NOTICE OF INTENT
TO ADOPT A MITIGATED NEGATIVE DECLARATION

LEAD AGENCY Sutter County Development Services Department
Planning Division
1130 Civic Center Boulevard, Suite A
Yuba City, CA 95993

PROJECT TITLE: Project No. U24-0017 (Singh)

CONTACT PERSON: Casey Murray, Senior Planner (530) 822-7400, ext. 245; cmurray@co.sutter.ca.us

PROJECT LOCATION: 1280 Walnut Avenue, Yuba City, CA 95991; on the southeast corner of State Highway 99 and Walnut Avenue; Assessor's Parcel No.: 23-064-011

PROJECT DESCRIPTION: The proposed project is a General Plan Amendment from ER (Estate Residential) to COM (Commercial) and a Rezone from ER (Estate Residential) to CM (Commercial-Industrial) District for the subject 4.21-acre parcel. No new development, uses, or construction is proposed at this time.

FINDINGS/DETERMINATION: An Initial Study of the effect of this project has been made, and it has been determined that there will be no significant adverse effects on the quality of the environment with mitigation incorporated; therefore, a Mitigated Negative Declaration is proposed.

PUBLIC REVIEW PERIOD: A 30-day public review period for the Mitigated Negative Declaration will commence on March 6, 2026 and end at 5pm on April 6, 2026, for interested and concerned individuals and public agencies to submit written comments on the document. Any written comments on the Mitigated Negative Declaration must be received within the public review period. Copies or an electronic version of the Mitigated Negative Declaration are available for review or purchase at the County address provided above and available online at:
https://www.suttercounty.org/government/county-departments/development-services/planning-services/project-notices-and-environmental-documents

PUBLIC MEETING: This project has not been scheduled for a public hearing at this time.

COUNTY OF SUTTER
MITIGATED NEGATIVE DECLARATION

PROJECT TITLE: Project #U24-0017 (Singh)

PROJECT SPONSORS: Applicant/Owner:
Pardeep Singh
1137 Leonard Court, Yuba City, CA 95993

Project Engineer/Surveyor:
Jeff W. Spence, Laughlin and Spence, Civil Engineers & Surveyors
1008 Live Oak Blvd., Yuba City, CA 95991

PROJECT LOCATION: 1280 Walnut Avenue, Yuba City, CA 95991; on the southeast corner of State Highway 99 and Walnut Avenue, south of the City of Yuba City, within the unincorporated area of Sutter County

ASSESSOR'S PARCEL NO: 23-064-011

PROJECT DESCRIPTION: The proposed project is a General Plan Amendment from ER (Estate Residential) to COM (Commercial) and a Rezone from ER (Estate Residential) to CM (Commercial-Industrial) District for the subject 4.21-acre parcel. No new development, uses, or construction is proposed at this time.

An Initial Study has been conducted by the Environmental Control Officer of the County of Sutter. The Environmental Control Officer finds that this project will not have a significant effect on the environment. The Initial Study is available for public review at the Sutter County Development Services Department, 1130 Civic Center Boulevard, Suite A, Yuba City, California. (Phone: 530-822-7400)

STATEMENT OF REASONS TO SUPPORT FINDING
OF MITIGATED NEGATIVE DECLARATION

Staff has conducted an Initial Study for this project, which revealed that the proposed project could have significant impact on the environment; however, the recommended mitigation measures would reduce the possible impacts to a less than significant level.

Neal Hay

Neal Hay
Director of Development Services
Environmental Control Officer

3-03-2026

Date

Sutter County
Initial Study

1. **Project title:** Project #U24-0017 (Singh)

2. **Lead agency name and address:** Sutter County Development Services Department
Planning Division
1130 Civic Center Boulevard, Suite A
Yuba City, CA 95993

3. **Contact person and phone number:** Casey Murray, Senior Planner
530-822-7400 ext. 245

4. **Project sponsor's name and address:** Applicant/Owner:
Pardeep Singh
1137 Leonard Court
Yuba City, CA 95993

Engineer/Surveyor:
Jeff W. Spence
Laughlin and Spence, Civil Engineers & Surveyors
1008 Live Oak Blvd.
Yuba City, CA 95991

5. **Project Location & APN:** 1280 Walnut Avenue, Yuba City, CA 95991; on the southeast corner of State Highway 99 and Walnut Avenue, south of the City of Yuba City, within the unincorporated area of Sutter County; APN: 23-064-011

6. **General Plan Designation:** ER (Estate Residential)

7. **Zoning Classification:** ER (Estate Residential) District

8. Description of project: The proposed project is a General Plan Amendment from ER (Estate Residential) to COM (Commercial) and a Rezone from ER (Estate Residential) to CM (Commercial-Industrial) District for the subject 4.21-acre parcel. No new development, uses, or construction is proposed at this time.

The project site is a 4.21-acre parcel located at the southeast corner of Walnut Avenue and State Highway 99 (See attachments 1 through 4). The applicant has provided a General Plan Amendment and Rezoning exhibit (See attachments 5 and 6).

The north portion of the site is developed with an existing 6,300 square foot metal shop building with an attached 3,700 square foot lean-to (10,000 square feet total). The building is proposed to remain but is proposed to be updated by repairing damaged and unsightly areas. The applicant has provided a conceptual site plan and landscape plan that are included as attachment 7 and building elevations of the existing building that are included as attachment 8. All improvements shown on the site plan and landscape plan are conceptual only and will need to be approved as a part of a future Design Review application or other entitlement for a new commercial or industrial use. No new use is proposed for the enclosed portion of the building. The 3,700 square foot lean-to portion of the building may be utilized for ten covered vehicle parking spaces as indicated on the conceptual site plan. Five parking spaces, including one ADA parking space, are shown on the north side of the building. Any future commercial or industrial use will require paved parking and circulation areas. The site is currently accessed by an

existing driveway off of Walnut Avenue, which is a County maintained road.

An existing septic area and 10,000 square foot septic replacement area located west of the shop building and are proposed to be fenced for protection. As indicated by the Development Services Environmental Health Division, the existing septic system does not meet current standards and will need to be destroyed under permit by Environmental Health. An existing water well is located on the eastern boundary of the property.

The existing yard area is currently surfaced with a combination of compacted earth and gravel and is conceptually proposed to be overlaid with asphalt grindings for dust control. The site currently surface drains westerly. A potential future retention area is located at the south end of the property as depicted on the site plan to mitigate increased storm water runoff.

A six-foot-tall chain link fence with privacy slats is conceptually proposed along the western boundary of the property setback 15 feet behind existing and proposed landscaping. An existing chain link fence with privacy slats along Walnut Avenue is proposed to be relocated 15 feet south of the property line behind existing and proposed landscaping. A 45-foot-wide driveway is shown with a proposed 45-foot-wide gate. Existing six-foot-tall chain link fence with privacy slats is located along the southern boundary of the property and along a portion of the eastern boundary. This same fencing is proposed along the entire eastern boundary except where it already exists. As per the design checklist contained in the Zoning Code, projects that abut residentially zoned parcels include a minimum six-foot-high solid wall (i.e. decorative masonry block such as split face or masonry block with stucco coat, solid wood frame with stucco coat, or similar alternative as approved by the Director) along the shared property boundary. A residentially zoned parcel is located east of the project site so a solid wall may be required as opposed to a fence.

The conceptual landscape plan depicts existing landscaping which consists of mature trees (majority are oaks), mature oleander, and hedge located around the perimeter of the site. New landscaping will include oleander, photinia, and oak trees and will be drip irrigated. A landscape plan consistent with County landscaping requirements will be required as part of a Design Review application for any future commercial or industrial use.

Article 19 of the Zoning Code contains agricultural buffering standards, which are applicable for new or expanded non-agricultural use or development such as commercial or industrial projects that require discretionary approval, are located outside established City sphere of influence boundaries or rural community boundaries, are located on land that is not zoned AG, and is adjacent to agriculturally zoned property with existing agricultural uses. The purpose of agricultural buffers is to provide for the long-term viability of agricultural operations and to minimize potential conflicts between adjacent agricultural and new, non-agricultural development and uses. Agricultural buffers are required to be located on the non-agricultural property. Walnuts are grown on agriculturally zoned property located west and northwest of the project site, this project requires discretionary approval, and the site is located outside sphere of influence and rural community boundaries; therefore, agricultural buffering standards apply to this project. The agricultural buffering standards require a 300-foot buffer (setback) between orchards and the project site. As shown on the conceptual site plan (attachment 7), a small portion of the existing shop building and the western half of the project site are located within the required 300-foot buffer; however, no expansion of the building is proposed. No new primary structures or uses will be allowed within the 300-foot buffer. The buffer does not apply to accessory uses and structures such as septic areas, fencing, parking lots, drainage facilities, storage buildings, equipment storage, ground mounted solar facilities, and other similar uses and structures.

