "Agricultural land" means prime farmland, farmland of statewide importance, or unique farmland, as defined by the United States Department of Agriculture land inventory and monitoring criteria. According to FMMP, the minimum land use mapping unit is 10 acres unless specified. Smaller units of land are incorporated into the surrounding map classification. For example, FMMP typically maps rural canals and roadways in agricultural areas as an agricultural soil type for the ease of mapping. Lands onsite and in the vicinity are designated as Urban/Built-Up, Grazing, Farmland of Statewide Importance and Other Land. The proposed Project will be constructed in an urbanized area located in the incorporated area, and will therefore not remove agricultural land from production, nor would it disrupt agricultural cultivation or harvesting activities in the vicinity. There will be no impact.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The proposed Project, in an urban area is currently zoned for commercial development and is not agricultural use or Williamson Act contracts. No zoning changes are proposed in association with the proposed Project. There would be no impact.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4256), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

The proposed Project is located in the Sacramento Valley which lies in the northern portion of the Central Valley floor, in a relatively flat and agricultural area. There are no forests or timberland located on the project site or within the vicinity of the proposed Project. There will be no impact on existing zoning of forest land and the proposed Project would not cause the rezoning of forested or timberlands.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

There is no forested land on the project site or within the vicinity of the proposed Project; therefore, there would be no impact.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

The project is within an urbanized area of the City and is not utilized as farmland, thus, there is no additional impact on agricultural land. While the underlying soils have agriculture qualities, the area was urbanized many years ago and no longer can be agriculturally utilized, due to location and land area. This property is also not near any viable agricultural properties. There are also no forestlands on the project site or in the vicinity. No properties within the area are within the Williamson Act. For these reasons there should be no significant impacts on agricultural lands from this proposal.

4.3. Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Table 4-3: Air Quality				
Would the project?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standards or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	

4.3.1. Environmental Setting/Affected Environment

Yuba City is located within the Sacramento Valley Air Basin (SVAB) which consists of the northern half of the Central Valley and approximates the drainage basin for the Sacramento River and its tributaries. The SVAB is bounded on the west by the Coast Range, on the north by the Cascade Range, on the east by the Sierra Nevada, and on the south by the San Joaquin Valley Air Basin. The intervening terrain is flat, and approximately 25 feet above sea level. The SVAB consists of the counties of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba and portions of Placer and Solano Counties.

Hot dry summers and mild rainy winters characterize the Mediterranean climate of the Sacramento Valley. The climate of the SVAB is dominated by the strength and position of the semi-permanent high-pressure cell over the Pacific Ocean north of Hawaii. In summer, when the high-pressure cell is strongest and farthest north, temperatures are high and humidity is low, although the incursion of the sea breeze into the Central Valley helps moderate the summer heat. In winter, when the high-pressure cell is weakest and farthest south, conditions are characterized by occasional rainstorms interspersed with stagnant and sometimes foggy weather. Throughout the year, daily temperatures may range from summer highs usually exceeding 100 degrees Fahrenheit and winter lows occasionally below freezing. Average annual rainfall is about 20 inches with snowfall being very rare. The prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north.

In addition to prevailing wind patterns that control the rate of dispersion of local pollutant emissions, the region experiences two types of inversions that affect the vertical depth of the atmosphere through which pollutants can be mixed. In the warmer months in the SVAB (May through October), sinking air forms a "lid" over the region. These subsidence inversions contribute to summer photochemical smog problems by confining pollution to a shallow layer near the ground. These warmer months are characterized by stagnant morning air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. Usually, the evening breeze transports the airborne pollutants to the north and out of the SVAB. During about half of the day from July to September, however, a phenomenon called the “Schultz Eddy” prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of violating federal or State standards. The Schultz Eddy normally dissipates around noon when the Delta sea breeze begins. In the second type of inversion, the mountains surrounding the SVAB create a barrier to airflow which can trap air pollutants in the valley. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The air near the ground cools by radiative processes, while the air aloft remains warm. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. These inversions typically occur during winter nights and can cause localized air pollution "hot spots" near emission sources because of poor dispersion. The surface concentrations of pollutants are highest when these conditions are combined with smoke from agricultural burning or when temperature inversions trap cool air and pollutants near the ground. Although these subsidence and radiative inversions are present throughout much of the year, they are much less dominant during spring and fall, and the air quality during these seasons is generally good.”

Local Climate: The climate of Sutter County is subject to hot dry summers and mild rainy winters which characterize the Mediterranean climate of the SVAB. Summer temperatures average approximately 90 degrees Fahrenheit during the day and 50 degrees Fahrenheit at night. Winter daytime temperatures average in the low 50s and nighttime temperatures are mainly in the upper 30s. During summer, prevailing winds are from the south. This is primarily because of the north- south orientation of the valley and the location of the Carquinez Strait, a sea-level gap in the coast range that is southwest of Sutter County.

Criteria Air Pollutants: Criteria air pollutants are a group of pollutants for which federal or State regulatory agencies have adopted ambient air quality standards. Criteria air pollutants are classified in each air basin, county, or in some cases, within a specific urbanized area. The classification is determined by comparing actual monitoring data with State and federal standards. If a pollutant concentration is lower than the standard, the area is classified as “attainment” for that pollutant. If an area exceeds the standard, the area is classified as “non-attainment” for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated “unclassified.”

Ambient Air Quality Standards: Both the federal and State government have established ambient air quality standards for outdoor concentrations of various pollutants in order to protect public health. The federal and State ambient air quality standards have been set at levels whose concentrations could be generally harmful to human health and welfare and to protect the most sensitive persons from experiencing health impacts with a margin of safety. Applicable ambient air quality standards are

identified later in this section. The air pollutants for which federal and State standards have been promulgated and which are most relevant to air quality planning and regulation in the air basins include ozone, carbon monoxide, nitrogen oxides, suspended particulate matter, sulfur dioxide, and lead. In addition, toxic air contaminants are of concern in Sutter County. Each of these pollutants is briefly described below.

Ozone (O3): is a gas that is formed when reactive organic gases (ROGs) and nitrogen oxides (NOX), both byproducts of internal combustion engine exhaust and other processes undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

Carbon Monoxide (CO): is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the SVAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

Nitrogen Oxides (NOX): is the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Many of the nitrogen oxides are colorless and odorless. However, one common pollutant, nitrogen dioxide (NO2) along with particles in the air can often be seen as a reddish-brown layer over many urban areas. Nitrogen oxides form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NOX are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels.
Nitrogen oxides can also be formed naturally.

Respirable Particulate Matter (PM10) and Fine Particulate Matter (PM2.5): consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter. Some sources of suspended particulate matter, like pollen and windstorms, occur naturally. However, in populated areas, most fine suspended particulate matter is caused by road dust, diesel soot, and combustion products, abrasion of tires and brakes, and construction activities.

Sulfur Dioxide (SO2): is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of the burning of high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries.

Lead: occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead. Since the use of leaded gasoline is no longer permitted for on-road motor vehicles, lead is not a pollutant of concern in the SVAB.

Toxic Air Contaminants (TACs): are known to be highly hazardous to health, even in small quantities. TACs are airborne substances capable of causing short-term (acute) and/or long-term (chronic or carcinogenic) adverse human health effects (i.e., injury or illness). TACs can be emitted from a variety of common sources, including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations.

TAC impacts are assessed using a maximum individual cancer risk (MICR) that estimates the probability of a potential maximally exposed individual (MEI) contracting cancer as a result of sustained exposure to toxic air contaminants over a constant period of 24 hours per day for 70 years for residential receptor locations. The CARB and local air districts have determined that any stationary source posing an incremental cancer risk to the general population (above background risk levels) equal to or greater than 10 people out of 1 million to be excessive. For stationary sources, if the incremental risk of exposure to project-related TAC emissions meets or exceeds the threshold of 10 excess cancer cases per 1 million people, the CARB and local air district require the installation of best available control technology (BACT) or maximum available control technology (MACT) to reduce the risk threshold. To assess risk from ambient air concentrations, the CARB has conducted studies to determine the total cancer inhalation risk to individuals due to outdoor toxic pollutant levels. The CARB has conducted studies to determine the total cancer inhalation risk to individuals due to outdoor toxic pollutant levels. According to the map prepared by the CARB showing the estimated inhalation cancer risk for TACs in the State of California, Sutter County has an existing estimated risk that is between 50 and 500 cancer cases per 1 million people. A significant portion of Sutter County is within the 100 to 250 cancer cases per 1 million people range. There is a higher risk around Yuba City where the cancer risk is as high as 500 cases per 1 million people. There are only very small portions of the County where the cancer risk is between 50 and 100 cases. This represents the lifetime risk that between 50 and 500 people in 1 million may contract cancer from inhalation of toxic compounds at current ambient concentrations under an MEI scenario.

4.3.2. Federal Regulatory Setting

Clean Air Act: The federal Clean Air Act of 1970 (as amended in 1990) required the U.S. Environmental Protection Agency (EPA) to develop standards for pollutants considered harmful to public health or the environment. Two types of National Ambient Air Quality Standards (NAAQS) were established. Primary standards protect public health, while secondary standards protect public welfare, by including protection against decreased visibility, and damage to animals, crops, landscaping and vegetation, or buildings. NAAQS have been established for six “criteria” pollutants: carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), ozone (O3), particulate matter (PM10 and PM2.5), and lead (Pb).

4.3.3. State Regulatory Setting

California Air Resources Board: The California Air Resources Board (CARB) is the state agency responsible for implementing the federal and state Clean Air Acts. CARB has established California Ambient Air Quality Standards (CAAQS), which include all criteria pollutants established by the NAAQS, but with additional regulations for Visibility Reducing Particles, sulfates, hydrogen sulfide (H2S), and vinyl chloride. The proposed Project is located within the Sacramento Valley Air Basin, which includes Butte, Colusa, Glenn, Tehama, Shasta, Yolo, Sacramento, Yuba Sutter and portions of Placer, El Dorado and Solano counties. Air basins are classified as attainment, nonattainment, or unclassified. The FRAQMD is comprised Sutter and Yuba Counties. Attainment is achieved when monitored ambient air quality data is in compliance with the standards for a specified pollutant. Non-compliance with an established standard will result in a nonattainment designation and an unclassified designation indicates insufficient data is available to determine compliance for that pollutant.

California Clean Air Act: The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO2, and NO2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide

emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

CARB Portable Equipment Registration Program: This program was designed to allow owners and operators of portable engines and other common construction or farming equipment to register their equipment under a statewide program so they may operate it statewide without the need to obtain a permit from the local air district.

U.S. EPA/CARB Off-Road Mobile Sources Emission Reduction Program: The California Clean Air Act (CCAA) requires CARB to achieve a maximum degree of emissions reductions from off-road mobile sources to attain State Ambient Air Quality Standards (SAAQS); off- road mobile sources include most construction equipment. Tier 1 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996. These standards, along with ongoing rulemaking, address emissions of nitrogen oxides (NOX) and toxic particulate matter from diesel engines. CARB is currently developing a control measure to reduce diesel PM and NOX emissions from existing off-road diesel equipment throughout the state.

California Global Warming Solutions Act: Established in 2006, Assembly Bill 32 (AB 32) requires that California's GHG emissions be reduced to 1990 levels by the year 2020. This will be implemented through a statewide cap on GHG emissions, which will be phased in beginning in 2012. AB 32 requires CARB to develop regulations and a mandatory reporting system to monitor global warming emissions level.

4.3.4. Regional Regulatory Setting

Feather River Air Quality Management District: The FRAQMD is bi-county District that was formed in 1991 to administer local, state, and federal air quality management programs for Yuba and Sutter Counties within the Sacramento Valley Air Basin. The goal of the FRAQMD is to improve air quality in the region through monitoring, evaluation, education and implementing control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations and by supporting and implementing measures to reduce emissions from motor vehicles.

The FRAQMD adopted its Indirect Source Review guidelines document for assessment and mitigation of air quality impacts under CEQA in 1998. The guide contains criteria and thresholds for determining whether a project may have a significant adverse impact on air quality, and methods available to mitigate impacts on air quality. FRAQMD updated its Indirect Source Review Guidelines to reflect the most recent methods recommended to evaluate air quality impacts and mitigation measures for land use development projects in June 2010. This analysis uses guidance and thresholds of significance from the 2010 FRAQMD Indirect Source Review Guidelines to evaluate the proposed project's air quality impacts.

According to FRAQMD's 2010 Indirect Source Review Guidelines, a project would be considered to have a significant impact on air quality if it would:

- generate daily construction or operational emissions that would exceed 25 pounds per day for reactive organic gases (ROG), 25 pounds per day for oxides of nitrogen (NOX), or 80 pounds per day for PM10; or generate annual construction or operational emissions of ROG or NOX that exceed 4.5 tons per year.

Northern Sacramento Valley Planning Area 2015 Air Quality Attainment Plan: As specified in the California Clean Air Act of 1988 (CCAA), Chapters 1568-1588, it is the responsibility of each air district in California to attain and maintain the state's ambient air quality standards. The CCAA requires that an Attainment Plan be developed by all nonattainment districts for O3, CO, SOx, and NOx that are either receptors or contributors of transported air pollutants. The purpose of the Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan (TAQAP) is to comply with the requirements of the CCAA as implemented through the California Health and Safety Code. Districts in the NSVPA are required to update the Plan every three years. The TAQAP is formatted to reflect the 1990 baseline emissions year with a planning horizon of 2020. The Health and Safety Code, sections 40910 and 40913, require the Districts to achieve state standards by the earliest practicable date to protect the public health, particularly that of children, the elderly, and people with respiratory illness.