The applicant is not proposing any development of the property at this time. Attachment 9 includes a table that lists all of the permitted uses within the existing ER zone and proposed CM zone and discusses which uses will require approval of a Zoning Clearance and/or Design Review. The table

does not include uses allowed with approval of a discretionary permit such as an Administrative Permit or Use Permit. New commercial and industrial buildings and/or use types require Design Review. Applications for Design Review must demonstrate compliance with applicable Zoning Code requirements for the proposed use. Building permit applications for projects over 65,000 square feet of area, or a warehouse/outdoor storage use type over 100,000 square feet of area, require Design Review approval by the Board of Supervisors and is a discretionary action. Projects that are below these thresholds only require Minor Design Review and is a ministerial action. The proposed CM District has a maximum Floor Area Ratio (FAR) of 0.35 for commercial use types and 0.50 for industrial use types. For the subject property, the maximum square footage of structures cannot exceed 64,185.66 square feet for commercial use types and 91,693.8 square feet for industrial use types. New future uses are not anticipated to trigger discretionary Design Review due to the size of the parcel and the fact that the existing 6,300 square foot shop building is proposed to remain. The western half of the site is also within the required 300-foot buffer as explained previously. In addition, the site will require onsite drainage, onsite sewage disposal, parking and circulation, landscaping, lighting, and fencing/walls that meet setbacks, so it's not anticipated to result in an outdoor storage use type over 100,000 square feet. Should a new use trigger discretionary Design Review, additional environmental review will be required.

Certain permitted uses such as wayside stands, agricultural truck yards, kennels, vehicle rental, sales, and leasing, equipment and material storage yards, and impound and towing yards must meet certain supplemental regulations as contained in Zoning Code Section 1500-07-030. These regulations include requirements regarding building density, structure size, parking requirements, screening requirements, and maintenance requirements.

The County's Commercial and Employment Districts contain specific design requirements for building design and architecture, landscaping, vehicular circulation and parking, walls, signs, screening, and natural features. As part of any future Design Review application, the applicant will be required to provide an application and plans for the proposed use that demonstrate compliance with applicable requirements contained in the design checklist. Attachment 10 includes a complete copy of the design checklist for reference.

Prior to any future use or construction, the applicant will submit plans and related documents for exterior building improvements per the design review submittal, interior building renovations of the existing metal building, septic design, vehicular circulation and parking, landscaping, lighting, setbacks, grading and drainage, signage, screening, walls/fences, and driveway connections for approval and permits as required by the County.

9. Surrounding land uses and setting: The project site is a 4.21-acre parcel located at the southeast corner of Walnut Avenue and State Highway 99. The existing metal building on the project site was issued Building Permit No. 5883 on January 18, 1974, for a farm storage building. Building Permit No. 6508 was issued in January of 1975 to add the lean-to portion to the building.

On May 2, 2006, the Board of Supervisors approved Project #05-045, a General Plan Amendment to change the General Plan designation of 7.4 acres from AG-20 (Agriculture, 20-acre minimum) to RAN (Ranchette), a Rezone of 7.4 acres from AG (General Agriculture) to RAN (Ranchette), and a Tentative Subdivision Map to divide 7.4 acres into two parcels; one at 3.4 acres and one at 4.0 acres.

Project #05-045 was processed and approved concurrently with Project #05-043 and Project #05-044, which were all separate applications for Ranchette designation submitted by landowner Larry Matsumura. Each project was recommended for approval because each project was found to be consistent with the General Plan Policies for Ranchette designation at that time.

On February 15, 2007, a subdivision map was recorded in Book 19 of Surveys, at Page 127, in the

Offices of the Recorder of the County of Sutter. The subject parcel being Lot 1 of said map being 4.21 acres and containing the applicant's storage building and a mobile home. Lot 2 of said map being 3.25 acres and containing the applicant's residence. Lot 2 adjoins the project site to the east.

The project site's General Plan designation was changed from RAN (Ranchette) to ER (Estate Residential) through the 2030 General Plan update that was approved on March 29, 2011. The parcel was subsequently rezoned to Estate Residential (ER) through the consistency rezoning process by the County (Project #11-026). Although the project site had a mobile home on it at one time, it has never been developed residentially.

Aside from Barry Elementary School, which is on land zoned P (Public) District, all land lying south of Walnut Avenue, north of Barry Road, east of State Highway 99, and west of Muir Road is zoned ER (Estate Residential). These parcels are currently planted with walnuts with one residence located on Barry Road and one residence located on Walnut Avenue directly east of the project site.

According to Google Maps Street View imagery from April 2012, the site was previously utilized for a welding business "Dirk's Welding and Machine Shop" and had outdoor equipment storage. The welding business operated at the site for approximately seven years, which is consistent with past aerial imagery of the site. The operation of a welding business was inconsistent with the previous Ranchette and current Estate Residential zoning.

The site was previously utilized for the illegal use of a large general truck terminal with truck repair. Project #17-016, which was denied on August 10, 2021, included a General Plan Amendment, Rezone, and Design Review that would have legitimized the illegal use. This project included a General Plan Amendment from ER (Estate Residential) to an IND (Industrial) land use designation, a Rezone from ER (Estate Residential) to M-1 (Light Industrial) District, and Design Review for the subject 4.21-acre parcel. Additionally, a Use Permit was proposed to allow for a reduced agricultural buffer between adjacent agricultural uses and the project site.

The surrounding area is largely rural and features agricultural, rural residential, industrial, and educational uses. The site is generally bounded by a residence and other light industrial to the north, State Highway 99 to the west, with agricultural orchards beyond, Barry Elementary School to the south, and a residence to the east.

Building Permit No. 6502 was issued on February 4, 1975, for the residence located on the adjoining 3.25-acre estate residential parcel to the east.

Barry Elementary School, which was established in 1861, is a K-8 school located directly south of the project site on an adjoining 10-acre parcel in the P (Public) zoning district. The school is located at the northeast corner of Barry Road and State Highway 99. The Oswald-Tudor Fire Station (Station 8) is located at the southeast corner of Barry Road and State Highway 99, south of Barry Elementary School. The fire station sits on a 0.75-acre parcel in the P (Public) zoning district approximately 1,300 feet south of the project site.

Aside from the fire station, parcels located on the south side of Barry Road lying east of State Highway 99 are zoned AG (Agriculture). Parcels located west and northwest of the project site, on the west side of State Highway 99 are also zoned AG (Agriculture) and are currently planted with walnuts.

Southwest of the project site, at the northwest corner of Barry Road and State Highway 99 is a 5.95-acre parcel zoned M-1 (Light Industrial). On April 25, 2017, the Board of Supervisors approved Project #16-003, a General Plan Amendment to change the General Plan designation of the parcel from AG-20 (Agriculture, 20-acre minimum) to IND (Industrial), a Rezone from AG (Agriculture) to M-1 (Light Industrial), and Design Review. This project provided the proper General Plan designation and zoning

for an existing unpermitted general truck yard. This property also has an established agricultural well business, which was approved through Use Permit #97-25.

North of the project site, at the northeast corner of Walnut Avenue and State Highway 99 is a 3.93-acre parcel zoned M-1-PD (Light Industrial – Planned Development). On October 31, 2006, the Board of Supervisors approved Project #05-009, a General Plan Amendment to change the General Plan designation of the parcel from AG-20 (Agriculture, 20-acre minimum) to IND (Industrial), a Rezone from AG (Agriculture) to M-1-PD (Light Industrial – Planned Development), and Design Review for a commercial trucking terminal. Additional parcels to the north on the east side of State Highway 99 are zoned for industrial and commercial uses.

North of the project site, at 1261 Walnut Avenue, is a 1.27-acre parcel zoned M-1 (Light Industrial). This parcel is developed with a residence. This parcel was re-designated to Industrial through the 2030 General Plan update that was approved on March 29, 2011, and was subsequently rezoned to M-1 (Light Industrial) through the consistency rezoning process by the County (Project #11-026).

Parcels located on the north side of Walnut Avenue, approximately 400 feet northeast of the project site are zoned R-1 (Single Family Residential) and are developed with residences.

The project site lies approximately 0.5 miles south of the City of Yuba City and its current sphere of influence (SOI) or future growth area but is within Yuba City's possible future expanded SOI (See attachments 10 through 12). This area is designated as a growth area in the General Plan. Attachments 10 through 12 show maps from 2011 when the General Plan was adopted and do not show the current City of Yuba City and SOI boundaries, which are now located along Stewart Road.

The project site is generally level; however, there is an existing grade difference between the project site and the adjoining parcel to the east. The grade difference ranges from approximately three feet near the northern end of the project site up to approximately eight feet toward the southern end of the project site. Gilsizer Slough lies over 300 feet west of the project site. There are no rivers or streams in the immediate vicinity. The Feather River lies approximately 1.6 miles east of the project site.

Adjacent land uses, zoning, and General Plan designations for the surrounding properties are summarized below.

	Land Use	Zoning Designation	General Plan Designation
Site	Metal shop building	ER (Estate Residential) District	ER (Estate Residential)
North	Walnut Avenue, commercial truck yard (Sandhu Brothers), residence	M-1-PD (Light Industrial-Planned Development), M-1 (Light Industrial)	IND (Industrial)
South	Barry Elementary School	P (Public) District	P (Public)
East	Estate residential	ER (Estate Residential) District	ER (Estate Residential)
West	Highway 99, walnut orchard	AG (Agriculture)	AG-20 (Agriculture, 20-acre minimum)

10. Other public agencies whose approval is required: The proposed General Plan Amendment and Rezone will require approval by the Sutter County Board of Supervisors; no other public agency approval is required. Other permits and approvals required for any future use and future construction, or improvements are listed below. It should be noted that this list is not exhaustive and additional permits and approvals may also be required.

- Sutter County Development Services Department Planning Division: Design Review (for new commercial and industrial buildings and/or use types)
- Sutter County Development Services Department Building Division: Building permits
- Sutter County Development Services Department Environmental Health Division: Well and Septic permits, CUPA permits
- Sutter County Development Services Department Engineering Division: Grading and Encroachment Permits
- Feather River Air Quality Management District (FRAQMD). The proposed project is within the jurisdiction of the FRAQMD and will be required to comply with FRAQMD rules and regulations, including but not limited to Rule 3.0, 3.15, 3.16, 3.17, 3.23, and 7.10.
- Central Valley Regional Water Quality Control Board, SWPPP. The proposed project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB will require a Storm Water Pollution Prevention Plan (SWPPP) to prevent impacts related to stormwater if project construction exceeds one acre in size

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? The County initiated Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18) consultation through distribution of letters to the Native American tribes provided by the Native American Heritage Commission (NAHC). No request for consultation were received from Native American tribes during the review period.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology and Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	☐ 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 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.

Applicant Mitigation Agreement:
CEQA allows a project proponent to make revisions to a project, and/or to agree and comply with, mitigation measures that reduce the project impacts such that the project will not have a significant effect on the environment. CEQA Guidelines Section 15064.

As the applicant/representative for this proposed project, I hereby agree to implement the proposed mitigation measures and mitigation monitoring program identified within this document.

Signature of Applicant/Representative — Date: 3-2-2026

Casey Murray, Senior Planner — Date: 3-3-2026

Neal Hay
Neal Hay, Director of Development Services
Environmental Control Officer — Date: 3-03-2026

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Responses:

a) **Less than significant impact.** This project will not have a substantial adverse effect on a scenic vista. A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. The General Plan Technical Background Report identifies geographic features such as the Sutter Buttes, Feather River, Sacramento River, Bear River, and the valley's orchards as scenic resources within the County, which contribute to the County's character. Additionally, the Land Use Element of the General Plan contains specific goals and policies directed at preservation of scenic resources and enhancing design of new development. The General Plan does not inventory any scenic vista on the subject property and there are no scenic vistas proximate to the project site. This project is not located within the Sutter Buttes Overlay Zone and is not located in the immediate vicinity of the Bear River, Feather River, or Sacramento River. The Feather River lies approximately 1.6 miles east of the project site. As a result, this project will not substantially alter any scenic vista and a less than significant impact is anticipated.

b) **No impact.** This project will not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway because there are no state scenic highway designations in Sutter County. As there are no scenic highways located in Sutter County, no impact is anticipated.

c) **Less than significant impact.** The proposed project is located in a nonurbanized area and will not substantially degrade the existing visual character or quality of public views of the site and its surroundings because future uses will be developed consistent with all applicable County standards.

Although the project site has had residential zoning since 2006 and had a mobile home on it at one time, it has never been developed residentially. The existing shop building has been in place since 1974 and is proposed to remain. Due to previous uses, the site currently resembles a commercial or industrial site as opposed to a residential or estate residential site; therefore, this project will not substantially degrade the existing visual character of the site. Existing industrial uses are located north and southwest of the project site.

The current 2030 General Plan was adopted on March 29, 2011. During preparation of the 2030 General Plan, the project site and surrounding area was included within Yuba City's possible future expanded SOI (See attachments 10 through 12) and determined to be one of the Growth Areas in the County. The General Plan defines Growth Areas as areas where new growth and development should be directed within the County.

The County's Commercial and Employment Districts contain specific design requirements for building design and architecture, landscaping, vehicular circulation and parking, walls, signs, screening, and natural features which are designed in part to improve the appearance of a site and create a cohesive look (Zoning Code Section 1500-07-050 E). As part of any future Design Review application, the applicant will be required to provide an application and plans for the proposed use that demonstrate compliance with applicable requirements contained in the design checklist. Attachment 10 includes a complete copy of the design checklist for reference.

The Design Review process will incorporate requirements such as minimum landscape planter widths, minimum landscaping of the interior of parking lots, as well as providing a minimum number of parking lot shade trees and building design requirements.

The applicant has provided a conceptual site plan and landscape plan that are included as attachment 7 and building elevations of the existing building that are included as attachment 8. All improvements shown on the site plan and landscape plan are conceptual only and will need to be approved as a part of a future Design Review application or other entitlement for a new commercial or industrial use. Colored elevation drawings of the shop building will be required showing how its appearance will be improved and to demonstrate compliance with the building design requirements.

A six-foot-tall chain link fence with privacy slats is conceptually proposed along the western boundary of the property setback 15 feet behind existing and proposed landscaping. An existing chain link fence with privacy slats along Walnut Avenue is proposed to be relocated 15 feet south of the property line behind existing and proposed landscaping. A 45-foot-wide driveway is shown with a proposed 45-foot-wide gate. Existing six-foot-tall chain link fence with privacy slats is located along the southern boundary of the property and along a portion of the eastern boundary. This same fencing is proposed along the entire eastern boundary except where it already exists. As per the design checklist, projects that abut residentially zoned parcels include a minimum six-foot-high solid wall (i.e. decorative masonry block such as split face or masonry block with stucco coat, solid wood frame with stucco coat, or similar alternative as approved by the Director) along the shared property boundary. A residentially zoned parcel is located east of the project site so a solid wall may be required instead of a fence.

The conceptual landscape plan depicts existing landscaping which consists of mature trees (majority are oaks), mature oleander, and hedge located around the perimeter of the site. New landscaping will include oleander, photinia, and oak trees and will be drip irrigated. The design checklist requires a minimum 15-foot-wide landscape planter be provided for projects on properties that have frontage on highways and arterial roadways. Since the subject parcel is

bordered by State Highway 99 to the west, a minimum 15-foot-wide landscape planter will be required to be provided along that frontage. In addition, the design checklist requires a minimum 10-foot-wide landscape planter be provided along all other road frontages. The Walnut Avenue frontage will therefore be required to have a 10-foot-wide landscape planter. The applicant will be required to improve the existing access to the property from Walnut Avenue with a paved driveway that leads to a paved parking lot. This parking lot will also be required to be landscaped in accordance with the requirements of the Zoning Code. A landscape plan consistent with County landscaping requirements will be required as part of a Design Review application for any future commercial or industrial use.

The project site is generally level; however, there is an existing grade difference between the project site and the adjoining parcel to the east. The grade difference ranges from approximately three feet near the northern end of the project site up to approximately eight feet toward the southern end of the project site. Due to this existing grade difference, a residence on the adjacent parcel to the east could have limited views of the site. The applicant is conceptually proposing to add additional landscaping as previously mentioned that will have a mature height of approximately 15 feet. The adjacent parcel to the east has existing trees and hedge rows at the top of the elevation bench as well as a six-foot-tall fence around the rear yard of the residence.

There is no new development proposed at this time; however, new commercial or industrial development will be subject to compliance with the County's design checklist. Compliance with the checklist will ensure visual compatibility with adjacent land uses and mitigate impacts to the quality of public views. Therefore, this project is not anticipated to substantially degrade the existing visual character or quality of public views of the site and its surroundings and a less than significant impact is anticipated.

d) **Less than significant impact.** This project will not create a new source of substantial light or glare which will adversely affect day or nighttime views in the area. The area of the project has moderate levels of ambient lighting predominately from vehicle headlights on State Highway 99, existing streetlights at the intersection of State Highway 99 and Walnut Avenue, and agricultural, rural residential, and industrial uses in the area.

The existing shop building has one existing flood light wall pack fixture above each roll up door. No new development or lighting is proposed at this time. New sources of light and glare will potentially be generated from new industrial and commercial uses permitted in the CM zone. The County's Commercial and Employment Districts contain specific design requirements for development projects, which include requirements for lighting (Zoning Code Section 1500-07-050 E). These requirements specify that parking lot lighting shall not exceed 20 feet in total height, is oriented and shielded to direct the light downward onto the property and not spill onto adjacent properties or road rights-of-way. Lower lighting standards may be required if the proposed development is located adjacent to single-family residential development in order to minimize light spillage. Full cutoff lighting fixtures, diffusers and other "dark-sky" and low glare technologies such as motion activated lighting are to be used to reduce light pollution and glare. The requirements also specify illumination requirements for parking lots, driveways, trash enclosures, exterior doors, and pedestrian walkways and require that a point-by-point exterior lighting (photometric) plan be submitted to demonstrate compliance with the lighting standards.

As part of any future Design Review application submitted for a new use, the applicant will be required to have a qualified professional prepare and submit a lighting (photometric) plan to demonstrate compliance with the lighting requirements. Any existing exterior lighting not

meeting the lighting requirements will be required to be removed and replaced with new ones to ensure lighting requirements are met. The photometric plan must demonstrate that proposed lighting will not shine off of the property, consistent with County standards. As the subject property is located adjacent to single-family residential development, lighting standards below 20 feet may be required. New outdoor lighting will be required to be installed in accordance with the lighting plan prior to issuance of a certificate of occupancy for the proposed use. As a result, it is not anticipated this project will create a new source of substantial light or glare in this area. A less than significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)
(County of Sutter, Zoning Code. 2024)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE 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 (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☒	☐	☐
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				

Responses:

a) **No impact**. This project will not 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 (FMMP) of the California Resources Agency, to a non-agricultural use. As shown on the 2020 Sutter County Important Farmland map, the entire project site is designated as "Urban and Built-Up Land." As the project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, no impact is anticipated.

b) **Less than significant with mitigation incorporated**. This project will not conflict with existing zoning for agricultural uses or a Williamson Act contract. The project site and all adjacent properties are not encumbered by a Williamson Act contract.