Health and Safety Code Section 41503(b): Requires that control measures for the same emission sources are uniform throughout the planning area to the extent that is feasible. To meet this requirement, the NSVPA has coordinated the development of an Attainment Plan\ and has set up a specific rule adoption protocol. The protocol was established by the Technical Advisory Committee of the Sacramento Valley Basin-wide Air Pollution Control Council and the Sacramento Valley Air Quality Engineering and Enforcement Professionals, which allow the Districts in the Basin to act and work as a united group with the CARB as well as with industry in the rule adoption process. Section 40912 of the Health and Safety Code states that each District responsible for, or affected by, air pollutant transport shall provide for attainment and maintenance of the state and federal standards in both upwind and downwind Districts. This section also states that each downwind District's Plan shall contain sufficient measures to reduce emissions originating in each District to below levels which violate state ambient air quality standards, assuming the absence of transport contribution

Construction Generated Emissions of Criteria Air Pollutants: The District recommends the following best management practices:

- Implement the Fugitive Dust Control Plan.
- Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0,
- Visible Emissions limitations (40 percent opacity or Ringelmann 2.0).
- The contractor shall be responsible to ensure that all construction equipment is properly tunes and maintained prior to and for the duration of onsite operation.
- Limiting idling time to 5 minutes – saves fuel and reduces emissions.
- Utilize existing power sources or clean fuel generators rather than temporary power generators.
- Developed a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.

- Portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off-road motor vehicles, may require California Air Resources Board (ARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the ARB or the District to determine registration and permitting requirements prior to equipment operation at the site.

4.3.5. Impact Assessment/Environmental Consequences:

a) Conflict with or obstruct implementation of the applicable air quality plan?

The proposed Project will not conflict with or obstruct the implementation of the air quality management standards. Standards set by FRQAMD, CARB, and Federal agencies relating to the proposed Project will continue to apply. A Fugitive Dust Control Plan will be submitted to FRAQMD to as a part of standard measures required by the District, prior to the initiation of construction. An Indirect Source Review (ISR) application, will be filed with the Air District to address emissions from construction. Therefore, the proposed Project will not conflict with the FRAQMD's plans and any impacts will be less than significant.

b) Violate any air quality standards or contribute substantially to an existing or projected air quality violation?

Typically, construction and operation of a project generates emissions of various air pollutants, including criteria pollutants such as carbon monoxide (CO), ozone precursors such as nitrous oxides (NOX) and reactive organic gases (ROG) or Volatile Organic Compounds (VOC), particulate matter less than 10 microns in diameter (PM10), and PM2.5, as well as sulfur oxides (SOX). For example, typical emission sources during construction include equipment exhaust, dust from wind erosion, earthmoving activities, and vehicle movements.

Construction of the proposed Project will generally occur during daylight hours, Monday through Friday, excluding holidays. Project construction will include trenching and excavation on private property for the development of a hotel. The impacted areas will be back-filled. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. The estimated construction period of 7-10 months would generate air pollutant emissions intermittently within the site, and in the vicinity of the site. As a result, construction is a potential short-term concern because the proposed Project is in a nonattainment area for ozone and PM10.

Therefore, the proposed Project's operational emissions would not result in a significant contribution to the region's nonattainment status of ozone or PM, and would not violate an air quality standard or contribute substantially to an existing or projected air quality violation.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The Project would result in limited generation of criteria pollutants during construction. However, during construction, air quality impacts would be less than FRAQMD thresholds for non-attainment

pollutants and operation of the Project would not exceed the emissions thresholds for criteria pollutants. Accordingly, net increases of non-attainment criteria pollutants would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

The FRAQMD defines sensitive receptors as: facilities that house or attract children, the elderly, and people with illnesses, or others who are especially sensitive to the effects of air pollutants. Several sensitive receptors are located adjacent or within 1,000 feet to the proposed Project alignment, including private residences, elementary school, a religious institution, and medical facilities. FRAQMD states that if a project is located within 1,000 feet of a sensitive receptor location, the impact of diesel particulate matter shall be evaluated. According to the FRAQMD's Indirect Source Review Guidelines, "Construction activity can results in emissions of particulate matter from the diesel exhaust (diesel PM) of construction equipment. Best Management Practices (BMPs) that can be used to reduce the impact to sensitive receptors from off-road diesel equipment include:

- Install diesel particulate filters or implement other ARB-verifies diesel emission control strategies on all construction equipment to further reduce diesel PM emissions beyond the 45% reduction required by the Districts Best Available Mitigation Measure for Construction Phase;
- Use equipment during times when receptors are not present (e.g. when school is not in session or during non-school hours; or when office building are unoccupied);
- Establish staging areas for the construction equipment that are as distant as possible from off-site receptors
- Establish an electricity supply to the construction site and use electric powered equipment instead of diesel-powered equipment or generators, where feasible;
- Use haul trucks with on-road engines instead of off-road engines even for on-site hauling;
- Equip nearby buildings with High Efficiency Particle Arresting (HEPA) filter systems at all mechanical air intake points to the building to reduce the levels of diesel PM that enter the buildings;
- and/or,
- Temporarily relocate receptors during construction.

The FRAQMD has not established a threshold of significance to evaluate the health risk resulting from projects that would locate sensitive receptors near existing non-permitted sources of TACs. The proposed Project would result in the limited generation of criteria pollutants during construction and maintenance; however, these impacts would be less than FRAQMD's thresholds for criteria pollutants. Due to the temporary nature of construction, sensitive receptors in the vicinity of the proposed Project would not be subjected to long-term exposure to diesel particulate matter. Any exposure of sensitive receptors to pollutant concentrations would be less than significant.

e) Create objectionable odors affecting a substantial number of people?

Less than Significant Impact: Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative or formulaic methodologies to determine the presence of a significant odor impact do not exist. The intensity of an odor source's operations and its proximity to sensitive receptors influences the potential significance of odor emissions. The FRAQMD has prepared a screening table for use in determining whether an impact will occur.

Table 2: Screening Levels of Potential Odor Sources

Type of Facility (1)	Distance (in miles)
Wastewater Treatment Facilities	2
Wastewater Pumping Facilities	1
Sanitary Landfill	1
Transfer Station	1
Composting Facility	2
Asphalt Batch Plant	2
Chemical Manufacturing	1
Fiberglass Manufacturing	1
Painting/Coating Operations (e.g. auto body shops)	1
Rendering Plant	5
Coffee Roaster	1
Food Processing Facility	1
Feed Lot/Dairy	1
Green Waste & Recycling Operations	2
Metal Smelting Plants	1
(1) FRAQMD, Indirect Source Review Guidelines. Table 3.1 FRAQMD Thresholds of Significance. Page 26.	

The proposed Project does not involve any of the aforementioned facilities, and the system would not generate chemical emissions that would substantially contribute to air quality or create objectionable odors. No significant odor impacts related to the proposed Project's implementation are anticipated due to the nature and short-term extent of potential sources. Therefore, the operation of the Project will have a less than significant impact associated with the creation of objectionable odors affecting a substantial number of people.

4.4. Biological Resources

Table 4-4: Biological Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

4.4.1. Environmental Setting/Affected Environment

The site is located in an urbanized area and is vacant.

4.4.2. Federal & State Regulatory Setting

Threatened and Endangered Species: State and federal "endangered species" legislation has provided California Department of Fish & Wildlife (CDFW) and United States Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as "species of special status." Permits may be required from both the CDFW and USFWS if activities

associated with a proposed project will result in the "take" of a listed species. "Take" is defined by the state of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

Migratory Birds: State and federal laws also protect most birds. The Federal Migratory Bird Treaty Act (16U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Birds of Prey: Birds of prey are also protected in California under provisions of the California Fish and Game Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

Wetlands and Other Jurisdictional Waters: Natural drainage channels and adjacent wetlands may be considered "Waters of the United States" subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts.

Waters of the U.S. generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
- All interstate waters including interstate wetlands.
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce.
- All impoundments of waters otherwise defined as waters of the United States under the definition.
- Tributaries of waters identified in the bulleted items above.

As determined by the United States Supreme Court in its 2001 Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated Carabell/Rapanos decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable, and therefore, jurisdictional water.

The USACE regulates the filling or grading of Waters of the U.S. under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high water marks" on opposing channel banks. All activities that involve the discharge of dredge or fill material into Waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet state water quality standards.

CEQA Guidelines Section 15380: Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria that define "endangered" and "rare" as specified in CEQA Guidelines section 15380(b).

4.4.3. Local Regulatory Setting

The following goals and policies from Chapter 3, Street Trees of the City of Yuba City's Municipal Code are relevant to biological resources goals and policies pertaining to the development of the proposed project:

Section 9-3.05. Removing

(d) Any person who wishes to remove a tree from the planting strip or planting easement abutting his property shall make written application to and obtain a permit from the Director. The Director shall determine whether such tree is required to be retained in order to preserve the intent and purpose of the street tree plan and whether a replacement tree is required. In making his determination, the Director shall consider the inconvenience or hardship which retention of the tree would cause the property owner and consider also the condition, age, desirability of variety, and location of the tree. If the Director finds that the tree may be removed without violating the intent and spirit of the street tree plan, he may authorize the property owner to remove such tree at his own expense and liability. If a permit is granted for removal of a street tree, all removal work shall be completed within sixty (60) calendar days from the date of the issuance of the permit and shall be under the general supervision of, and in accordance with, rules established by the Director. All tree stumps shall be removed completely. All removal permits shall be void after the expiration of sixty (60) calendar days from the date of issuance unless extended by the Director. When a replacement tree is required, the property owner shall supply and plant the tree at his own expense. (§ 1, Ord. 563, eff. December 18, 1968)

Section 9-3.06. Protection

(b) It shall be unlawful for any person to trim, prune, spray, or cut any street tree in a planting strip or planting easement without first obtaining permission form the Director.

Section 9-3.09. Violations

It shall be unlawful for any person to injure or destroy by any means any tree planted or maintained by the City in a planting strip or planting easement, including, but not limited to, the following:

- Damaging, cutting, or carving the bark of any tree;
- Causing or permitting any wire charged with electricity to be attached to any tree;
- Allowing any gaseous, liquid, or solid substance harmful to trees to come in contact with the roots, leaves, bark, or any other part of any tree;
- Constructing a concrete sidewalk or driveway or otherwise filling up the ground around any tree so as to shut off air or water from its roots;
- Piling building materials, equipment, or other substance around any tree;
- Posting any sign, poster, notice, or other object on any tree, tree stake, or guard, or fastening any guy wire, cable, rope, nails, screws, or other device to any tree, tree stake, or guard; or
- Causing or encouraging any fire or burning near or around any tree. (§ 1, Ord. 563, eff. December 18, 1968)

4.4.4. Impact Assessment/Environmental Consequences:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

There have been no special status species identified within this portion of the Specific Plan area. According to the Yuba City General Plan EIR, the only designated special status vegetation species within Yuba City and its Sphere of Influence is the Golden Sunburst, a flowering plant that occurs primarily in non-native grasslands and is threatened mostly by the conversion of habitat to urban uses. The habitat area for this particular species occurs at the extreme eastern boundary of the Planning Area at the confluence of the Feather and Yuba Rivers. This property does not fall within this area, therefore no adverse impacts to special status species will occur as a result of this project. Moreover, General Plan Policies 8.4-I-1 and 8.4-I-2 encourage management and maintenance of sensitive habitat through the promotion of environmentally sensitive project siting and design. Policy 8.4-I-1 requires protection of sensitive habitat areas and special-status species in new development site designs and assessments of biological resources prior to approval of any development within 300 feet of any creeks, sensitive-habitat areas, or areas of potential sensitive-status species. Policy 8.4-I-2 provides additional requirement to preserve oak trees and other native trees that are of a significant size. Since the project is in compliance with these polices, the impacts on biological resources will be less than significant.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

A field inspection determined that riparian habitat is absent from the proposed Project site. Habitat-types occurring with the vicinity of the proposed Project include Urban and Deciduous Orchard habitats. These habitats are not of significant importance to regional wildlife populations. There would be no impact.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No wetlands or federally jurisdictional waters of the U.S. are present within the proposed Project alignment or general vicinity. The proposed Project is located in an urban area. There would be no impact.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The proposed Project would not disturb any waterways. Therefore, migratory fish would not be affected. Potential nesting habitat for raptors and migratory birds may occur in the vicinity of the project, within ornamental trees located on residential and commercial properties. There would be no impact.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No trees or other biological resources that would be protected by local policies or ordinances occur in the proposed Project footprint given that the site is absent any trees.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or any other approved local, regional, or state habitat conservation plans in the vicinity.

4.5. Cultural Resources

Table 4-5: Cultural Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.				X
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to § 15064.5.		X		
c) Directly or indirectly destroy unique paleontological resources or site or unique geologic features?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

4.5.1. Federal Regulatory Setting

National Historic Preservation Act of 1966 (as amended), Section 106: The significance of cultural resources is evaluated under the criteria for inclusion in the National Register of Historic Places (NRHP), authorized under the National Historic Preservation Act of 1966, as amended. The criteria defined in 36 CFR 60.4 are as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- That are associated with events that have made a significant contribution to the broad patterns of our history; or
- That are associated with the lives of persons significant in our past; or
- That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- That have yielded, or may be likely to yield, information important to prehistory or history.

Sites listed or eligible for listing on the NRHP are considered to be historic properties. Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP.

4.5.2. State Regulatory Setting

CEQA requires consideration of project impacts on archaeological or historical sites deemed to be "historical resources." Under CEQA, a substantial adverse change in the significant qualities of a historical resource is considered a significant effect on the environment. For the purposes of CEQA, a "historical resource" is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (Title 14 CCR §15064.5[a][1]-[3]). Historical resources may include, but are not limited to, "any object, building, site, area, place, record, or manuscript which is historically or

archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC §5020.1[j]).

The eligibility criteria for the California Register are the definitive criteria for assessing the significance of historical resources for the purposes of CEQA (Office of Historic Preservation). Generally, a resource is considered "historically significant" if it meets one or more of the following criteria for listing on the California Register:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Is associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1[c])

California Health and Safety Code Section 7050.5: Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Paleontological Resources: Paleontological resources are the fossilized remains of plants and animals and associated deposits. The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources. Botanical and invertebrate fossils and assemblages may also be considered significant resources. CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) Section 15126.4 (a)(1)). California Public Resources Code Section 5097.5 (see above) also applies to paleontological resources.