Article 19 of the Zoning Code contains agricultural buffering standards, which are applicable for new or expanded non-agricultural use or development such as commercial or industrial projects that require discretionary approval, are located outside established City sphere of influence boundaries or rural community boundaries, are located on land that is not zoned AG, and is adjacent to agriculturally zoned property with existing agricultural uses. The purpose of agricultural buffers is to provide for the long-term viability of agricultural operations and to minimize potential conflicts between adjacent agricultural and new, non-agricultural development and uses. Agricultural buffers are required to be located on the non-agricultural property.

Walnuts are grown on agriculturally zoned property located west and northwest of the project site, this project requires discretionary approval, and the site is located outside sphere of influence and rural community boundaries; therefore, agricultural buffering standards apply to this project. The agricultural buffering standards require a 300-foot buffer (setback) between orchards and the project site.

As shown on the conceptual site plan (attachment 7), a small portion of the existing shop building and the western half of the project site are located within the required 300-foot buffer; however, no expansion of the building is proposed. No new primary structures or uses will be allowed within the 300-foot buffer. The buffer does not apply to accessory uses and structures such as septic areas, fencing, parking lots, drainage facilities, storage buildings, equipment storage, ground mounted solar facilities, and other similar uses and structures. Article 19 of the Zoning Code allows for reductions in buffer widths with approval of a Use Permit where the approving authority determines that:

A. Specific site characteristics exist such as topography, prevailing winds, vegetation, and other site features that provide adequate buffering such that the required setback is not necessary to promote and protect agriculture and protect public health and safety; or

B. Site constraints such as parcel size and configuration are such that the required setback is infeasible and the reduced setback provides the maximum feasible buffer from the agricultural district or use.

However, the applicant has not applied for a Use Permit to allow for the removal of the agricultural buffer requirement between the adjacent agricultural land and the project site. The project site is separated from the adjacent orchards by State Highway 99 and by approximately 144 feet to 200 feet. The western frontage of the project site has existing trees and oleander shrubs. Additional landscaping is planned as shown on the conceptual landscape plan and will be required to be planted along the frontage of the site as part of any new commercial or industrial use. A new six-foot-high chain-link fence with privacy slats is planned to be installed behind the existing and proposed landscaping along the western frontage. The proposed screening provides a buffer between the existing orchards and the project site. Historically there have been no conflicts between the use of this property and adjacent agricultural uses. This project does not propose sensitive uses such as a residence, school, daycare center, playground, or medical facility that may be sensitive to adjacent agricultural uses. Conflicts between the project site and adjacent orchards are not anticipated. In addition, the Sutter County Agricultural Department previously reviewed this project and stated they are not aware of any complaints or conflicts between agricultural uses and general commercial uses. Additionally, should the subject property be sold, new property owners will be required to sign a Right to Farm disclosure in accordance with County Code Chapter 1330 informing them they may be subjected to impacts related to productive nearby farming activities.

The following mitigation measure is included to ensure that future uses will maintain a 300-foot agricultural buffer setback consistent with Article 19 of the Zoning Code. A less than significant impact is anticipated with the following mitigation measure in place.

> **Mitigation Measure No. 1 (Agriculture and Forestry Resources):** Consistent with Sutter County Zoning Code Article 19, a permanent agricultural buffer is required for any new or expanded non-agricultural use or development at the project site. A 300-foot agricultural buffer setback shall be maintained on the west half of the project site as depicted on the conceptual site plan. The buffer setback shall be measured from the property line of the adjacent agricultural property to any new or expanded non-agricultural use or structure. The buffer shall not apply to the existing building previously permitted on the site or to accessory uses and structures such as septic areas, fencing, parking lots, drainage facilities, storage buildings, equipment storage, ground mounted solar facilities, and other similar uses and structures. The buffer shall be shown on the site plan for a new use or structure. A reduction of the 300-foot agricultural buffer setback may be allowed after application and approval of a Use Permit as allowed under Article 19. Buffer requirements may also be waived or subsequently terminated if adjacent AG zoned parcels have been converted to non-agricultural uses as included in Article 19.

c) **No impact.** This project does not 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)), because the project site and surrounding area does not contain forest land. The project site is not zoned for forest land or timberland nor is it adjacent to land that is zoned for forest land or timberland. This project is located in the Sacramento Valley, a non-forested region. No impact is anticipated.

d) **No Impact.** This project will not result in the loss of forest land or conversion of forest land to a non-forest use because of its location within Sutter County. Sutter County is located on the valley floor of California's Central Valley, and, as such, does not contain forest land. No impact is anticipated.

e) **Less than significant impact.** This project will not involve other changes to the existing environment which could result in the conversion of farmland to a non-agricultural use or conversion of forest land to a non-forest use. This project does not include land being converted from farmland to a non-agricultural use or forest land to non-forest use. Agricultural uses in the vicinity will continue as they historically have. Staff does not anticipate that this project will result in the conversion of other agricultural lands to non-agricultural use. Therefore, a less than significant impact is anticipated.

(California Dept. of Conservation, Farmland Mapping and Monitoring Program. 2020)
(County of Sutter, Zoning Code. 2024)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) 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?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Responses:

a) **Less than significant with mitigation incorporated.** This project will not conflict with or obstruct implementation of an applicable air quality plan. Both the federal and State governments have established ambient air quality standards, based on their respective Clean Air Acts, for various air pollutants identified as "criteria" air pollutants. The federal Clean Air Act identifies six criteria pollutants: reactive organic gases (ROG), nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO_2), lead, and particulate matter less than 10 micrometers in diameter (PM10), a subset of which is particulate matter less than 2.5 micrometers in diameter (PM2.5). The California Clean Air Act identifies these six federal criteria pollutants, along with four others.

Under both Clean Air Acts, air basins are classified as being in “attainment” or “nonattainment” of these ambient air quality standards, or they are “unclassified”. Any air district that has been designated as a nonattainment area relative to federal and/or State ambient air quality standards for ozone, CO, sulfur dioxide, or nitrogen dioxide is required to prepare and submit a plan for attaining and maintaining the standards for which it is in nonattainment.

The proposed project is located within the Northern Sacramento Valley Air Basin (NSVAB) and the jurisdiction of the Feather River Air Quality Management District (FRAQMD), which covers both Sutter and Yuba Counties. Air quality standards are set at both the federal and state levels. FRAQMD is responsible for the planning and maintenance/attainment of these standards at the local level. FRAQMD sets operational rules and limitations for businesses that emit significant amounts of criteria pollutants. The FRAQMD is either in attainment of or unclassified for all federal and State ambient air quality except for federal standards for ozone and PM10. Portions of Sutter County are also in nonattainment of State standards for ozone. The FRAQMD, in cooperation with other air districts in the northern Sacramento Valley, has prepared the Northern Sacramento Valley Planning Area Air Quality Attainment Plan for the attainment of State ozone standards. Plans have also been prepared for the attainment of federal ozone and PM10 standards.

According to the FRAQMD 2010 Indirect Source Review Guidelines, Significant Impact Thresholds are triggered by the construction of projects larger than 130 new single-family residences, 225,000 square feet of new light industrial space, 350,000 square feet of new warehouse space, or 130,000 gross square feet of new office space. This project will not trigger this threshold of significance. No new construction is proposed by this project. The existing 6,300 square foot metal shop building with an attached 3,700 square foot lean-to (10,000 square feet total) is proposed to remain. No comments were provided from FRAQMD regarding this project; however, they will have a chance to comment on future commercial or industrial projects that require Design Review.

Short-Term Construction Impacts

Future anticipated construction activity will be phased and will temporarily increase emissions in the project vicinity during the construction period. Construction activities, including site clearing, excavation, grading, and paving, will be considered an intermittent air quality impact throughout the construction period of the project. Emission levels will fluctuate depending upon construction activity, equipment type, and duration of use. All equipment must comply with California emissions standards.

Future construction activities will emit criteria air pollutants from a variety of activities, including operation of heavy equipment and use of worker vehicles, vendor trucks, and hauling trucks. Emissions of ozone precursors (ROG and NOx) are primarily generated by mobile sources and largely vary as a function of vehicle trips per day and the type, quantity, intensity, and frequency of heavy-duty, off-road equipment used. Typically, a large portion of construction-related ROG emissions results from the application of asphalt on to parking areas, and the application of architectural coatings. Construction-related fugitive dust emissions of PM10 will vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather.

Based on the nature of the scope of the project, construction emissions of NOx, ROG, and PM10 generated during construction is not expected to exceed FRAQMD thresholds of significance. Therefore, project construction activities will not interfere with the implementation

of air quality attainment plans for ozone or PM10. Project construction impacts on air quality will be less than significant.

New development is subject to FRAQMD rules and regulations. FRAQMD will require the applicant to complete and submit a Fugitive Dust Control Plan. To ensure these requirements are met, the following mitigation measure is proposed:

> **Mitigation Measure No. 2 (Air Quality):** Prior to any on-site grading, paving, or construction activities, the applicant shall submit a fugitive dust control plan to the Feather River Air Quality Management District (FRAQMD) for review and approval. The applicant shall comply with all FRAQMD standards and construction phase measures. A copy of the approved plan shall be submitted to the Development Services Department.