4.5.3. Native American Consultation

In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the PRC regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In particular, AB 52 now requires lead agencies to analyze project impacts on "tribal cultural resources" separately from archaeological resources (PRC § 21074; 21083.09). AB 52 also requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC § 21080.3.1, 21080.3.2, 21082.3).

On February 24, 2107, the City supplied the following seven Native American tribes with a project description and map of the proposed project area.

- United Auburn Indian Community of the Auburn Rancheria
- Ione Band of Miwok Indians
- Torres Martinez Desert Cahuilla Indians
- Mechoopda Indian Tribe of Chico Rancheria
- Mooretown Rancheria of Maidu Indians
- Strawberry Valley Rancheria
- Enterprise Rancheria of Maidu Indians

In response to the City's inquiry, Enterprise Rancheria of Maidu Indians indicated that their records failed to locate any known cultural sites within the project boundaries. United Auburn Indian Community of the Auburn Rancheria indicated that there are historic resources in the area. In subsequent communication, it was determined that there are possible artifacts. In order to mitigate any potential impacts, a mitigation measure is included.

4.5.4. Impact Assessment/Environmental Consequences:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.

Based on the absence of significant historical resources and historic properties within the project area, any impacts to historical resources would be unlikely. Regardless, there is still potential for previously unknown resources to be present. In order to avoid potential impacts to unknown resources, the mitigation measure below shall be implemented to ensure impacts are less than significant.

b) Cause a substantial adverse change in the significance of an archeological resource pursuant to § 15064.5.

Any impacts to historic/cultural resources have been discussed in Impact Assessment V-a. The implementation of Mitigation Measure Cultural-1 is sufficient to mitigate potential archaeological impacts.

c) Directly or indirectly destroy unique paleontological resources or site or unique geologic features?

The property was originally cleared, graded and built upon many years ago. Because of past ground disturbance, it is unlikely that any paleontological or archaeological artifacts or human remains exist in the area. Therefore there is not expected to be any significant archeological or paleontological resources on these properties. However, regarding archaeological resources an email was received by the City from the United Auburn Indian Community of the Auburn Rancheria (dated March 21, 2017) requesting that the property be tested for cultural resources. While it is unlikely that any cultural resources remain due to prior property grading, and urbanization over the last 100 years, the following mitigation measure is provided in case any archaeological artifacts are discovered during the construction process.

d) Disturb any human remains, including those interred outside of formal cemeteries?

No formal cemeteries or other places of human internment are known to exist on the proposed Project site. No evidence of human remains at the project site have been document, and it is unlikely that buried human remains are present. However, there still remains the potential for previously unknown

sub-surface resources to be present. In order to avoid potential impacts to unknown remains, the mitigation measures below shall be implemented to ensure impacts are less than significant:

4.5.5. Cultural Mitigation Measures

1. In the event that previously undetected cultural materials (i.e. prehistoric sites, historic features, isolated artifacts, and features such as concentrations of shell or glass) are discovered during construction, work in the immediate vicinity should immediately cease and be redirected to another area until a qualified archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historic archaeology inspects and assesses the find. The City shall consider further recommendations as presented by the professional and implement additional measures as necessary to protect and preserve the particular resource. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.

2. If human remains are uncovered, or in any other case where human remains are discovered, the Sutter County Coroner, as appropriate, is to be notified to arrange their proper treatment and disposition. If the remains are identified – on the basis of archaeological context, age, cultural associations, or biological traits – as those of a Native American, California Health and Safety Code 7050.5 and Public Resource Code 5097.98 require that the coroner notify the NAHC within 24 hour of discovery. The NAHC will then notify the most likely descendant, who may recommend treatment of the remains.

3. Should artifacts or unusual amounts of bone or shell be uncovered during demolition or construction activity, all work shall be stopped and a qualified archeologist shall be contacted for on-site consultation. Avoidance measures or appropriate mitigation shall be completed according to CEQA guidelines. The State Office of Historic Preservation has issued recommendations for the preparation of Archeological Resource Management Reports, which shall be used for guidelines. If a bone appears to be human, California law mandates that the Sutter County Coroner and the Native American Heritage Commission be contacted.

4.6. Geology and Soils

Table 4-6: Geology and Soils				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault?			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?				X
b) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?				X
c) Be located on expansive soil, as defined in the California Building Code creating substantial risks to life or property?				X
d) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

4.6.1. Environmental Setting/Affected Environment

Topography and Geology: According to the Sutter County General Plan Update TBR, Sutter County is located in the flat surface of the Great Valley geomorphic province of California. The Great Valley is an alluvial plain approximately 50 miles wide and 400 miles long in the central portion of California. The Great Valley's northern portion is the Sacramento Valley, drained by the Sacramento River, and its southern portion is the San Joaquin Valley, drained by the San Joaquin River. The geology of the Great Valley is typified by thick sequences of alluvial sediments derived primarily from erosion of the mountains of the Sierra Nevada to the east, and to a lesser extent, erosion of the Klamath Mountains and Cascade Range to the north. These sediments were transported downstream and subsequently laid down as a river channel, floodplain deposits, and alluvial fans.

Seismic Hazards: Earthquakes are due to a sudden slip of plates along a fault. Seismic shaking is typically the greatest cause of losses to structures during earthquakes. Earthquakes can cause structural damage,

injury and loss of life, as well as damage to infrastructure networks such as water, power, gas, communication, and transportation lines. Other damage-causing effects of earthquakes include surface rupture, fissuring, settlement, and permanent horizontal and vertical shifting of the ground. Secondary impacts can include landslides, seiches, liquefaction, and dam failure.

Seismicity: Although all of California is typically regarded as seismically active, the Central Valley region does not commonly experience strong ground shaking resulting from earthquakes along known and previously unknown active faults. Though no active earthquake faults are known to exist in Yuba City, active faults in the region could generate ground motion felt within the county. Numerous earthquakes of magnitude 5.0 or greater on the Richter scale have occurred on regional faults, primarily those within the San Andreas Fault System in the region. There are several potentially active faults underlying the Sutter Buttes which are associated with deep- seated volcanism.

The faults identified in Sutter County include the Quaternary Faults, located in the northern section of the County within the Sutter Buttes, and the Pre Quaternary Fault, located in the southeast of the City, just east of where Highway 70 enters in to the County. Both Faults are listed as non active faults, but have the potential for seismic activity.

Ground Shaking: As stated in the Sutter County Multi-Hazard Mitigation Plan, although the County has felt ground shaking from earthquakes with epicenters located elsewhere, no major earthquakes or earthquake related damage has been recorded within the County. Based on historic data and known active or potentially active faults in the region, parts of Sutter County have the potential to experience low to moderate ground shaking. The intensity of ground shaking at any specific site depends on the characteristics of the earthquake, the distance from the earthquake fault, and on the local geologic and soils conditions. Fault zone maps are used to identify where such hazards are more likely to occur based on analyses of faults, soils, topography, groundwater, and the potential for earthquake shaking sufficiently strong to trigger landslide and liquefaction.

Liquefaction: Liquefaction, which can occur in earthquakes with strong ground shaking, is mostly found in areas with sandy soil or fill and a high water table located 50 feet or less below the ground surface. Liquefaction can cause damage to property with the ground below structures liquefying making the structure unstable causing sinking or other major structural damage. Evidence of liquefaction may be observed in "sand boils," which are expulsions of sand and water from below the surface due to increased pressure below the surface.

Liquefaction during an earthquake requires strong shaking and is not likely to occur in the city due to the relatively low occurrence of seismic activity in the area; however, the clean sandy layers paralleling the Sacramento River, Feather River, and Bear River have lower soil densities and high overall water table are potentially a higher risk area if major seismic activity were to occur. Areas of bedrock, including the Sutter Buttes have high density compacted soils and contain no liquefaction potential, although localized areas of valley fill alluvium can have moderate to high liquefaction potential.

Landslides: Landslides are downward and outward movements of slope forming materials which may be rock, soil, artificial fill, or combinations of such materials. The size of landslides varies from those containing less than a cubic yard of material to massive ones containing millions of cubic yards. Large landslides may move down slope for hundreds of yards or even several miles. A landslide may move rapidly or so slow that a change of position can be noted only over a period of weeks or years. A similar,

but much slower movement is called creep. The susceptibility of a given area to landslides depends on a great many variables. With the exception of the Sutter Buttes, Yuba City is located in a landslide-free zone due to the flat topography. The Sutter Buttes are considered to be in a low landslide hazard zone as shown in Bulletin 198 by the California Division of Mines and Geology.

Soil Erosion: Erosion is a two-step process by which soils and rocks are broken down or fragmented and then transported. The breakdown processes include mechanical abrasion, dissolution, and weathering. Erosion occurs naturally in most systems, but is often accelerated by human activities that disturb soil and vegetation. The rate at which erosion occurs is largely a function of climate, soil cover, slope conditions, and inherent soil properties such as texture and structure. Water is the dominant agent of erosion and is responsible for most of the breakdown processes as well as most of the transport processes that result in erosion. Wind may also be an important erosion agent. The rate of erosion depends on many variables including the soil or rock texture and composition, soil permeability, slope, extent of vegetative cover, and precipitation amounts and patterns. Erosion increases with increasing slope, increasing precipitation, and decreasing vegetative cover. Erosion can be extremely high in areas where vegetation has been removed by fire, construction, or cultivation. High rates of erosion may have several negative impacts including degradation and loss of agricultural land, degradation of streams and other water habitats, and rapid silting of reservoirs.

Subsidence: Subsidence is the sinking of a large area of ground surface in which the material is displaced vertically downward, with little or no horizontal movement. Subsidence is usually a direct result of groundwater, oil, or gas withdrawal. These activities are common in several areas of California, including parts of the Sacramento Valley and in large areas of the San Joaquin Valley. Subsidence is a greater hazard in areas where subsurface geology includes compressible layers of silt and clay. Subsidence due to groundwater withdrawal generally affects larger areas and presents a more serious hazard than does subsidence due to oil and gas withdrawal. In portions of the San Joaquin Valley, subsidence has exceeded 20 feet over the past 50 years. In the Sacramento Valley, preliminary studies suggest that much smaller levels of subsidence, up to two feet may have occurred. In most of the valley, elevation data are inadequate to determine positively if subsidence has occurred. However, groundwater withdrawal in the Sacramento Valley has been increasing and groundwater levels have declined in some areas. The amount of subsidence caused by groundwater withdrawal depends on several factors, including: (1) the extent of water level decline, (2) the thickness and depth of the waterbearing strata tapped, (3) the thickness and compressibility of silt-clay layers within the vertical sections where groundwater withdrawal is occurring, (4) the duration of maintained groundwater level decline, (5) the number and magnitude of water withdrawals in a given area, and (6) the general geology and geologic structure of the groundwater basin. The damaging effects of subsidence include gradient changes in roads, streams, canals, drains, sewers, and dikes. Many such systems are constructed with slight gradients and may be significantly damaged by even small elevation changes. Other effects include damage to water wells resulting from sediment compaction and increased likelihood of flooding of low-lying areas.

Expansive Soils: Expansive soils are prone to change in volume due to the presence of moisture. Soft clay soils have the tendency to increase in volume when moisture is present and shrink when it is dry (shrinkswell). Swelling soils contain high percentages of certain kinds of clay particles that are capable of absorbing large quantities of water, expanding up to 10 percent or more as the clay becomes wet. The force of expansion is capable of exerting pressure on foundations, slabs, and other confining structures.

Soils: The Natural Resources Conservation Service (NRCS, formerly the Soil Conservation Service) has mapped over 40 individual soil units in the county. The predominant soil series in the county are the Capay, Clear Lake, Conejo, Oswald, and Olashes soils, which account for over 60 percent of the total land area. The remaining soil units each account for smaller percentages the total land area. The Capay and Clear Lake soils are generally present in the western and southern parts of the county. The Conejo soils occur in the eastern part closer to the incorporated areas of the county. Oswald and Olashes soils are located in the central portion of the county extending north to south, with scattered areas along the southeastern edge of the county. Soil descriptions for the principal soil units in the county are provided below. These descriptions which were developed by the NRCS, are for native, undisturbed soils and are primarily associated with agricultural suitability. Soil characteristics may vary considerably from the mapped locations and descriptions due to development and other uses. Geotechnical studies are required to identify actual engineering properties of soils at specific locations to determine whether there are specific soil characteristics that could affect foundations, drainage, infrastructure, or other structural features.

4.6.2. Federal Regulatory Setting

Historic Sites Act of 1935: This Act became law on August 21, 1935 (49 Stat. 666; 16 U.S.C. 461-467) and has been amended eight times. This Act establishes as a national policy to preserve for public use historic sites, buildings and objects, including geologic formations.

National Earthquake Hazards Reduction Program: The National Earthquake Hazards Reduction Program (NEHRP), which was first authorized by Congress in 1977, coordinates the earthquake-related activities of the Federal Government. The goal of NEHRP is to mitigate earthquake losses in the United States through basic and directed research and implementation activities in the fields of earthquake science and engineering. Under NEHRP, FEMA is responsible for developing effective earthquake risk reduction tools and promoting their implementation, as well as supporting the development of disaster-resistant building codes and standards. FEMA's NEHRP activities are led by the FEMA Headquarters (HQ), Federal Insurance and Mitigation Administration, Risk Reduction Division, Building Science Branch, in strong partnership with other FEMA HQ Directorates, and in coordination with the FEMA Regions, the States, the earthquake consortia, and other public and private partners.

4.6.3. State Regulatory Setting

California Alquist-Priolo Earthquake Fault Zoning Act: The Alquist-Priolo Earthquake Fault Zoning Act (originally enacted in 1972 and renamed in 1994) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The statute prohibits the location of mot types of structures intended for human occupancy across the traces of active faults and regulates construction in the corridors along active faults.

California Seismic Hazards Mapping Act: The Seismic Hazards Mapping Act is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Earthquake Fault Zoning Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically induced landslides. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones.

Uniform Building Code: The California Code of Regulations (CCR) Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The California Building Code incorporates by reference the Uniform Building Code with necessary California amendments. The Uniform Building Code is a widely adopted model building code in the United States published by the International Conference of Building Officials. About one-third of the text within the California Building Code has been tailored for California earthquake conditions.