The approved Fugitive Dust Control Plan serves as an acknowledgement by the project proponent of their duty to address state and local laws governing fugitive dust emissions and the potential for first offense issuance of a Notice of Violation by FRAQMD where violations are substantiated by district staff. The approved Fugitive Dust Control Plan along with the standard construction phase measures are required to be made available to the contractors and construction superintendent on the project site. The approved Fugitive Dust Control Plan requires the project proponent to acknowledge that they have read the FRAQMD Rules and Regulations Statement for new development, which includes state and local fugitive dust emission laws. It further requires the project proponent to acknowledge that it is their responsibility to ensure that appropriate materials and instructions are available to site employees to implement fugitive dust mitigation measures appropriate for each development phase of this project in order to ensure compliance. It further requires the project proponent to acknowledge that it is their responsibility to ensure that site employees are made formally aware of fugitive dust control laws, requirements, and available mitigation techniques, and that appropriate measures are to be implemented at the site as necessary to prevent fugitive dust violations.

As required by the Fugitive Dust Control Plan, the developer or contractor is required to control dust emissions from earth moving activities, storage, and any other construction activity to prevent airborne dust from leaving the project site. Required measures to control dust emissions include, but are not limited to, suspending all grading operations on a project when winds exceed 20 miles per hour or when winds carry dust beyond the property line, utilizing a water truck to water all work areas as needed, and covering all on-site dirt piles or other stockpiled material.

All projects are subject to FRAQMD rules in effect at the time of construction. All new residential, commercial, and industrial land uses in Yuba and Sutter counties are subject to the Indirect Source Fee collected by FRAQMD. These fees are collected by FRAQMD to offset FRAQMD’s costs reviewing projects under CEQA and to mitigate air quality impacts of new development. Projects are subject to the Indirect Source Fee at the time of building permit issuance.

Overall, because this project will not generate emissions above FRAQMD's thresholds of significance for construction and operational activities and will implement the relevant mitigation listed above, a less than significant impact is anticipated.

b) **Less than significant impact.** Neither construction nor operation of the proposed project will generate emissions that will exceed the FRAQMD thresholds of significance, and the project will

implement the FRAQMD recommended Standard Mitigation Measures. Therefore, the project will not result in a significant net increase of criteria air pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. A less than significant impact is anticipated.

c) **Less than significant impact.** This project will not expose sensitive receptors to substantial pollutant concentrations. The nearest potential sensitive receptors include a residence on an adjacent parcel to the east and Barry Elementary School on an adjacent parcel to the south. As discussed in a) above, project construction and operational emissions will not exceed FRAQMD significance thresholds. As such, the nearby sensitive receptors will not be exposed to substantial amounts of pollutant emissions, especially when Mitigation Measure No. 1 is implemented.

The project will generate short-term phased construction emissions of diesel particulate matter (DPM), which is considered a toxic air contaminant that could lead to increased cancer risk with prolonged exposure. DPM emissions will be generated by the operation of off-road construction equipment (e.g., excavators, loaders, cranes, graders) and on-road diesel heavy-duty vehicles.

Toxic air contaminant emissions are considered significant if the emissions lead to a cancer risk of 10 cancers per million people and the Non-Cancer Hazard Index is 1.0. The project construction and operational emissions will be well below the significance thresholds for cancer risk.

Due to sensitive receptors being located adjacent to the project site, the applicant for the previously proposed large general truck yard was required to have a Health Risk Assessment (HRA) prepared by a qualified consultant to accurately evaluate potential impacts of that project (Attachment 14). The HRA prepared by ECORP Consulting, Inc. evaluated the potential health risks associated with toxic air contaminants (TAC) and DPM resulting from implementation of the truck yard project. The HRA was prepared in accordance with the requirements of the state Office of Environmental Health Hazard Assessment (OEHHA) with consultation from FRAQMD to determine if health risks were likely to occur. The nearest sensitive receptors to the project site, which are identified in the HRA, include a residence located on an adjacent parcel to the east, a residence located approximately 75 feet to the north across Walnut Avenue, a residence located approximately 300 feet to the northeast across Walnut Avenue, and Barry Elementary School located on an adjacent parcel to the south. The HRA concludes that impacts related to health risk from the truck yard project would be less than significant. It is noted that the previous HRA was prepared for a large general truck yard, which is much more intensive than uses that are currently listed as permitted uses under the proposed CM zone. Therefore, the project will not expose sensitive receptors to substantial pollutant concentrations, and the impact is considered less than significant.

d) **Less than significant impact.** This project will not result in other emissions, such as those leading to odors, adversely affecting a substantial number of people. FRAQMD has identified various types of facilities that are known sources of odors, including wastewater treatment plants, sanitary landfills, painting/coating operations, food processing facilities, and green waste and recycling operations. The proposed project is not anticipated to result in any of these types of odor-generating facilities. Therefore, the project will not be anticipated to generate odors that will affect a substantial number of people and the impact will be less than significant.

(Feather River Air Quality Management District, Indirect Source Review Guidelines. 2010)
(County of Sutter, General Plan 2030. 2011)

(ECORP Consulting, Inc., Health Risk Assessment. August 2019)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the project:				
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 Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
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 Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
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?	☐	☐	☐	☒

Responses:

a), d) **Less than significant impact.** This project will not 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 Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS). This project will also not 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 a native wildlife nursery site. The California Natural Diversity Database (CNDDB) is a positive-sighting database managed by CDFW. The CNDDB indicates the veiny monardella (*Monardella venosa*) and Hartweg's golden sunburst (*Pseudobahia bahiifolia*) as potentially occurring somewhere in the greater Yuba City/Marysville area, but does not provide a specific location. Further, CNDDB indicates that the Hartweg's golden sunburst is extirpated

and the veiny monardella is possibly extirpated. The CNDDB does not indicate the presence of any other species in the project area. This project was circulated to CDFW for review, and they did not provide any comments.

The project site consists of a 4.21-acre parcel located at the southeast corner of Walnut Avenue and State Highway 99. The site is developed with an existing 10,000 square foot building. Sites that have been developed are of limited use to wildlife due to the level of disturbance and are typically devoid of native plant species. There are no waterways in the project vicinity that may provide connectivity for listed species. The Feather River lies approximately 1.6 miles east of the project site. The site has been extensively disturbed due to past agricultural use and other historic activities. The project site is located adjacent to other developed parcels. The uses occurring in the area are not conducive for wildlife to locate within the project site and none have been inventoried. The project is not anticipated to significantly interfere with wildlife movement due to the fact that the site is enclosed by existing perimeter vegetation and fencing and is located adjacent to State Highway 99. As a result, a less than significant impact is anticipated.

b) **Less than significant impact.** This project will not 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 CDFW or USFWS. There are no streams or rivers in the immediate vicinity. The Feather River lies approximately 1.6 miles east of the project site. No riparian habitat or other sensitive natural community is known to exist onsite or near the property. Therefore, a less than significant impact is anticipated.

c) **Less than significant impact.** This project will not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means because there are no known wetlands located within the project site or vicinity. No wetlands are located at the project site according to the National Wetlands Inventory of the U.S. Fish and Wildlife Service. A less than significant impact is anticipated.

e) **Less than significant with mitigation incorporated.** This project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Sutter County has not adopted a tree preservation ordinance; however, General Plan Policy ER 3.7 is in place to preserve native oak trees when possible, through the review of discretionary development projects and activities. Policy ER 3.7 also requires a reduction in the loss of oak trees through consideration of tree mitigation and replanting programs. Section 21083.4 (b) of the State Public Resources Code allows counties to determine the methods in which applicants can mitigate potentially significant effects on oak woodland populations. These options for mitigation include the active conservation of oak woodlands through conservation easements, the planting and replanting of an appropriate number of trees, contributing funds to the Oak Woodlands Conservation Fund (which is further specified under Section 1363 of the Fish and Game Code), or other mitigation measures provided by the County. There are existing oak trees on the perimeter of the property as shown on the landscape plan. While these oak trees are not anticipated or proposed to be removed to accommodate any future use, the following mitigation measure is included to reduce potential impacts.

> **Mitigation Measure No. 3 (Biological Resources):** Prior to issuance of any future entitlements at the site, all oak trees five inches in diameter or greater in size (when measured at breast height) shall be identified on the project site and their locations mapped. Any oak trees meeting this requirement that are to be removed as a result of

construction shall be replaced at a ratio of three trees to one and identified on the plans. A note shall be placed on the plans stating that no structures shall be constructed or grading permitted within the drip line of any oak trees to be saved and new oak trees planted for mitigation. As an alternative, the applicant may contribute funds to the Oak Woodlands Conservation Fund, per Section 21083.4 (b) of the State Public Resources Code.

f) **No impact.** The proposed project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because a plan has not been adopted that affects this project site. As a result, not impacts are anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)
(California Department of Fish and Wildlife, California Natural Diversity Database)
(U.S. Fish and Wildlife Service, National Wetlands Inventory, 2026)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Responses:

a-c) **Less than significant with mitigation incorporated.** The proposed project will not cause a substantial adverse change in the significance of a historical resource or archaeological resource pursuant to §15064.5. Also, this project will not disturb any human remains, including those interred outside of dedicated cemeteries. In Section 4.6 of the General Plan Technical Background Report, Figure 4.6-1 does not list the property as being a historic site. There are no unique features or historical resources located on the project site and the property is not located near a cemetery. The project site is not located within the vicinity of the Bear River or Sacramento River. The Feather River lies approximately 1.6 miles east of the project site. There is no evidence on the project site indicating that archaeological resources exist. Furthermore, the property has been extensively disturbed to varying depths due to historic agricultural operations, previous activities, and existing development. Therefore, no significant impacts to historical or archaeological resources are anticipated with this project.