4.6.4. Impact Assessment/Environmental Consequences:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault?

According to the Yuba City General Plan, no active earthquake faults are known to exist in Sutter County, although active faults in the region could produce ground motion in Yuba City (Dyett & Bhatia, 2004). The closest known fault zone is the Bear Mountain Fault Zone, located approximately 20 miles northeast of Yuba City (California Geological Survey [CGS], 2015). Because the distance from the City to the closest known active fault zone is large, the potential for exposure of people or structures to substantial adverse effects from fault rupture is low.

No active earthquake faults are known to exist in Sutter County, although active faults in the region could produce motion in Yuba City. Potentially active faults do exist in the Sutter Buttes but those faults are considered small and have not exhibited activity in recent history.

ii. Strong seismic ground shaking?

In the event of a major regional earthquake, fault rupture or seismic ground shaking could potentially injure people and cause collapse or structural damage to existing and proposed structures. Ground shaking could potentially expose people and property to seismic-related hazards, including localized liquefaction and ground failure. All new structures are required to adhere to current California Building Code standards. These standards require adequate design, construction and maintenance of structures to prevent exposure of people and structures to major geologic hazards. General Plan Implementing Policies 9.2-I-1 through 9.2-I-8 and the building codes reduce the potential impacts to less than significant.

iii. Seismic-related ground failure, including liquefaction?

The proposed Project is not located within a liquefaction zone according to the California Department of Conservation's California Geologic Survey regulatory maps. Regardless, all new structures are required to adhere to current California Building Code standards. These standards require adequate design, construction and maintenance of structures to prevent exposure of people and structures to major geologic hazards.

iv. Landslides?

According to the Environmental Impact Report prepared for the General Plan, due to the flat topography, erosion, landslides, and mudflows are not considered to be a significant risk in the City limits or within the City's Sphere of Influence.

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

The proposed Project would be constructed on private property in an urban area that was previously developed with an industrial use. The proposed Project would result in the temporary loss of topsoil from construction, however, these soils would be backfilled during construction. Approximately 1.5 acres of ground will be disturbed during construction. As part of construction, the applicant would be required to follow Best Management Practices (BMP's) and provide erosion control measures to protect the topsoil during the construction process. Therefore, impacts are less than significant.

d) Be located on expansive soil, as defined in the California Building Code creating substantial risks to life or property?

The extreme southwest corner of the Yuba City Sphere of Influence is the only known area with expansive soils. The project area is not located within that area and therefore will not be impacted by the presence of expansive soils.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The City requires new development to connect to its sanitary sewer system, so new development will not utilize septic tanks or other alternative wastewater disposal systems.

4.7. Greenhouse gas emissions

Table 4-7: Greenhouse Gas Emissions				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

4.7.1. Federal Regulatory Setting

The United States Environmental Protection Agency (USEPA) Mandatory Reporting Rule (40 CFR Part 98), which became effective December 29, 2009, requires that all facilities that emit more than 25,000 metric tons CO2-equivalent per year beginning in 2010, report their emissions on an annual basis. On May 13, 2010, the USEPA issued a final rule that established an approach to addressing GHG emissions from stationary sources under the Clean Air Act (CAA) permitting programs. The final rule set thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration and title V Operating Permit programs are required for new and existing industrial facilities.

In addition, the Supreme Court decision in Massachusetts v. EPA (Supreme Court Case 05-1120) found that the USEPA has the authority to list GHGs as pollutants and to regulate emissions of greenhouse gases (GHG) under the CAA. On April 17, 2009, the USEPA found that CO2, CH4, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride may contribute to air pollution and may endanger public health and welfare. This finding may result in the USEPA regulating GHG emissions; however, to date the USEPA has not propose regulations based on this finding.

4.7.2. State & Local Regulatory Setting

The City's Resource Efficiency Plan as designed under the premise that the City, and the community it represent, is uniquely capable of addressing emissions associated with sources under the City's jurisdiction and that the City's emission reduction efforts should coordinate with the state strategies of reducing emissions in order to accomplish these reductions in an efficient and cost effective manner. The City developed this document with the following purposes in mind:

- Local Control: The Efficiency Plan allows the City to identify strategies to reduce resource consumption, costs, and GHG emissions in all economic sectors in a way that maintains local control over the issues and fits the character of the community. It also may position the City for funding to implement programs tied to climate goals.
- Energy and Resource Efficiency: The Efficiency Plan identifies opportunities for the City to increase energy efficiency and lower GHG emissions in a manner that is most feasible within the community. Reducing energy consumption through increasing the efficiency of energy

technologies, reducing energy use, and using renewable sources of energy are effective ways to reduce GHG emissions. Energy efficiency also provides opportunities for cost-savings.

- Improved Public Health: Many of the GHG reduction strategies identified in the Efficiency Plan also have local public health benefits. Benefits include local air quality improvements; creating a more active community through implementing resource-efficient living practices; and reducing health risks, such as heat stroke, that would be otherwise elevated by climate change impacts such as increased extreme heat days.

Demonstrating Consistency with State GHG Reduction Goals—A GHG reduction plan may be used as GHG mitigation in a General Plan to demonstrate that the City is aligned with State goals for reducing GHG emissions to a level considered less than cumulatively considerable.

4.7.3. Impact Assessment/Environmental Consequences:

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may hae a significant impact on the environment?

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, similar to a greenhouse. The accumulation of GHGs has been implicated as a driving force for Global Climate Change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the climate caused by natural fluctuations and the impact of human activities that alter the composition of the global atmosphere. Both natural processes and human activities emit GHGs. Global Climate Change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. Although there is disagreement as to the speed of global warming and the extent of the impacts attributable to human activities, the vast majority of the scientific community now agrees that there is a direct link between increased emission of GHGs and long-term global temperature. Potential global warming impacts in California may include, but are not limited to, loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. GHG impacts are considered to be exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA).

This project involves an amendment to the Central City Specific Plan and the General Plan, both of which are policy documents. As such the project does not directly involve any specific development. Future development on the properties involved in these amendments will be required to undergo project-specific review and approval, including addressing impacts resulting from additional GHG emissions. Because the City Zoning Regulations trigger discretionary review for all larger projects such as a hotel that could potentially create significant amounts of GHG emissions that project review process will determine any needed greenhouse gas mitigations measures.

Specifically addressing this proposal, the City's Resource Efficiency Plan addresses greenhouse gas concerns and provides a description of greenhouse gas reduction measures. A mitigation measure is

included that requires new development within this area to incorporate the relevant greenhouse gas reduction measures.

4.7.4. Greenhouse Mitigation Measure

1. All projects within the area of this general plan amendment and specific plan amendment shall comply with the GHG Reduction Measures provided in the adopted Yuba City Resource Efficiency Plan.

2. Prior to issuance of a building or grading permit obtain a Feather River Air Quality Management District (FRAQMD) approved Fugitive Dust Control Plan.

4.8. Hazards and Hazardous Materials

Table 4-8: Hazards and Hazardous Materials				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

4.8.1. Federal Regulatory Setting

U.S. Environmental Protection Agency (USEPA): The USEPA was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard setting and enforcement activities to ensure environmental protection. USEPA's mission is to protect human health and to safeguard the natural environment — air, water, and land — upon which life depends. USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for

researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, USEPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Federal Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act: The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes.

Comprehensive Environmental Response, Compensation, and Liability Act/Superfund Amendments and Reauthorization Act: The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law (U.S. Code Title 42, Chapter 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Contingency Plan (NCP). The NCP (Title 40, Code of Federal Regulation [CFR], Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the National Priorities List (NPL). CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Clean Water Act/SPCC Rule: The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972), was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. As part of the Clean Water Act, the U.S. EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR, Part 112 (Title 40 CFR, Part 112) which is often referred to as the "SPCC rule" because the regulations describe the requirements for facilities to prepare, amend and implement Spill Prevention, Control, and

Countermeasure (SPCC) Plans: A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the "Navigable Waters" of the United States. Other federal regulations overseen by the U.S. EPA relevant to hazardous materials and environmental contamination include Title 40, CFR, Chapter 1, Subchapter D – Water Programs and Subchapter I – Solid

Wastes. Title 40, CFR, Chapter 1, Subchapter D, Parts 116 and 117 designate hazardous substances under the Federal Water Pollution Control Act: Title 40, CFR, Part 116 sets forth a determination of the reportable quantity for each substance that is designated as hazardous. Title 40, CFR, Part 117 applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

The NFPA 70®: National Electrical Code® is adopted in all 50 states. Any electrical work associated with the Proposed Project is required to comply with the standards set forth in this code. Several federal regulations govern hazards as they are related to transportation issues. They include:

Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.
49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.

49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

4.8.2. State Regulatory Setting

California Environmental Protection Agency (CalEPA): The California Environmental Protection Agency (CalEPA) was created in 1991 by Governor's Executive Order. The six boards, departments, and office were placed under the CalEPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of State resources. The mission of CalEPA is to restore, protect, and enhance the environment to ensure public health, environmental quality, and economic vitality under Title 22 of the California Code of Regulations (CCR).

Department of Toxic Substances Control (DTSC): DTSC is a department of Cal/EPA and is the primary agency in California that regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Government Code Section 65962.5 (commonly referred to as the Cortese List) includes DTSC listed hazardous waste facilities and sites, DHS lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks and which have had a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.

Unified Program: The Unified Program (codified CCR Title 27, Division 1, Subdivision 4, Chapter 1, Sections 15100- 15620) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs:

- Hazardous Waste Generator (HWG) program and Hazardous Waste On-site Treatment activities;
- Aboveground Storage Tank (AST) program Spill Prevention Control and Countermeasure Plan requirements;
- Underground Storage Tank (UST) program;
- Hazardous Materials Release Response Plans and Inventory (HMRRP) program;
- California Accidental Release Prevention (CalARP) program;
- Hazardous Materials Management Plans and Hazardous Materials Inventory Statement (HMMP/HMIS) requirements.

The Secretary of CalEPA is directly responsible for coordinating the administration of the Unified Program. The Unified Program requires all counties to apply to the CalEPA Secretary for the certification

of a local unified program agency. Qualified cities are also permitted to apply for certification. The local Certified Unified Program Agency (CUPA) is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements in the county. Most CUPAs have been established as a function of a local environmental health or fire department.

Hazardous Waste Management Program: The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement, and Unified Program activities in accordance with California Health and Safety Code Section 25135 et seq. The main focus of HWMP is to ensure the safe storage, treatment, transportation, and disposal of hazardous wastes.

State Water Resources Control Board (SWRCB): The State Water Resources Control Board (SWRCB) was created by the California legislature in 1967. The mission of SWRCB is to ensure the highest reasonable quality for waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables SWRCB to provide comprehensive protection for California's waters.

California Department of Industrial Relations – Division of Occupational Safety and Health (Cal OSHA): In California, every employer has a legal obligation to provide and maintain a safe and healthful workplace for employees, according to the California Occupational Safety and Health Act of 1973 (per Title 8 of the CCR). The Division of Occupational Safety and Health (Cal/OSHA) program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. Cal/OSHA regulations are administered through Title 8 of the CCR. The regulations require all manufacturers or importers to assess the hazards of substances that they produce or import and all employers to provide information to their employees about the hazardous substances to which they may be exposed.

California Fire Code: The California Fire Code is Part 9 of the California Code of Regulations, Title 24, also referred to as the California Building Standards Code. The California Fire Code incorporates the Uniform Fire Code with necessary California amendments. This Code prescribes regulations consistent with nationally recognized good practice for the safeguarding to a reasonable degree of life and property from the hazards of fire explosion, and dangerous conditions arising from the storage, handling and use of hazardous materials and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises and provisions to assist emergency response personnel.

4.8.3. Local Regulatory Setting

Sutter County Airport Comprehensive Land Use Plan: The SCACLUP was adopted in April 1994 by the Sacramento Area Council of Governments (SACOG). SACOG is the designated Airport Land Use Commission (ALUC) for Sacramento, Sutter, Yolo and Yuba Counties under the provisions of the California Public Utilities Code, Chapter 4, Article 3.5, Section 21670.1 Airport Land Use Commission Law. The purpose of the ALUC law is to (1) protect public health, safety, and welfare through the adoption of land use standards that minimize the public's exposure to safety hazards and excessive levels of noise, and (2) Prevent the encroachment of incompatible land uses around public-use airports, thereby preserving the utilities of these airports into the future.66

4.8.4. Impact Assessment/Environmental Consequences:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section and, as a result, would create a significant hazard to the public or the environment?

A "Remedial Design/Remedial Action Plan (FS/RAP) Work Plan (Appendix B of this report) that was prepared for the City-owned 6.56 acres located at the southeast corner of Bridge Street and Shasta Street (AP# 52-324-23), of which this 1.5 acres is a part. The study determined that there is contamination in the soil. The site has undergone several different commercial uses since the 1890s until 2003 when it was razed. Past uses included rail lines and a train station, a match plant and lumber company, marine boat service, electric container storage, independent electric plant boiler, in-ground salt-water tank, coal piles and charcoal storage, etc. These past uses resulted in on-site soil contamination. The contaminants that were within established screening levels include:

- Total petroleum hydrocarbons (TPH) of several types - Primarily found in the oil pit area and the former underground storage tanks.
- Semi-volatile organic compounds (SVOCs) - Naphthalene and benzopyrene. Found around the former oil pit.
- Metals – antimony, arsenic and lead. Antimony was found around the former Feather River Mills building. Arsenic was most concentrated near the former marine boat service/recycling center area, but was found in lower concentrations over much of the property, but has also been reported regionally. Lead was reported in all samples but exceeded reportable levels near the former independent electric plant boiler. Lead also has been reported regionally.
- Organochlorine pesticides – Soil samples containing dieldrin were collected near the former Feather River Mills building.
- Asbestos – was found from directly beneath the wrapping of the crushed boiler buried in-situ.