California Health and Safety Code §7050.5 states that when human remains are discovered, no further site disturbance can occur until the County Coroner has made the necessary findings as to the origin of the remains and their disposition pursuant to Public Resources Code Section

5097.98. If the remains are recognized to be those of a Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours.

Public Resources Code §5097.98 states that whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, it shall immediately notify the most likely descendent from the deceased Native American. The descendants may inspect the site and recommend to the property owner a means for treating or disposing the human remains. If the Commission cannot identify a descendent, or the descendent identified fails to make a recommendation, or the landowner rejects the recommendation of the descendent, the landowner shall rebury the human remains on the property in a location not subject to further disturbance.

The subject property has not been previously surveyed for cultural resources. There is always the possibility that important unidentified cultural materials could be encountered on or below the surface during the course of future development activities. The following mitigation measure is included in the event of inadvertent discovery of cultural resources.

> **Mitigation Measure No. 4 (Cultural Resources):** Should any subsurface cultural resources, paleontological resources, or human remains be encountered during any future construction, all work within 100 feet of the discovery shall be stopped and the area protected from further disturbance until the discovery is evaluated. The appropriate County personnel shall be notified immediately. The resources shall be examined by qualified personnel to determine their significance and develop appropriate protection and preservation measures. If human remains are discovered, they shall be treated in compliance with applicable state and federal laws, including notifying the County Coroner and consulting with the California Native American Heritage Commission, as appropriate.

(County of Sutter, General Plan 2030. 2011)
(County of Sutter, General Plan Technical Background Report. 2008)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Responses:

a-b) **Less than significant impact.** The proposed project will not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. No new development or new uses are proposed at this time. Future uses are not anticipated to require the creation of a new

substantial source of energy generation. Construction of the utilities and drainage infrastructure will require the consumption of diesel and gasoline to power construction equipment and delivery trucks. Construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency, combined with state regulations limiting engine idling times, will further reduce transportation fuel demand during future project construction. There are no unusual construction processes that will be more energy-intensive than are used for comparable activities, and no equipment will be used that will not conform to current emissions standards and related fuel efficiencies. For these reasons, it is expected that fuel consumption associated with future project construction will not be any more inefficient, wasteful, or unnecessary than other similar projects of this nature within Sutter County.

Future construction and uses are required to comply with the energy requirements of the State Building Codes, including California's energy code, Title 24, and will not result in a wasteful, inefficient, or unnecessary consumption of energy resources because the energy efficiency standards of the State of California are some of the most stringent codes in the nation. A less than significant impact is anticipated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause 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? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Responses:

a) **Less than significant impact.** This project will not directly or indirectly cause potential substantial adverse effects from rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides because the subject property is not located in an Alquist-Priolo Earthquake Fault Zone and will not exacerbate existing seismic hazards in the region. Figure 5.1-1 in the General Plan Technical Background Report does not identify any active earthquake faults in Sutter County as defined by the California Mining and Geology Board. 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 southeastern corner of the County, just east of where Highway 70 enters the County (Figure 5.1-1 of the General Plan Technical Background Report). Both faults are listed as non-active faults but have the potential for seismic activity. The project site is relatively level with no significant slope except for the elevation bench on the east side of the property and is not in an area where any documented faults exist. A future project will involve minor grading activities that will not exacerbate existing seismic hazards in the region and is unlikely to be affected by earthquakes, liquefaction, or landslides in the region. As a result, a less than significant impact is anticipated.

b) **Less than significant with mitigation incorporated.** This project will not result in substantial soil erosion or the loss of topsoil. According to the USDA Soil Conservation Service Soil Survey of the County, on-site soil consists of Liveoak sandy clay loam, 0 to 1 percent slopes. This soil is unlikely to cause erosion because runoff is very slow with only a slight hazard of water erosion. The General Plan Technical Background Report indicates that soils with a 0 to 9 percent slope have slight erodibility. The project site is relatively level and has been graded in the past to accommodate the existing structure and historic agricultural use. Severe erosion typically occurs on moderate slopes of sand and steep slopes of clay subjected to concentrated water runoff. These conditions do not exist at the site.

Subsequent grading and future development at the project site has the potential to result in soil erosion. If the project size is more than one acre, the applicant is required to prepare a Storm Water Pollution Prevention Plan (SWPPP) and obtain a National Pollution Discharge Elimination System (NPDES) General Construction Permit through the Regional Water Quality Control Board (RWQCB) to ensure that soil is not released in storm water from the project site. This will include Best Management Practices designed to prevent sediment and other pollutants from contacting stormwater moving off-site into receiving waters during the construction process. To ensure that a less than significant impact occurs, the following mitigation measure is included.

> **Mitigation Measure No. 5 (Geology and Soils):** STORM WATER QUALITY PROTECTION – DURING CONSTRUCTION.

SWPPP – Prior to construction the applicant shall prepare and submit a Storm Water Pollution and Prevention Plan (SWPPP) if the project's cumulative disturbed area is one acre or more, to be executed through all phases of grading and project construction. The SWPPP shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. These measures shall be consistent with the County's Improvement Standards and Land Grading and Erosion Control Ordinance and the requirements of the National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. The SWPPP shall be submitted to the County for review and to the Central Valley Regional Water Quality Control Board (CVRWQCB) as required by the NPDES General Permit in effect during construction. During construction, the applicant shall implement actions and procedures established to reduce the pollutant loadings in storm drain systems. The project applicant shall implement BMPs in accordance with the SWPPP and the County's Improvement Standards. The project applicant(s) shall submit a state storm water permit Waste Discharger Identification (WDID) number for each construction project.

If the Project cumulative disturbed area is less than one acre the applicant's engineer shall submit an engineer stamped letter along with a calculation certifying the cumulative disturbed area is less than one acre.

NPDES GENERAL CONSTRUCTION PERMIT - If the project size is one acre or more, the applicant shall file a Notice of Intent (NOI) with the Central Valley Regional Water Quality Control Board (CVRWQCB), prior to construction, to obtain coverage under the California State Water Resources - General Construction Activity Storm Water Permit. Permits are issued by the State Water Resources Control Board, which can provide all information necessary to complete and file the necessary documents. Applicant shall comply with the terms of the General Construction Permit, the County's ordinances, and the NPDES Waste Discharge Requirements for the Sutter County Phase II NPDES Permit.

c) **Less than significant impact.** This project is not 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. As stated above in b), soil at the site has a 0 to 1 percent slope with only a slight hazard of water erosion. The General Plan Technical Background Report indicates that soils with a 0 to 9 percent slope have slight erodibility. In addition, the project is not located in the Sutter Buttes, the only area identified by the General Plan Technical Background Report as having landslide potential. A less than significant impact is anticipated.

d) **Less than significant impact.** This project is not located on expansive soil creating substantial direct or indirect risks to life or property. The soil type on the project site, as stated above in b), has a low to moderate shrink-swell potential. All future construction is required to comply with the current adopted California Building Code, specifically Chapter 18 for soils conditions and foundation systems, to address potential expansive soils that may require special foundation design, a geotechnical survey, and engineering for foundation design. The Sutter County Building Division will implement these standards as part of any future building permit process. A less than significant impact is anticipated.

e) **Less than significant impact.** This project does not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are

not available for the disposal of wastewater. Properties in the area of the project rely on the use of on-site septic tanks and leach field systems for the disposal of wastewater, as there is no sewer system available in the area. The parcel was previously determined to be capable of supporting an onsite septic system when it was part of a previous subdivision map. The property has an existing septic system/leach field located west of the shop building.

The Development Services Environmental Health Division reviewed this project and stated that the existing, abandoned septic system does not meet current standards for connection to any dwelling that may be proposed in the future and shall not be used for commercial purposes. The septic tank will be required to be destroyed under permit by Environmental Health. Soil testing has not been conducted to determine suitability for onsite sewage disposal that meets Sutter County Onsite Sewage Treatment and Disposal Ordinance. At the time a septic system is needed, soil testing will be required with application and fee submitted to Environmental Health. Depending on soil test results, the proposed 10,000 square foot septic replacement area may need to be increased. An authorized professional will be required to design any septic system proposed for commercial use. A septic permit application, design, and fee will be required prior to any septic system installation.