The data collected for the study indicated that none of the contaminants had migrated to the underlying groundwater. Because the TPH concentrations were low they had not migrated into the groundwater at reportable levels. The metals typically do not migrate within the soil. Therefore the remedial actions will not involve groundwater but instead center on soil removal.

In the FS/RAP soil was identified as the only contaminated media and is the target for this remedial action for the protection of human health and to facilitate unrestricted land use. The remedial action in the FS/RAP is excavation of impacted soil with proper off-site disposal. Soil excavation will be performed to the initial lateral and vertical extents as presented in Figure 4. A volume of approximately 10,500 cubic yards of material, including contaminated soil, burn debris, ballast and other debris will be excavated, stored on-site for waste disposal characterization and then disposed at proper locations.

The result will be the 5.56-acre property that is available for unrestricted land uses from a soil contamination standpoint and to allow for the beneficial use of the groundwater beneath the site. Since the City has already committed to this process there should be no potential for adverse environmental impacts and no further mitigation measures are needed.

The description above is only a summary of the entire work plan and greater details is provided in the contaminates and processes that are involved can be viewed in the FS/RAP, which is attached as Appendix B of this report, and attached hereto.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The Sutter County Airport is located about one-half mile south of these properties. The airport is not utilized by jet aircraft and is mostly limited to single engine aircraft. It is not expected that the contamination on the properties of concern could have an impact on residents or workers within the vicinity of the airport. The contaminants are in the ground and are generally not transitory to other properties. The Remedial Design/Remedial Action Work Plan has concluded that the contaminants have not entered the groundwater, plus the flow of groundwater is to the northwest, away from the airport. There is some potential for wind transfer of some ground contaminants but not at that distance. Therefore there is no potential for the contaminants to cause any significant adverse impacts to the airport environs.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

There are no private airports or airfields located within the city limits of Yuba City. The closest private airstrip is the Vanderford Ranch Company Airport, located approximately six miles southwest of the City, well beyond any safety or hazardous zones. Therefore, there will be no impact from any private airstrips.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Yuba City Fire Department and Police Department, serve this area. Neither agency expressed concern over impacts on any emergency response plans.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

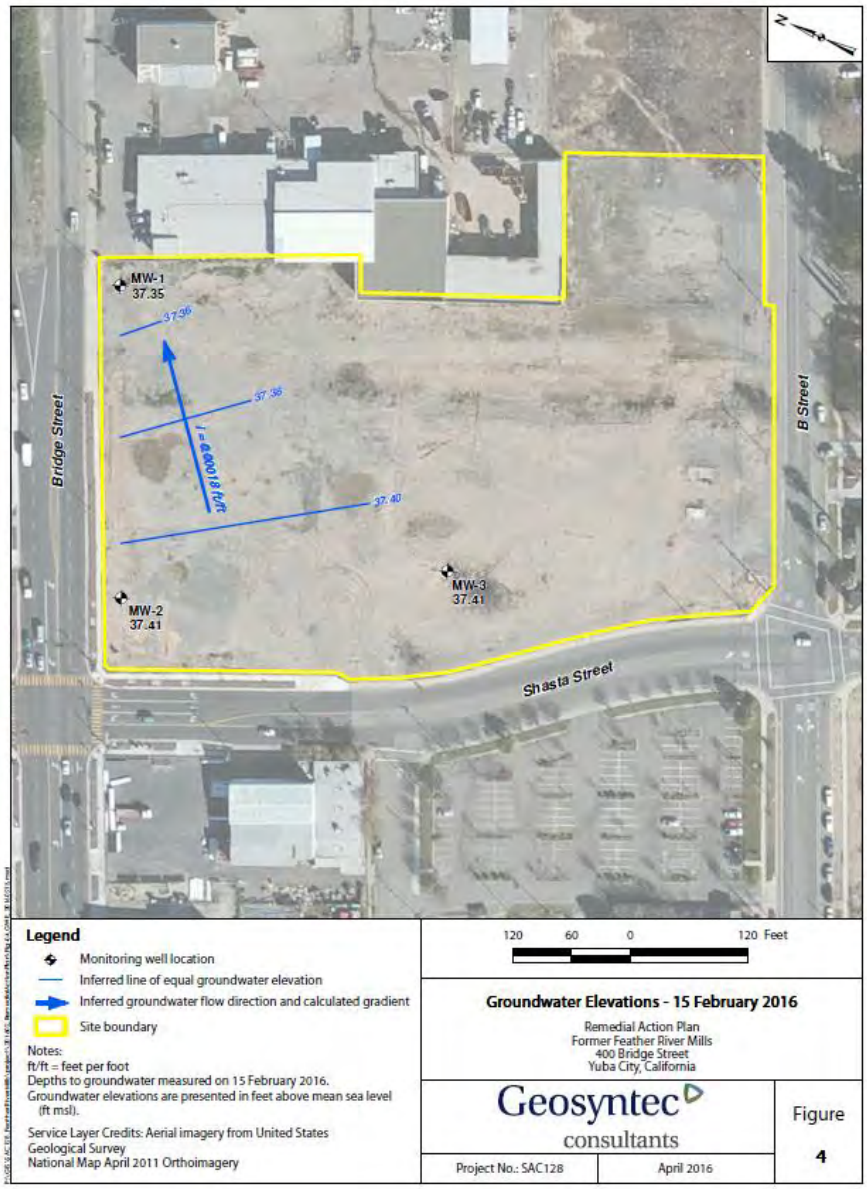
The project site is located in an urban area and there are no wildlands on the site or in the immediate area.

4.8.5. Hazardous Mitigation Measure

1. Comply with the standards as outlined in Attached Appendix B.

Figure 4: Groundwater Elevation

Figure 4 from the Remedial Action Plan.



4.9. Hydrology and Water Quality

Table 4-9: Hydrology and Water Quality				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?			X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course or a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?				X
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?				X

4.9.1. Federal Regulatory Setting

Clean Water Act: The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

Federal Emergency Management Agency (FEMA) Flood Zones: The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes. Flood hazard areas identified on the Flood

Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (unshaded).

4.9.2. State Regulatory Setting

State Water Resources Control Board: The State Water Resources Control Board (SWRCB) is the agency with jurisdiction over water quality issues in the State of California. The WRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code), which establishes the legal framework for water quality control activities by the SWRCB. The intent of the Porter- Cologne Act is to regulate factors which may affect the quality of waters of the State to attain the highest quality which is reasonable, considering a full range of demands and values. Much of the implementation of the SWRCB's responsibilities is delegated to its nine Regional Boards. The Project site is located within the Central Valley Regional Water Quality Control board.

Central Valley Regional Water Quality Control Board (CVRWQCB): administers the NPDES storm water-permitting program in the Central Valley region. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). Additionally, CVRWQCB is responsible for issuing Waste Discharge Requirements Orders under California Water Code Section 13260, Article 4, Waste Discharge Requirements.

State Department of Water Resources: California Water Code (Sections 10004 et seq.) requires that the State Department of Water Resources update the State Water Plan every five years. The 2013 update is the most current review and included (but is not limited to) the following conclusions:

- The total number of wells completed in California between 1977 and 2010 is approximately 432,469 and ranges from a high of 108,346 wells for the Sacramento River Hydrologic Region to a low of 4,069 wells for the North Lahontan Hydrologic Region.

- Based on the June 2014 California Statewide Groundwater Elevation Monitoring (CASGEM) basin prioritization for California's 515 groundwater basins, 43 basins are identified as high priority, 84 basins as medium priority, 27 basins as low priority, and the remaining 361 basins as very low priority.

- The 127 basins designated as high or medium priority account for 96 percent of the average annual statewide groundwater use and 88 percent of the 2010 population overlying the groundwater basin area.

- Depth-to-groundwater contours were developed for the unconfined aquifer system in the Central Valley. In the Sacramento Valley, the spring 2010 groundwater depths range from less than 10 feet below ground surface (bgs) to approximately 50 feet bgs, with local areas showing maximum depths of as much as 160 feet bgs.

- The most prevalent groundwater contaminants affecting California's community drinking water wells are arsenic, nitrate, gross alpha activity, and perchlorate.

California Government Code 65302 (d): A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, river and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any County-wide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the County or city for which the plan is prepared. Coordination shall include the discussion and evaluation of any water supply and demand information described in Section 65352.5, if that information has been submitted by the water agency to the city or County. The conservation element may also cover:

- The reclamation of land and waters.
- Prevention and control of the pollution of streams and other waters.
- Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
- Prevention, control, and correction of the erosion of soils, beaches, and shores.
- Protection of watersheds.
- The location, quantity and quality of the rock, sand and gravel resources.
- Flood control.

Sustainable Groundwater Management Act: On September 16, 2014 Governor Edmund G. Brown Jr. signed historic legislation to strengthen local management and monitoring of groundwater basins most critical to the state's water needs. The three bills, SB 1168 (Pavley) SB 1319 (Pavley) and AB 1739 (Dickinson) together makeup the Sustainable Groundwater Management Act. The Sustainable Groundwater Management Act comprehensively reforms groundwater management in California. The intent of the Act is to place management at the local level, although the state may intervene to manage basins when local agencies fail to take appropriate responsibility. The Act provides authority for local

agency management of groundwater, and requires creation of groundwater sustainability agencies and implementation of plans to achieve groundwater sustainability within basins of high and medium-priority.

4.9.3. Impact Assessment/Environmental Consequences:

a) Violate any water quality standards or waste discharge requirements?

The City's public water supplies come from the Feather River. The water is pumped from the river to the Water Treatment Plant located in northern Yuba City. The plant is currently utilizing a well in addition to surface water supplies due to recent drought conditions. The City provides water quality data to the public through consumer confidence reports. The most recent Consumer Confidence Report for 2015 shows that arsenic levels detected in the City's water range from non-detect to 2.0 ppb (parts per billion), well below the California Maximum Contaminant Level of 10 ppb, but above the California Public Health Goal of 0.004 ppb. The proposed Project does not violate any water quality standards or waste discharge requirements.

All storm water runoff associated with new development on this property is addressed through General Plan Implementing Policies 8.5-I-1 through 8.5-I-10 which require a wide range of developer and City actions involving coordination with the State Regional Water Quality Control Board, protecting waterways, and following Yuba City's adopted Best Management Practices for new construction.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

Very little, if any, groundwater will be utilized. The City primarily utilizes surface water in its system, which is only occasionally supplemented with groundwater. All new development will be connected to the City water system.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?

The new development that may result from this specific plan amendment and general plan amendment will drain into the existing Gilsizer drainage system, which is managed by the Gilsizer Drainage District. The system is designed to accommodate drainage from urban development for much of Yuba City. As noted above, all new construction must involve use of Best Management Practices.

d) Substantially alter the existing drainage patter of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

The new development that may result from this specific plan amendment and general plan amendment will drain into the existing Gilsizer drainage system, which is managed by the Gilsizer Drainage District. The system is designed to accommodate drainage from urban development for much of Yuba City. As noted above, all new construction must involve use of Best Management Practices.

e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The existing drainage system was designed and improved to accommodate storm water drainage from the entire area, including the properties involved in this legislative action. The drainage facilities within this area were designed with the assumption that these properties will be developed with impermeable surfaces. Therefore, the development of these properties will not contribute runoff water that would exceed the capacity of the existing storm-water drainage system or provide substantial additional sources of polluted water.

f) Otherwise substantially degrade water quality?

The proposed project will not substantially degrade water quality. As noted under item a) above, development of the site will be required to meet all local and state standards and will adhere to the General Plan Implementing Policies which includes adherence to City adopted Best Management Practices that ensures that water quality degradation does not occur.

g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place structures that would impede or redirect flood flows within a 100-year flood hazard area?

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

According to the Federal Emergency Management Agency, this portion of the City is outside of the 100-year flood plain. It is classified as such because of an extensive series of levees and dams along the Feather River, which protects the City from potential flooding. Local drainage improvements, principally in this case the Gilsizer Slough, provide storm water relief within the urban area.

j) Inundation by a seiche, tsunami, or mudflow?

A seiche is the periodic oscillation of a body of water resulting from seismic shaking. The City is not close to any big lakes so seiche is unlikely to happen in or near the City. A tsunami is a very large ocean wave caused by an underwater earthquake or volcanic eruption. The City is located inland from the Pacific Ocean, so people or structures in the City would not be exposed to inundation by tsunami. Mudflows are shallow water-saturated landslides that travel rapidly down slopes carrying rocks, brush, and other debris. Landslides are unlikely to happen due to the relatively flat topography within the project area. Thus, it is unlikely that the project site would be subject to inundation by a seiche, tsunami, or mudflow. Therefore, there is no impact.

4.10. Land Use and Planning

Table 4-10: Land Use and Planning				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

4.10.1. Environmental Setting/Affected Environment

The proposed Project is located in an urban area in the City limits and SOI. The proposed Project components would be constructed within private property surrounded by private residences, commercial and industrial uses, and public rights-of-way.

4.10.2. Federal Regulatory Setting

There are no federal or state regulations pertaining to land use and planning relevant to the proposed Project.

4.10.3. Local Regulatory Setting

Yuba City General Plan, Land Use Element: The Land Use Element of the General Plan establishes guidance for the ultimate pattern of growth in the City's Sphere of Influence. It provides direction regarding how lands are to be used, where growth will occur, the density/intensity and physical form of that growth, and key design considerations.

Central City Specific Plan: Establishes the vision and property development standards for the project area.

4.10.4. Impact Assessment/Environmental Consequences:

a) Physically divide an established community?

The project will not physically divide an established community. Instead, the development of the properties is considered infill within the urban core of the City.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Presently there is an inconsistency between the Yuba City General Plan, the Central City Specific Plan and the Zoning. This project is to amend the General Plan and Specific Plan to be consistent with each other and to accommodate new development that is proposed for the area. At the completion of this process, the General Plan, Central City Specific Plan and Zoning shall all be consistent with each other.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

There are currently no adopted habitat conservation plans or natural community conservations plans within the City limits or the City's Sphere of Influence.

4.11. Mineral Resources

Table 4-11: Mineral Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X

4.11.1. Federal Regulatory Setting

There are no federal regulations pertaining to mineral resources relevant to the proposed Project.