Any new septic systems will require evaluation and approval by the Environmental Health Division to ensure compliance with wastewater standards. With compliance with all Environmental Health Division regulations, a less than significant impact is anticipated.

f) **Less than significant impact.** The proposed project will not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. There are no known unique paleontological resources or unique geologic features located in the vicinity of the project. Furthermore, the property has been extensively disturbed to varying depths due to historic agricultural operations, previous activities, and existing development. A less than significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)
(USDA Soil Conservation Service, Sutter County Soil Survey. 1988)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have 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?	☐	☐	☒	☐

Responses:

a) **Less than significant with mitigation incorporated.** This project will not generate additional greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. The Sutter County Climate Action Plan (CAP) was prepared and

adopted in 2010 as part of the General Plan to ensure compliance with Assembly Bill (AB) 32, the Global Warming Solutions Act. Sutter County's CAP includes a greenhouse gas (GHG) inventory, an emission reduction target, and reduction measures to reach the target. As part of the CAP, the County adopted GHG screening tables, whereby if a project with a proposed building can qualify with 100 points, the project can be considered less than significant under CEQA. Small projects with no proposed development and minor levels of GHG emissions typically cannot achieve the 100-point threshold and therefore must quantify GHG emission impacts using other methods, an approach that consumes time and resources with no substantive contribution to achieving the CAP reduction target.

Since the adoption of the CAP, further analysis to determine if a project can be too small to provide the level of GHG emissions reductions expected from the screening tables or alternative emissions analysis methods has been performed. In that study, emissions were estimated for each project within the Governor's Office of Planning and Research (OPR) database. The analysis found that 90 percent of carbon dioxide equivalent (CO_2e) emissions are from CEQA projects that exceed 3,000 metric tons CO_2e per year. Both cumulatively and individually, projects that generate less than 3,000 metric tons CO_2e per year have a negligible contribution to overall emissions. Sutter County has concluded that projects generating less than 3,000 metric tons of CO_2e per year are not required to be evaluated using Sutter County's screening tables. Such projects require no further GHG emissions analysis and are assumed to have a less than significant impact.

The north portion of the site is developed with an existing 6,300 square foot metal shop building with an attached 3,700 square foot lean-to (10,000 square feet total). No new development or change of use on the property is proposed at this time; however, future development of this property is required to comply with the Climate Action Plan. If emissions associated with this proposed project do not exceed 3,000 metric tons, as identified by the GHG Pre-Screening Thresholds, no further analysis will be required as the proposed project is considered less than significant under CEQA. If the proposed project does exceed 3,000 metric tons of CO_2e and the use proposes a building, the project may utilize the County's adopted GHG screening table and qualify with 100 points. The project can be considered less than significant under CEQA and will not be required to quantify their individual project emissions. Where a project cannot obtain 100 points using the screening tables or the project applicant chooses to do their own analysis of GHG emissions, the project is required to quantify its unmitigated emissions and provide a 27 percent reduction of those emissions in order to be considered less than significant.

The following mitigation measure is required to ensure future development and use of the property will comply with the adopted Climate Action Plan:

> **Mitigation Measure No. 6 (Greenhouse Gas Emissions):** Prior to development and use of the property the applicant shall demonstrate compliance with the Sutter County Climate Action Plan by providing information indicating compliance with one of the following: 1) the proposed development meets the thresholds identified by the GHG Pre-Screening Thresholds; 2) buildings built or placed on the property shall be constructed using materials and techniques that obtain 100 points on the County's Greenhouse Gas Emissions screening table; 3) a qualified consultant shall prepare an analysis of GHG emissions, to demonstrate other acceptable means of compliance with the Climate Action Plan.

b) **Less than significant impact**. This project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The project

is within the boundaries of the Feather River Air Quality Management District (FRAQMD), which has not individually adopted any plans or regulations for reducing greenhouse gas emissions. The County has adopted a Climate Action Plan (CAP) that details methods to reduce greenhouse gas emissions. No development or change of use is proposed by the project as this time; however, with the mitigation measure discussed in Section a) above, future development of this parcel will not conflict with the Climate Action Plan. A less than significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)
(County of Sutter, General Plan 2030 Climate Action Plan. 2011)
(County of Sutter, Greenhouse Gas Pre-Screening Measures for Sutter County. June 28, 2016.)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
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 § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
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 or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Responses:

a-b) **Less than significant impact.** This project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or the creation of 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. The Development Services Environmental Health Division is the Certified Unified Program Agency (CUPA) for Sutter County with responsibility for the administration of the "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program). Elements of this program include hazardous waste generators and hazardous waste on-site treatment, underground storage tanks, above-ground storage tanks, hazardous material release response plans and inventories, risk management and prevention program, and Uniform Fire Code hazardous materials management plans and inventories. All uses involving the storage and handling of hazardous materials are monitored by CUPA. CUPA has reviewed this project and stated that they had no comments, but they will be able to comment on future uses that require Design Review.

Any future use or business that uses, generates, processes, produces, treats, stores, emits, or discharges a hazardous material in quantities at or exceeding 55 gallons, 500 pounds, or 200 cubic feet (compressed gas) at any one time in the course of a year are required to submit a Hazardous Materials Business Plan (HMBP). The primary purpose of the HMBP is to provide readily available information regarding the location, type, and health risks of hazardous materials to emergency response personnel, authorized government officials, and the public. CUPA will review any future uses and determine if a HMBP is required.

All activities and uses must comply with State and County laws and regulations pertaining to the handling and disposal of all hazardous or acutely hazardous materials. The discharge of fuels, oils, other petroleum products, detergents, cleaners, chemicals, or compost materials to the surface of the ground or to drainage ways on or adjacent to the site is prohibited. CUPA responsibilities include: inspecting hazardous material handlers and hazardous-waste generators to ensure compliance with laws and regulations; ensuring the preparation and implementation of Business Plans, emergency response plans, and accident prevention plans for businesses that handle hazardous materials; providing 24-hour response to emergency incidents involving hazardous materials or wastes; and conducting investigations and taking enforcement action as necessary against anyone who disposes of hazardous waste illegally or otherwise manages hazardous materials or wastes in violation of federal, state, or local laws and regulations. The hazardous materials control and safety programs and available emergency-response resources, along with periodic inspections to ensure regulatory compliance, reduce the potential risk of upset and exposure to hazardous materials. Should a future use require compliance with the CUPA program, the facility will undergo periodic inspections during which it will be verified that all materials are being handled, stored, and disposed of property. Therefore, a less than significant impact is anticipated.

c) **Less than significant impact.** This project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The nearest proximate school is Barry Elementary School, which is located on an adjoining parcel directly south of the project site. There are no other existing schools or proposed schools within one-quarter mile of the project site. This project is located within the Yuba City Unified School District. The Yuba City Unified School District has reviewed this project and had no comments. They will have a chance to comment on future commercial or industrial projects that require Design Review.

As stated previously in the Air Quality section, a Health Risk Assessment (HRA) was prepared by ECORP Consulting, Inc. to assess air quality health risks from a previously proposed large general truck yard at this site. As determined by the HRA, impacts related to health risk from heavy trucks will be less than significant at Barry Elementary School. It is noted that the previous HRA was prepared for a large general truck yard, which is much more intensive than uses that are currently listed as permitted uses under the proposed CM zone. Therefore, a less than significant impact is anticipated.

d) **No impact.** This project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5. As a result, the project will not create a hazard to the public or the environment; therefore, no impact is anticipated.

e) **No impact**. This project is not 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; therefore, this project will not result in a safety hazard or excessive noise for people residing or working in the project area. The nearest public airport is the Sutter County Airport, which is located over three miles northeast of the project site. Due to the project's distance from these facilities, no impact is anticipated.

f) **Less than significant impact.** This project will not impact the implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan because the project site has adequate frontage on Walnut Avenue, which is of sufficient size to not impede necessary emergency responses. No new development or use on the property is proposed at this time. This project is not anticipated to result in a unique or unusual use or activity that will impair the effective and efficient implementation of an adopted emergency response or evacuation plan. At the time of development, the parcel will be required to have access meeting fire standards and obtain an encroachment permit for a driveway constructed to commercial or industrial standards; therefore, a less than significant impact is anticipated.

g) **Less than significant impact.** This project will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. The General Plan indicates the Sutter Buttes and the "river bottoms," or those areas along the Sacramento, Feather, and Bear Rivers within the levee system, are susceptible to wildfires since much of the areas inside the levees are left in a natural state, thereby allowing combustible fuels to accumulate over long periods of time. The area has existing fire protection services. Since this property is not located in the Sutter Buttes or "river bottom" areas, a significant risk of loss, injury, or death associated with wildland fires as a result of the proposed project is not anticipated and is considered less than significant.

(County of Sutter, General Plan Technical Background Report. 2008)
(California Department of Toxic Substances Control, Hazardous Waste and Substances Site List - Site Cleanup (Cortese List). 2026)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
discharge requirements or otherwise substantially degrade surface or ground water quality?				
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site;	☐	☒	☐	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☒	☐	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☒	☐	☐
iv) Impede or redirect flood flows?	☐	☒	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Responses:

a) **Less than significant impact.** This project will not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. The property has an existing septic system/leach field. The septic tank will be required to be destroyed under permit by the Environmental Health Division. No new development or change of use on the property is proposed at this time. Any new septic systems will require evaluation and approval by the Environmental Health Division to ensure compliance with wastewater standards. Future development that generates wastewater is required to meet local and State requirements for wastewater disposal in effect at the time of development.

If the project size is one acre or more, the applicant is required to obtain coverage under the State Construction General Permit, under the National Pollutant Discharge Elimination System (NPDES) program (Mitigation Measure 5). This program requires implementation of erosion control measures designed to avoid significant erosion. The NPDES construction permit requires implementation of a Storm Water Pollution Prevention Program (SWPPP) that includes

storm water best management practices to control runoff, erosion, and sedimentation from the site.