4.11.2. State Regulatory Setting

California Surface Mining and Reclamation Act of 1975: Enacted by the State Legislature in 1975, the Surface Mining and Reclamation Act (SMARA), Public Resources Code Section 2710 et seq., insures a continuing supply of mineral resources for the State. The act also creates surface mining and reclamation policy to assure that:

- Production and conservation of minerals is encouraged;
- Environmental effects are prevented or minimized;
- Consideration is given to recreational activities, watersheds, wildlife, range and forage, and aesthetic enjoyment;
- Mined lands are reclaimed to a useable condition once mining is completed; and
- Hazards to public safety both now and in the future are eliminated.

Areas in the State (city or county) that do not have their own regulations for mining and reclamation activities rely on the Department of Conservation, Division of Mines and Geology, Office of Mine Reclamation to enforce this law. SMARA contains provisions for the inventory of mineral lands in the State of California.

The State Geologist, in accordance with the State Board's Guidelines for Classification and Designation of Mineral Lands, must classify Mineral Resource Zones (MRZ) as designated below:

- MRZ-1. Areas where available geologic information indicates that there is minimal likelihood of significant resources.
- MRZ-2. Areas underlain by mineral deposits where geologic data indicate that significant mineral deposits are located or likely to be located.
- MRZ-3. Areas where mineral deposits are found but the significance of the deposits cannot be evaluated without further exploration.

- MRZ-4. Areas where there is not enough information to assess the zone. These are areas that have unknown mineral resource significance.

SMARA only covers mining activities that impact or disturb the surface of the land. Deep mining (tunnel) or petroleum and gas production is not covered by SMARA.

4.11.3. Impact Assessment/Environmental Consequences:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

The property involved in this legislative action contains no known mineral resources and there is little opportunity for mineral resource extraction. The Yuba City General Plan does not recognize any mineral resource zone within the City's boundary, and no mineral extraction facilities currently exist in the project area or City vicinity. Additionally, the City is mostly occupied by residential and commercial land uses, which generally are considered incompatible with mineral extraction facilities.

4.12. Noise

Table 4-12: Noise				
Would the project result in:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

4.12.1. Environmental Setting/Affected Environment for Noise

Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-

range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts.

4.12.2. Environmental Setting/Affected Environment for Groundbourne Vibration

Vibration is the periodic oscillation of a medium or object. Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground borne vibrations may be described by amplitude and frequency. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS), as in RMS vibration velocity. The PPV and RMS (VbA) vibration velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal and is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings.

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. As it takes some time for the human body to respond to vibration signals, it is more prudent to use vibration velocity when measuring human response. The typical background vibration velocity level in residential areas is approximately 50 VdB. Groundborne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels.

Typical outdoor sources of perceptible ground borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. Construction vibrations can be transient, random, or continuous. The approximate threshold of vibration perception is 65 VdB, while 85 VdB is the vibration acceptable only if there are an infrequent number of events per day.

4.12.3. Federal Regulatory Setting

Federal Vibration Policies: The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 90 VdB without experiencing structural damage.97 The FTA has identified the human annoyance response to vibration levels as 75 VdB.

4.12.4. State Regulatory Setting

California Noise Control Act: The California Noise Control Act was enacted in 1973 (Health and Safety Code §46010 et seq.), and states that the Office of Noise Control (ONC) should provide assistance to local communities in developing local noise control programs. It also indicates that ONC staff would work with the Department of Resources Office of Planning and Research (OPR) to provide guidance for the preparation of the required noise elements in city and county General Plans, pursuant to Government Code § 65302(f). California Government Code § 65302(f) requires city and county general plans to include a noise element. The purpose of a noise element is to guide future development to enhance future land use compatibility.

Title 24 – Sound Transmission Control: Title 24 of the California Code of Regulations (CCR) codifies Sound Transmission Control requirements, which establishes uniform minimum noise insulation performance standards for new hotels, motels, dormitories, apartment houses, and dwellings other than detached single-family dwellings. Specifically, Title 24 states that interior noise levels attributable to exterior sources shall not exceed 45 dBA CNEL in any habitable room of new dwellings Title 24, Part 2 requires an acoustical report that demonstrates the achievements of the required 45 dBA CNEL. Dwellings are designed so that interior noise levels will meet this standard for at least ten years from the time of building permit application.

4.12.5. Local Regulatory Setting

The City of Yuba City General Plan presents the vision for the future of Yuba City, and outlines several guiding policies and policies relevant to noise.

The following goals and policies from the City of Yuba City General Plan[1] are relevant to noise.

Guiding Policies

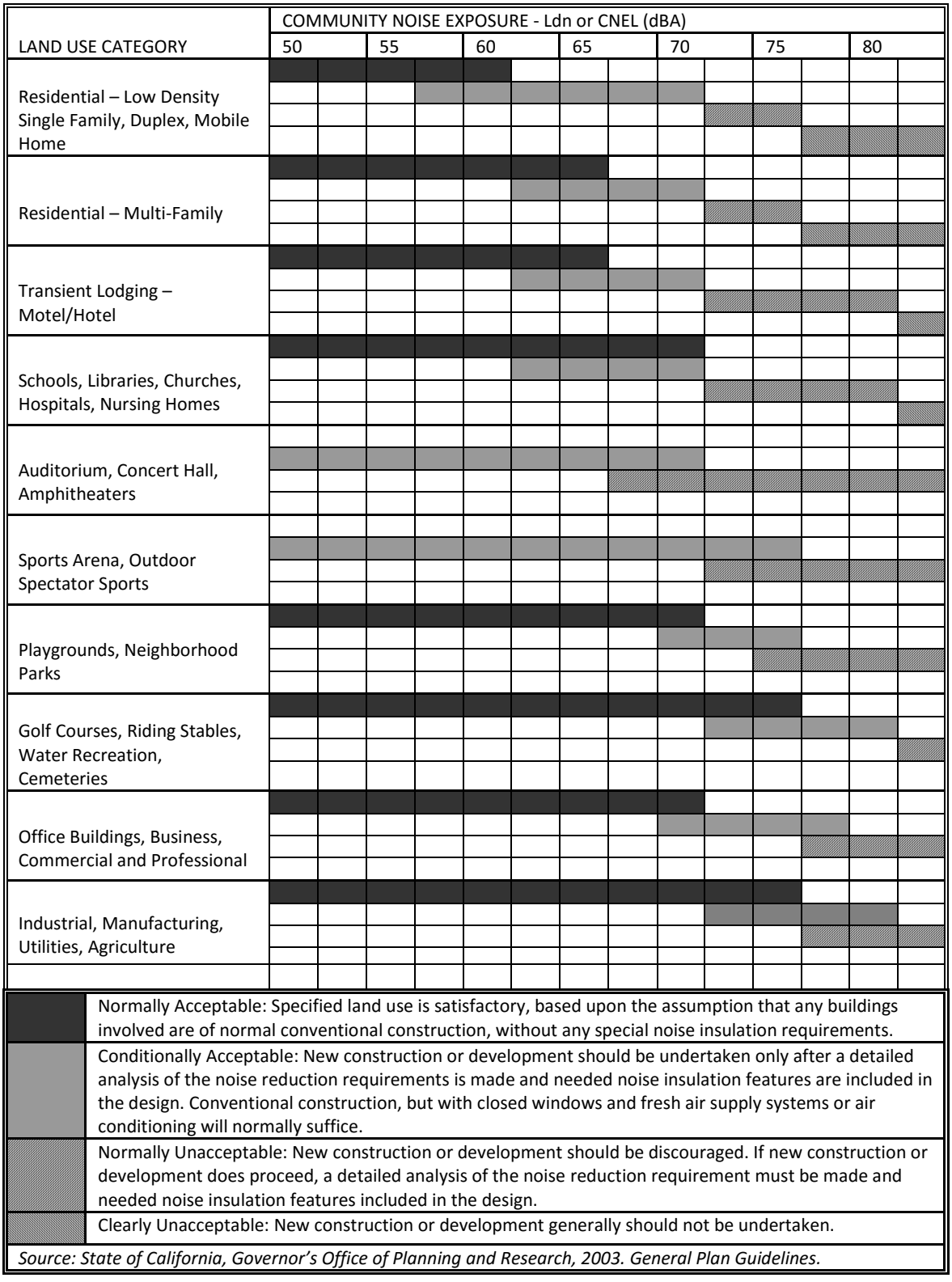
- 9.1-G-1 Strive to achieve an acceptable noise environment for the present and future residences of Yuba City.
- 9.1-G-2 Incorporate noise considerations into land use planning decisions, and guide the location and design of transportation facilities to minimize the effects of noise on adjacent land uses.
- Implementing Policies
- 9.1-I-1 Require a noise study and mitigation for all projects that have noise exposure greater than “normally acceptable” levels. Noise mitigation measures include, but are not limited to, the following actions:
- Screen and control noise sources, such as parking and loading facilities, outdoor activities and mechanical equipment,
- Increase setbacks for noise sources from adjacent dwellings,
- Retain fences, walls, and landscaping that serve as noise buffers,
- Use soundproofing materials and double-glazed windows, and
- Control hours of operation, including deliveries and trash pickup, to minimize noise impacts.
- 9.1-I-3 In making a determination of impact under the California Environmental Quality Act (CEQA), consider an increase of four or more dBA to be "significant" if the resulting noise level would exceed that described as normally acceptable for the affected land use in Figure 5.
- 9.1-I-4 Protect especially sensitive uses, including schools, hospitals, and senior care facilities, from excessive noise, by enforcing “normally acceptable” noise level standards for these uses.

1 City of Yuba, 2004. *City of Yuba General Plan.* April 8, 2004.

- 9.1-I-5 Discourage the use of sound walls. As a last resort, construct sound walls along highways and arterials when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility.
- 9.1-I-6 Require new noise sources to use best available control technology (BACT) to minimize noise from all sources.
- 9.1-I-7 Minimize vehicular and stationary noise sources and noise emanating from temporary activities, such as construction.

City of Yuba City Municipal Code: Title 4, Chapter 17, Section 4-17.10(e) of the Yuba City Municipal Code prohibits the operation of noise-generating construction equipment before 6:00 a.m. or after 9:00 p.m. daily, except Sunday and State or federal holidays when the prohibited time is before 8:00 a.m. and after 9:00 p.m.

Figure 5: Noise Exposure



4.12.6. Impact Assessment/Environmental Consequences:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Long–term operation of the proposed Project would not generate a substantial increase in ambient noise levels. Potential noise sources resulting from implementation of the proposed Project include noise associated with proposed hotel would be visitors and periodic vehicular trips for site maintenance. Visitors, maintenance, and operation activities are not expected to substantially increase ambient noise levels in the area above existing levels, especially when considering existing development and streets adjacent to the site.

Construction of the proposed Project would involve temporary noise sources and is anticipated to last approximately one year. Typical construction equipment would include backhoe, excavators, loader, crane, grader, dump trucks, compactors, concrete trucks, water truck, tractors and miscellaneous equipment. Construction-related short-term, temporary noise levels will be higher than existing ambient noise levels in the Project area today, but will no longer occur after construction is completed.

During construction, which is planned to occur during day-light hours, Monday through Friday, noise from construction activities would contribute to the noise environment in the immediate Project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in Table 3, ranging from 79 to 91 dBA at a distance of 50 feet, without feasible noise control (e.g., mufflers) and ranging from 75 to 80 dBA at a distance of 50 feet, with feasible noise control.

Table 3: Noise Levels of Typical Construction

Type of Equipment (1)	dBA at 50 ft.	
	Without Feasible Noise Control (2)	With Feasible Noise Control
Dozer or Tractor	80	75
Excavator	88	80
Scraper	88	80
Front End Loader	79	75
Backhoe	85	75
Grader	85	75
Truck	91	75

(1)US Environmental Protection Agency. "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances." Figure IV.H-4. 1971.
(2)Feasible noise control includes the use of intake mufflers, exhaust mufflers and engine shrouds operating in accordance with manufacturers specifications

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through

the ground and diminish in strength with distance. Table 4 describes the typical construction equipment vibration levels.

Table 4: Typical Construction Levels	
Equipment (1)	VdB at 25 ft2
Small Bulldozer	58
Vibratory Roller	94
Jackhammer	79
Loaded Trucks	86
(1) US Environmental Protection Agency. "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances." Figure IV.H-4. 1971.	

Vibration levels of construction equipment in Table 4 are at a distance of 25 feet from the equipment. As noted above, construction activities are limited to certain hours of the day. Infrequent construction-related vibrations would be short-term and temporary, and operation of heavy-duty construction equipment would be intermittent throughout the day during construction. Therefore, with the implementation of mitigation measure Noise-1 and the approximate reduction of 6 VdB for every doubling of distance from the source, the temporary impact to residences and school in the vicinity of the proposed Project would be less than significant.

c) c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) d) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Increased traffic was anticipated in the Noise Element of the Yuba City General Plan. The Noise Element study was completed with the assumption of build-out of this area by light industrial type uses, which are often as noisy as or noisier than the commercial uses.

The property will likely be developed with a hotel, which typically is not considered to be large noise generator. There is no nightclub/live music being considered as part of the hotel. Therefore there is not expected to be a significant increase in noise levels.

Upon completion of construction activities, the proposed Project operation would not generate a substantial increase in ambient noise levels. Potential noise sources resulting from implementation of the proposed Project include noise associated with vehicular trips by employees and hotel visitors, however day to day operation activities are not expected to substantially increase ambient noise levels in the area above existing levels, especially when considering existing urban development and Bridge St., a major east-west regional serving corridor. The impact would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The Sutter County Airport is located about half a mile south of this property. The airport is not utilized by jet aircraft and is mostly limited to use by single engine aircraft. According to the Airport Land Use Plan the noise contours generated by the airport do not adversely affect these properties. This condition is not expected to change so there should be no potential for significant impacts on this property from airport generated noise.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

There are no private airports or airfields located within the City limits of Yuba City. The closest private airstrip is the Vanderford Ranch Company Airport, located approximately six miles southwest of the City, well beyond any safety or hazardous zones. Therefore, there will be no significant impacts from any private airstrips.

4.13. Population and Housing

Table 4-13: Population and Housing				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

4.13.1. Environmental Setting/Affected Environment

The proposed Project is located in an urbanized area in the City. The project location is surrounded by light industrial, office, commercial, and private residences. It is bordered to the north by Bridge St., a regional serving east-west transportation corridor.

4.13.2. Federal Regulatory Setting

There are no federal regulations, plans, programs or guidelines associated with population or housing that are applicable to the proposed Project.

4.13.3. State Regulatory Setting

California law (Government Code Section 65580, et seq.) requires cities and counties to include a housing element as a part of their general plan to address housing conditions and needs in the community. Housing elements are prepared approximately every five years (eight following implementation of Senate Bill [SB] 375), following timetables set forth in the law. The housing element must identify and analyze existing and projected housing needs and "make adequate provision for the existing and projected needs of all economic segments of the community," among other requirements. The City adopted its current Housing Element in 2013.

4.13.4. Regional Regulatory Setting

State law mandates that all cities and counties offer a portion of housing to accommodate the increasing needs of regional population growth. The statewide housing demand is determined by the California Department of Housing and Community Development (HCD), while local governments and councils of governments decide and manage their specific regional and jurisdictional housing needs and develop a regional housing needs assessment (RHNA).

In the greater Sacramento region, which includes the City of Yuba City, SACOG has the responsibility of developing and approving an RHNA and a Regional Housing Needs Plan (RHNP) every eight years (Government Code, Section 65580 et seq.). This document has a central role of distributing the allocation of housing for every county and city in the SACOG region. Housing needs are assessed for very low income, low income, moderate income, and above moderate households.[2]

As described above, SACOG is the association of local governments that includes Yuba City, along with other jurisdictions comprising the six counties in the greater Sacramento region. In addition to preparing the Metropolitan Transportation Plan and Sustainable Communities Strategy for the region, SACOG approves the distribution of affordable housing in the region through its RHNP. SACOG also assists in planning for transit, bicycle networks, clean air and serves as the Airport Land Use Commission for the region.[3]

4.13.5. Impact Assessment/Environmental Consequences:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

There are no residential properties involved with this project, either existing or proposed. Instead, it is anticipated that new businesses will locate at this property. These new businesses will not, however, induce new growth, as they will be infill projects within the urban area. All infrastructure already exists in the vicinity, including sewer, water, drainage and roads. Moreover, they will provide additional employment opportunities for local residents.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The proposed Project is located on vacant land on private property and will not result in the displacement of any housing or population. There will be no impact.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The proposed Project is located on vacant land on private property and will not result in the displacement of any housing or population. There will be no impact.

2 Sacramento Area Council of Governments. 2012. Regional Needs Housing Plan 2013-2021. Adopted September 20, 2012. Page 4. Table 1.

3 Sacramento Area Council of Governments. 2017. About SACOG. SACOG website. Available: http://www.sacog.org/about/. Accessed July 25, 2017.

4.14. Public Services

Table 4-14: Public Services				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?			X	
ii) Police protection?			X	
iii) Schools?				X
iv) Parks?				X
v) Other public facilities?			X	

4.14.1. Environmental Setting/Affected Environment

Law enforcement for the proposed Project area is provided by the Yuba City Police Department. Fire protection is provided by the Yuba City Fire Department. Schools in the vicinity of the proposed Project are operated through the Yuba City Unified School District. Parks and other urban facilities are provided by Yuba City.

4.14.2. Federal Regulatory Setting

National Fire Protection Association: The National Fire Protection Association (NFPA) is an international nonprofit organization that provides consensus codes and standards, research, training, and education on fire prevention and public safety. The NFPA develops, publishes, and disseminates more than 300 such codes and standards intended to minimize the possibility and effects of fire and other risks. The NFPA publishes the NFPA 1, Uniform Fire Code, which provides requirements to establish a reasonable level of fire safety and property protection in new and existing buildings.

4.14.3. State Regulatory Setting

California Fire Code and Building Code: The 2013 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to fire fighters and emergency responders during emergency operations. The provision of the Fire Code includes regulations regarding fire-resistance rated construction, fire protection systems such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, fire safety during construction and demolition, and wildland urban interface areas.

California Health and Safety Code (HSC)
State fire regulations are set forth in Sections 13000 et seq. of the California HSC, which includes regulations for building standards (as set forth in the CBC), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, childcare facility standards, and fire suppression training.

California Master Mutual Aid Agreement
The California Master Mutual Aid Agreement is a framework agreement between the State of California and local governments for aid and assistance by the interchange of services, facilities, and equipment, including but not limited to fire, police, medical and health, communication, and transportation services and facilities to cope with the problems of emergency rescue, relief, evacuation, rehabilitation, and reconstruction.

4.14.4. Impact Assessment/Environmental Consequences:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire Protection: The Yuba City Fire Department would provide fire protection services to the site. At the time of development, the Fire Department will review the project for compliance with local and state guidelines.

Police Protection: The Yuba City Police Department will provide police services to the site. The project would pay all applicable fees to give the Police Department its fair share of funding to support the appropriate law enforcement capabilities.

Schools: The nearest school to the proposed Project site is Bridge Street Elementary. The proposed Project itself would not include construction of any residential structures. Regardless, the Project will be required to pay its proportional faire-share of development impact fees which would help off-set any population growth as a result of this project.

Parks: The nearest parks, Gauche Aquatic Park is located 500 feet south of the proposed Project, respectively. As the proposed Project would not impact any existing recreational activities or induce greater population growth, there would be no need for additional park or recreational services or facilities as a result of proposed Project implementation. There would be no impact.

Other Public Facilities: No power stations, water treatment plants or other public facilities are located within the immediate vicinity of the proposed Project. The development of the proposed Project would require nominal additional water treatment and power resource needs. Any impacts to public services and facilities, such as the City of Yuba City Water Treatment Facility, would be less than significant.

4.15. Recreation

Table 4-15: Recreation				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

4.15.1. Environmental Setting/Affected Environment

Yuba City has 22 City-owned parks and recreational areas, managed by the City's Parks and Recreation Department. The City currently has 4 community parks, 15 neighborhood parks, and 3 passive or mini parks.

4.15.2. Federal Regulatory Setting

There are no federal regulations regarding parks and open space that are applicable to the proposed Project.

4.15.3. State Regulatory Setting

State Public Park Preservation Act: The primary instrument for protecting and preserving parkland is the Public Park Preservation Act of 1971. Under the PRC section 5400-5409, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

Quimby Act: California Government Code Section 66477, referred to as the Quimby Act, permits local jurisdictions to require the dedication of land and/or the payment of in-lieu fees solely for park and recreation purposes. The required dedication and/or fee are based upon the residential density and housing type, land cost, and other factors. Land dedicated and fees collected pursuant to the Quimby Act may be used for developing new, or rehabilitating existing park or recreational facilities.

4.15.4. Local Regulatory Setting

The Yuba City General Plan and the City's Parks Master Plan provide a goal of providing 5 acres of public parkland per 1,000 residents, while it also requires 1 acre of Neighborhood Park for every 1,000

residents. The City's development impact fee program collects fees for new development which is allocated for the acquisition and development of open space in the City.

4.15.5. Impact Assessment/Environmental Consequences:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed Project does not include recreational facilities. As there is no population growth associated with the proposed Project, construction or expansion of nearby recreational facilities will not be necessary. There will be no impact.

4.16. Transportation/Traffic

Table 4-16: Transportation Recreation				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?		X		
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?			X	
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				

4.16.1. Federal Regulatory Setting

Federal Highway Administration: FHWA is the agency of the U.S. Department of Transportation (DOT) responsible for the Federally-funded roadway system, including the interstate highway network and portions of the primary State highway network. FHWA funding is provided through the Safe, Accountable, Flexible, Efficiency Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU can be used to fund local transportation improvement projects, such as projects to improve the efficiency of existing roadways, traffic signal coordination, bikeways, and transit system upgrades.

Several federal regulations govern transportation issues. They include:

- Title 49, CFR, Sections 171-177 (49 CFR 171-177), governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

- Title 49 CFR 350-399, and Appendices A-G, Federal Motor Carrier Safety Regulations, address safety considerations for the transport of goods, materials, and substances over public highways.

- Title 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

- Federal Aviation Administration: The Federal Aviation Administration (FAA) regulates aviation at regional, public, and private airports. The FAA regulates objects affecting navigable airspace.

4.16.2. State Regulatory Setting

State of California Transportation Department Transportation Concept Reports: Each District of the State of California Transportation Department (Caltrans) prepares a Transportation Concept Report (TCR) for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of the TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period, otherwise known as the "route concept" or beyond 20 years, for what is known as the "ultimate concept".

4.16.3. Impact Assessment/Environmental Consequences:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The project specific traffic impact study (TIS) study was prepared for this project (a copy is attached to this report as Appendix A and is made a part of it). A summary of the results of that study is provided below:

A Traffic Impact Study for the Feather River Mills Hotel (1.5 acres), located at the southeast corner of Shasta Street and B Street, was prepared by KDAnderson & Associates, Inc. A summary of the study is as follows:

Traffic impacts typically occur at intersections, as compared to through road sections. Therefore the study included seven nearby intersections:

- Bridge Street/Plumas Street
- Bridge Street/Shasta Street
- Bridge Street/Boyd Street
- Bridge Street/EB on-ramp
- B Street/Plumas Street
- B Street/Shasta Street
- B Street/Boyd Street

Existing Conditions: Most study area intersections operate at Levels of Service (LOS) that satisfy the City Standard of LOS D (the lowest (worst) acceptable level per City policy for these intersections). However, the Bridge Street/Boyd Street intersection operates at LOS E (below acceptable level) in the a.m. peak hour, and the Bridge Street/Bridge Street eastbound on-ramp intersections operate at LOS F in the evening peak hour. These locations will be addressed by the City's pending Fifth Street Bridge Replacement Project.

Trip Generation: The proposed hotel is projected to generate a total of 882 new daily one-way vehicle trips in the a.m. peak hour and 65 trips in the p.m. peak hour.

Project Impacts: Development of the Feather River Mills Hotel will not significantly impact most intersections. The project will increase traffic through the Bridge Street/Boyd Street and Bridge Street/Bridge Street - eastbound on-ramp intersections. In short term the intersections will continue to operate at Levels of Service that exceed the City's LOS D minimum. While the increase in delays associated with the project would normally be considered significant at the eastbound on-ramp intersection, because the issue will be resolved with the City's pending Fifth Street Bridge Replacement Project, no mitigation is required.

Cumulative Impacts: No Project: Under long term conditions the background traffic volumes on Bridge Street and B Street will increase dramatically. Even with the Fifth Street Bridge Replacement Project, the signalized intersection at Plumas Street and Shasta Street will operate at LOS F. Similarly, the all-way stop controlled intersections at B Street at Plumas Street and Shasta Street intersection will operate at LOS F. The B Street/Boyd Street intersection will also operate LOS F. While no additional feasible improvements have been identified for the Bridge Street corridor, traffic signals and auxiliary lanes will be needed on B Street.

Cumulative Plus Project Impacts: The addition of project traffic will exacerbate the deficient background conditions that are expected if the site had been developed with industrial uses. Because LOS F is forecast with and without the project, the significance of cumulative impacts is determined based on the worsening of the delay at each location.

The project will increase delays at the intersections on Bridge Street and B Street intersections but as the increase in the length of the delays is less than the 5 second increment allowed under City adopted guidelines, the project impact is not significant except at of the intersections. The exception is the B Street/Boyd Street intersection for which the delay would be increased over the 5-second threshold and is considered significant. The impact must be mitigated by contributing its fair share to the cost of improvements to the intersection, which includes auxiliary left turn lanes and a traffic signal. The result would be the intersection would be improved to an acceptable level of LOS D.

Since the hotel project will contribute .5% of the new traffic, the project will be required to contribute .5% of the cost of the improvements. A mitigation is included below that requires this payment, once the City estimates the cost of improving the intersection.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

The traffic study included local intersections. The study determined that, while traffic would increase at all seven studied intersections, only one, B Street and Boyd Street, would be significantly impacted. A mitigation measure is provided below that requires any project on the property to pay a fair share of signalizing that intersection.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

The nearest airport, Sutter County Airport, is approximately 0.5 miles southeast of the proposed Project. The proposed Project will not cause an increase in air traffic levels or cause a change in air traffic location. There will be no impact.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed Project does not include any components that would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). As such, no impacts will occur as a result of proposed Project implementation.

e) Result in inadequate emergency access?

The site is bordered by improved roadways, which will remain open during construction and the operation of the proposed hotel. Thus, no impacts will occur as a result of this project.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The proposed Project will be constructed in an urban area with improved roadways, although Bridge Street immediately to the north will experience a transformation from the replacement of the existing 5th Street Bridge. However, the proposed Project would not permanently alter any roadway or construct new roads. Due to the nature of the proposed Project, implementation would not conflict with any transportation policies, plans, or programs for public transit, bicycle, or pedestrian facilities specifically serving these areas. There will be no impact.

4.16.4. Traffic Mitigation Measure

1. Prior to issuing any building permits for a hotel on this site, the applicant shall deposit with the City 0.5 percent of the cost of improvements to the B Street and Boyd Street intersection. The improvements include auxiliary left turn lanes and a traffic signal.

4.17. Tribal Cultural Resources

Table 4-17: Tribal Cult				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause of substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is :				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				X
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

4.17.1. Federal Regulatory Setting

Refer to Section 4-5, Cultural Resources, of this document for a discussion of Federal Regulatory Setting.

4.17.2. State Regulatory Setting

Refer to Section 4-5, Cultural Resources, of this document for a discussion of Federal Regulatory Setting.

4.17.3. Impact Assessment/Environmental Consequences:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)

Refer to response 4.5. The site is currently vacant, however it previously housed the Feather River Mills Company. Thus, there are no resources that are eligible for the California Register of Historical Resources or other local registers, and thus do not meet the definition of a tribal cultural resources.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

As noted above, the City of Yuba City solicited consultation with potentially affected Native American tribes (as applicable) regarding the proposed project in accordance with AB 52.

Given the level of previous disturbance within the project site, it is not expected that any tribal cultural resources remain within the shallow soils on-site due to the placement of fill material. However, construction of the proposed project would require grading and excavation activities and may have the potential to encounter native soils, which may contain undiscovered tribal cultural resources. In the unlikely event resources are discovered during ground disturbing activities, compliance with Mitigation Measures outlined in Section 4.5 of this document, which provides instructions in the event a material of potential cultural significance is uncovered, would reduce potential impacts to a less than significant level.

4.17.4. Tribal Cultural Mitigation

1. Refer to Mitigation Measures outlined in Section 4.5 of this document.

4.18. Utilities and Service Systems

Table 4-18: Utilities and Service Systems				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projected demand in addition to the existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

4.18.1. Environmental Setting/Affected Environment

Wastewater:

Yuba City owns, operates, and maintains the wastewater collection, treatment, and disposal system that provides sewer service to approximately 50,000 residents and businesses. The remainder of the residents and businesses in the Yuba City Sphere of Influence (SOI) are currently serviced by private septic systems. In the early 1970s, the City's original sewage treatment plant was abandoned and the current Wastewater Treatment Facility (WWTF) was constructed.

Conveyance capacity needed for wastewater flows from other parts of Yuba City are separate from the interceptor that would serve the BSMP site. In unincorporated areas of the Sphere of Influence (SOI), with limited exceptions, municipal sewage treatment has not been available to county residents. The project site is currently not served by the Yuba City sewer system. Wastewater generated by existing residences on the project site is disposed of through on-site private septic systems. Connection to the Yuba City sewer system is required for new development in the SOI, including the proposed plan.

Water:
The water supply source for the City is surface water from the Feather River with use of a backup groundwater well. The City of Yuba City is a public water agency with approximately 18,045 connections. City policy only allows areas annexed into the city limits to be served by the surface water system. The site may be served by to the City's water system.

Reuse and Recycling:
Solid waste generated in the Yuba City is collected by Recology Yuba-Sutter. Recology offers residential, commercial, industrial, electronic, and hazardous waste collection, processing, recycling and disposal, as well as construction and demolition waste processing, diversion, and transfer to a disposal facility. The City's municipal solid waste is delivered to the Ostrom Road Landfill; a State-permitted solid waste facility that provides a full range of transfer and diversion services. This landfill has a remaining capacity of 39,223,000 cubic yards (90 percent remaining capacity reported in 2007).[4]

4.18.2. Federal Regulatory Setting

National Pollutant Discharge Elimination System: Discharge of treated wastewater to surface water(s) of the U.S., including wetlands, requires an NPDES permit. In California, the RWQCB administers the issuance of these federal permits. Obtaining a NPDES permit requires preparation of detailed information, including characterization of wastewater sources, treatment processes, and effluent quality. Any future development that exceeds one acre in size would be required to comply with NPDES criteria, including preparation of a Stormwater Pollution Prevention Plan (SWPPP) and the inclusion of BMPs to control erosion and offsite transport of soils.

4.18.3. State Regulatory Setting

State Water Resources Control Board (SWRCB): Waste Discharge Requirements Program. State regulations pertaining to the treatment, storage, processing, or disposal of solid waste are found in Title 27, CCR, Section 20005 et seq. (hereafter Title 27). In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to Section 20230 of Title 27. Several programs are administered under the WDR Program, including the Sanitary Sewer Order and recycled water programs.

Department of Resources Recycling and Recovery (CalRecycle): The Department of Resources Recycling and Recovery (CalRecycle) is the State agency designated to oversee, manage, and track the 76 million tons of waste generated each year in California. CalRecycle develops laws and regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. The board works jointly with local government to implement regulations and fund programs.

The Integrated Waste Management Act of 1989 (PRC 40050 et seq. or Assembly Bill (AB 939, codified in PRC 40000), administered by CalRecycle, requires all local and county governments to adopt a Source

4 CalRecycle, 2017. Available: http://www.calrecycle.ca.gov/SWFacilities/Directory/58-AA-0011/Detail/. Accessed August 15, 2017.

Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

Regional Water Quality Control Boards: The primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (State Board) and nine Regional Water Quality Control Boards. The State Board sets statewide policy for the implementation of state and federal laws and regulations. The Regional Boards adopt and implement Water Quality Control Plans (Basin Plans) which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities.

National Pollutant Discharge Elimination System (NPDES) Permit: As authorized by the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into water of the United States. In California, it is the responsibility of Regional Water Quality Control Boards (RWQCB) to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements (WDRs). WDRs for discharges to surface waters also serve as NPDES permits.

California Department of Water Resources: The California Department of Water Resources (DWR) is a department within the California Resources Agency. The DWR is responsible for the State of California's management and regulation of water usage.

4.18.4. Impact Assessment/Environmental Consequences:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projected demand in addition to the existing commitments?

The City has adequate surface water supply or other water resources to service the proposed hotel. While the project would generate new wastewater, the City's wastewater treatment plan provides adequate capacity to accommodate the expected demand.

All of these services were available to the previous property uses. Therefore there is not expected to be a significant impact on any City utilities. If an unexpected extra-ordinary user of City services is proposed, it will have to be evaluated on its own merits at that time.

f) Be served by a landfill with sufficient permitted capacity to accommodate the solid waste disposal needs?

The landfill operated by Recology Yuba-Sutter has adequate landfill capacity for years to come and it operates in compliance with all standards.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

It is anticipated that all recyclable construction derived waste would be disposed of at the Recology Yuba-Sutter Transfer Station in Maryville. Non-recyclable materials would be disposed of at the Ostrom Road Landfill. Transportation and disposal of all waste due to the proposed Project's construction would be facilitated in accordance with all applicable federal, state and local statutes and regulations. There would be no impact.

4.19. Mandatory Findings of Significance

Table 4-18: Mandatory Findings of Significance				
Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important example of the major periods of California history or prehistory?			X	
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)			X	
c) Have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

4.19.1. Impact Assessment/Environmental Consequences:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important example of the major periods of California history or prehistory?

The project site is in an urbanized area with little biological value. The proposed Specific Plan Amendment and General Plan Amendment is for a property that was previously fully developed, but will be rebuilt to today's standards, meeting all adopted environmental standards. Therefore the developments that may result from these actions will not significantly degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate an important example of the major periods of California history or prehistory.

The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the proposed Project will have a less than significant effect on the local environment.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)

CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects.

The project does not create a situation with limited individual but cumulatively considerable impacts that can be considered significant.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed Project in and of itself would not create a significant hazard to the public or the environment. Construction-related air quality, noise, and hazardous materials exposure impacts would occur temporarily as a result of project construction. However, implementation of best management practices and mitigation measures identified in this IS/MND would ensure that impacts are less than significant. Therefore, the proposed project would not have any direct or indirect adverse impacts on humans. This impact would be reduced to a less than significant level with implementation of mitigation measures.

5. Section References and/or Incorporated by Reference

According to Section 15150 of the CEQA Guidelines, an ND may incorporate by reference all or portions of another document that is a matter of public record. The incorporated language will be considered to be set forth in full as part of the text of the ND. All documents incorporated by reference are available for review at, or can be obtained through, the City of Yuba City Development Services Department located at the address provided above. The following documents are incorporated by reference:

Remedial Design/Remedial Action Work Plan, Feather River Mills; prepared by Geosyntec Consultants, January 13, 2017.

Traffic Impact Study for Feather River Mills Hotel General Plan Amendment: prepared by KDAnderson & Associates, Inc. September 21, 2017.

Email to the City from the United Auburn Indian Community of the Auburn Rancheria, dated March 21, 2017.

Central City Specific Plan & Revitalization Strategy; prepared by Freedman Tung & Bottomley, Urban Design and Town Planning, adopted by Yuba City April7, 1992.

Airport Land Use Commission. 1994. Sutter County Airport Comprehensive Land Use Plan. April 1994.

Airport Land Use Commission. 2011. Yuba County Airport Land Use Compatibility Plan. Adopted March 17, 2011

California Department of Conservation, Division of Land Resource Protection (CDC DLRP). 2014. Farmland Mapping and Monitoring Program – Sutter County Important Farmland 2012. August 2014.

California Department of Conservation, Division of Land Resource Protection (CDC DLRP). 2013. Sutter County Williamson Act FY 2013/2014.

Carollo. 2011. City of Yuba City 2010 Urban Water Management Plan. June 2011.

Yuba City, City of. 2016. City of Yuba City Municipal Code. https://www.municode.com/library/ca/yuba_city/codes/code_of_ordinances

Dyett & Bhatia. 2004. City of Yuba City General Plan. Adopted April 8, 2004.

Fehr & Peers Associates, Inc. 1995. Yuba-Sutter Bikeway Master Plan. December 1995.

South Yuba City annexation “Plan for Services”, prepared by the City of Yuba City for Sutter LAFCo, March 2015.

“Determination of 1-in-200 Year Floodplain for Yuba City Urban Level of Flood Protection Determination,” prepared for Yuba City by MBK Engineers, November 2015.

Sutter County General Plan.

Feather River Air Quality Management District (FRAQMD) CEQA Significance Thresholds.

Yuba Sutter Transit Route Map.

California Department of Conservation, California Geological Survey. "Fault Zone Activity Map." Alquist-Priolo Earthquake Fault Zones.

California Department of Toxic Substances Control (DTSC). 2016. EnviroStor. Available at http://www.envirostor.dtsc.ca.gov/public/
California Department of Conservation, Division of Land Resource Protection Farmland Mapping and Monitoring Program – Sutter County Important Farmland Map.

Federal Emergency Management Agency (FEMA), Flood Insurance Rate Maps.

Carollo. 2011. City of Yuba City 2010 Urban Water Management Plan. June 2011.

City of Yuba City Wastewater Master Plan.

Sutter County Airport Comprehensive Land Use Plan, April, 1994.

Yuba County Airport Land Use Compatibility Plan, Sept., 2010.

Fehr & Peers Associates, Inc. 1995. Yuba-Sutter Bikeway Master Plan. December 1995.

California Department of Transportation (Caltrans). 2011. California Scenic Highway Mapping System website. Updated September 7, 2011. Available at http://dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm

6. Appendix A: Traffic Impact Study

Traffic Impact Study
Study prepared for:
GPA 16-06, SPA 16-04 (Civic Center Specific Plan), Feather River Mills Hotel

Prepared by:
KDAnderson & Associates Inc.

7. Appendix B: Remedial Action Plan

REMEDIAL DESIGN/REMEDIAL ACTION WORK PLAN:
FEATHER RIVER MILLS

Prepared by:
Geosyntec Consultants

City of Yuba City

MITIGATION MEASURES AND MONITORING PLAN

Environmental Assessment 16-13

Initial Study and Negative Declaration for General Plan Amendment 16-06 and Specific Plan Amendment 16-04 (Central City Specific Plan) for the Feather River Mills Hotel

Impact.≥	Mitigation Measure	Responsible Party	Timing
4.1.5 (1): Aesthetics	All new buildings constructed in this area shall be designed to be respectful in appearance to the historical nature of the Plumas Street commercial buildings or the newer office buildings constructed on Plumas Boulevard to the south of this site, depending on which is closer. The intent of this mitigation is not to attempt to match the hotel building (or other building that may be built) with the existing nearby buildings but to utilize a design that is not out of character with those buildings.	Development Services Department	Prior to issuance of building permits.
4.5.5 (1): Cultural Resources	In the event that previously undetected cultural materials (i.e. prehistoric sites, historic features, isolated artifacts, and features such as concentrations of shell or glass) are discovered during construction, work in the immediate vicinity should immediately cease and be redirected to another area until a qualified archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historic archaeology inspects and assesses the find. The City shall consider further recommendations as presented by the professional and implement additional measures as necessary to protect and preserve the particular resource. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.	Developer, Development Services Department	During construction
4.5.5 (2): Cultural Resources	If human remains are uncovered, or in any other case where human remains are discovered, the Sutter County Coroner, as appropriate, is to be notified to arrange their proper treatment and disposition. If the remains are identified – on the basis of archaeological context, age, cultural associations, or biological traits – as those of a Native American, California Health and Safety Code 7050.5 and Public Resource Code 5097.98 require that the coroner notify the NAHC within 24 hour of discovery. The NAHC will then notify the most likely descendant, who may recommend treatment of the remains.	Developer, Development Services Department	During construction

4.5.5 (3): Cultural Resources	Should artifacts or unusual amounts of bone or shell be uncovered during demolition or construction activity, all work shall be stopped and a qualified archeologist shall be contacted for on-site consultation. Avoidance measures or appropriate mitigation shall be completed according to CEQA guidelines. The State Office of Historic Preservation has issued recommendations for the preparation of Archeological Resource Management Reports, which shall be used for guidelines. If a bone appears to be human, California law mandates that the Sutter County Coroner and the Native American Heritage Commission be contacted.	Developer, Development Services Department	During construction
4.7.4 (1): Greenhouse Gas Emissions	Prior to issuance of a building or grading permit obtain a Feather River Air Quality Management District (FRAQMD) approved Fugitive Dust Control Plan.	Developer, Feather River Air Quality Management District, Developer, Public Works Depart., Development Services Depart.	Prior to issuance of building or grading permits.
4.8.5 (1): Hazards and Hazardous Materials	Comply with the standards as outlined in Attached Appendix B.	Developer , Central Valley Regional Water Quality Control Board	Prior to building construction and during construction phase.
4.16.4 (1): Traffic	Prior to issuing any building permits for a hotel on this site, the applicant shall deposit with the City 0.5 percent of the cost of improvements to the B Street and Boyd Street intersection. The improvements include auxiliary left turn lanes and a traffic signal.	Developer, Public Works Dept., Development Services Dept.	During construction
4.17.4 (1): Tribal Cultural	Refer to Mitigation Measures outlined in Section 4.5 above.	Developer, Development Services Department	

Attachment 8: Draft Hotel Site Plan