This project is not expected to violate water quality standards or waste discharge requirements. Compliance with applicable requirements and water quality standards will minimize the project's impact to water quality. No aspect of the proposed project involving water quality or discharge standards will be allowed to operate until they have complied with all state and local standards. No additional mitigation is necessary, and a less than significant impact is anticipated.

b) **Less than significant impact.** This project will not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. The General Plan Technical Background Report indicates the property is provided with groundwater by the Sutter Subbasin. Water levels in the Sutter Subbasin have remained approximately 10 feet below ground surface and California's Groundwater Bulletin 118 prepared by the California Department of Water Resources indicates municipal and irrigation wells withdraw groundwater at a rate of 500-2000 gallons per minute.

The project site was historically used for agricultural purposes and was served by on-site water supplies. Water demand from the proposed project is not anticipated to be higher over the historic use of the property.

Water is proposed to be supplied by a private well. The applicant will be required to obtain permits from the Environmental Health Division for any new wells. Under the Commercial and Employment Design Checklist, any future landscaping will be required comply with the current Model Water Efficient Landscaping Ordinance prepared by the California Department of Water Resources, as required by the California Water Conservation in Landscaping Act (Government Code Section 65591 et seq.). Existing and future landscaping is not expected to use a substantial amount of groundwater.

Future uses at the site must comply with standard green building and energy efficiency standards consistent with the California Building Code and Title 24 Energy Code standards. The incorporation of green building measures, as applicable, will reduce energy and water consumption. A less than significant impact is anticipated.

c) **Less than significant with mitigation incorporated.** This project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on or off site or substantially increase the rate or amount of surface runoff in a manner resulting in flooding on or off-site. This project will also not contribute runoff water which will exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff or impede or redirect flood flows.

The Development Services Engineering Division and the state Department of Transportation (Caltrans) reviewed this project and had no comments regarding drainage. They will have a chance to comment on future commercial or industrial projects that require Design Review. There are no streams or rivers on or in the immediate vicinity of the project site that could be altered by this project. The site currently surface drains westerly. A potential future retention area is located at the south end of the property as depicted on the site plan to mitigate increased storm water runoff. No new development or change of use on the property is proposed at this time. However, future development of a commercial or industrial use will

require asphalt paving in all parking and circulation areas. The proposed project will likely result in an increase of impervious surfaces. The following mitigation measures are proposed to ensure a less than significant impact with future commercial/industrial development:

> **Mitigation Measure No. 7 (Hydrology and Water Quality):** DRAINAGE STUDY, GRADING, AND CONSTRUCTION - Prior to recordation of a map, issuance of a building, grading, or encroachment permit, the applicant shall obtain approval from the Director of a drainage study that reflects final design conditions for the proposed project per County Standards. The Drainage Study shall be completed and stamped by a Professional Engineer and determined by the County to be comprehensive, accurate, and adequate. (SCIS Section 9). All impacts to the site must be mitigated in the project area or lands acquired for mitigation by the project. Any Grading or Site Improvements shall be done per an approved plan and in accordance with Sutter County Development Standards. Plans shall be reviewed and approved for construction by the Director of Development Services prior to the start of construction.
>
> **Mitigation Measure No. 8 (Hydrology and Water Quality):** PRIVATE DRAINAGE IMPROVEMENTS - The applicant shall construct private onsite drainage ditches/basins that provide storm water retention / detention per a County Approved Drainage Study for this Project. Owner shall limit maximum discharge rates, where applicable, to pre-project "existing" conditions for peak 10- and 100-year storms per an approved onsite drainage study for the project. The drainage ditches/basins shall not be connected to the roadside swales. The applicant must obtain a grading permit from the County prior to any grading for storm water retention / detention ditches or basins. The applicant shall provide an as-built drawing of the drainage improvements, that is stamped and signed by a licensed Engineer verifying that what was constructed complies with the approved plan for the site.
>
> PRIVATE DRAINAGE FACILITIES MAINTENANCE AGREEMENT - The property owner shall enter into an agreement with Sutter County committing the property owners and all successors in interest to maintain the private drainage facilities (including on-site peak flow attenuation basins) in perpetuity in a manner to preserve storage capacity, drainage patterns, ultimate discharge points and quantities, and water quality treatment controls for stormwater discharges as identified in the drainage study and approved by Sutter County.

If the project's cumulative disturbed area is one acre or more, the applicant will be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) as a component of the General Construction Permit for storm water discharges (Mitigation Measure 5). This plan will be implemented during the construction phase of the project and will reduce erosion and stormwater pollution.

The project site is located within Flood Zone "A" according to Flood Insurance Rate Map (FIRM) No. 0603940600E, dated December 1, 2008, issued by the Federal Emergency Management Agency (FEMA). Flood Zone "A" is one of the Special Flood Hazard Areas (SFHAs) and consists of areas subject to inundation by the 1-percent-annual-chance flood event. The site is also located within a Local Flood Hazard Area (LFHA). Sutter County adopted a new LFHA map for the Yuba City Basin Area effective as of October 4, 2021. The Base Flood Elevation (BFE) was set at 47.7 feet (NAVD 1988) for this area. New structures are required to be elevated one foot above the BFE, which puts the finished floor at 48.7-feet. The existing ground elevation is estimated to be 43-44 feet (NAVD 1988) resulting in having to elevate new structures between

4.7 and 5.7 feet. No new building construction is proposed. The existing shop building is not required to be elevated if it will not violate the FEMA 50 percent rule for the value of the building. That is, the cost of the improvement will not equal or exceed 50 percent of the market value of the structure before the start of construction. The applicant will be required to comply with all provisions of the Sutter County – Floodplain Management Ordinance and FEMA regulations. A less than significant impact is anticipated with the proposed mitigation measures incorporated into the project.

d) **Less than significant impact.** This project will not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. No new development or change of use on the property is proposed at this time. As stated above in Section c), all new structures proposed in the future will be required to be elevated above the BFE. The applicant will be required to comply with all provisions of the Sutter County – Floodplain Management Ordinance and FEMA regulations. Drainage will be mitigated onsite such that the peak runoff from the property will be the same as pre-development conditions or less. This project is not anticipated to risk the release of pollutants due to project inundation in a flood hazard area.

If the project's cumulative disturbed area is one acre or more, the applicant will be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) as a component of the General Construction Permit for storm water discharges (Mitigation Measure 5). This plan will be implemented during the construction phase of the project and will reduce erosion and stormwater pollution.

There is no anticipated impact to this project site resulting from tsunamis and seiches because the land is not located adjacent to or near any water bodies of sufficient size to create such situations. A less than significant impact is anticipated.

e) **Less than significant Impact.** This project will not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The County, along with other agencies, has prepared the Sutter Subbasin Groundwater Sustainability Plan that covers most of Sutter County, including the project site. The project is not expected to interfere with implementation of the Groundwater Sustainability Plan, particularly since the project is not anticipated to generate substantial new water demand. A less than significant impact is anticipated.

(California Department of Water Resources (DWR), California's Groundwater – Bulletin 118 (Update 2003). 2003)
(County of Sutter, General Plan Technical Background Report. 2008)
(Federal Emergency Management Agency, Flood Insurance Rate Map. 2008)
(Sutter Subbasin Groundwater Management Coordination Committee, Sutter Subbasin Groundwater Sustainability Plan. 2022)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				

Responses:

a) **No impact.** This project will not physically divide an established community. The project site is located within a rural area within the unincorporated area of Sutter County. The project is located outside the Live Oak and Yuba City spheres of influence and the County's recognized rural communities. The project site lies approximately 0.5 miles south of the City of Yuba City and its current sphere of influence. This project will not modify any existing roadways that will result in a barrier to other surrounding parcels as a result of the project. This project will not result in a physical barrier that will divide a community. Physical division of an existing community will typically be associated with construction of a new highway, railroad, park, or other linear feature being constructed in a manner that will bifurcate an established neighborhood or community. This project does not propose or include such linear features or development. No impact is anticipated.

b) **Less than significant impact.** This project will not conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The County has not adopted any land use plan, policy, or regulation for the purpose of avoiding or mitigating a specific environmental effect that affects this project. The proposed project is consistent with the goals and policies of the General Plan and County Code and will not conflict with any adopted plan affecting the site. Where necessary, mitigation has been incorporated into the project and no additional mitigation measures are necessary. A less than significant impact is anticipated.

(County of Sutter, General Plan 2030. 2011)
(County of Sutter, General Plan Technical Background Report. 2008)
(County of Sutter, Zoning Code. 2024)

XII. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Responses:

a-b) **No impact.** This project will not 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 or 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 General Plan and State of California Geological Survey Special Report 245 do not list the site as having any substantial mineral deposits of a significant or substantial nature, nor is the site located in the vicinity of any existing surface mines. No impact is anticipated.

(California Department of Conservation, California Geological Survey, Special Report 245: Mineral Land Classification: Concrete Aggregate in the Greater Sacramento Area Production-Consumption Region. 2018)
(County of Sutter, General Plan Technical Background Report. 2008)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. NOISE. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or 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?	☐	☐	☐	☒

Responses:

a-b) **Less than significant impact with mitigation incorporated.** This project will not result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinances, or applicable standards of other agencies or result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels. The Sutter County General Plan Noise Element provides a basis for local policies to control and abate environmental noise and to protect the citizens of Sutter County from excessive noise exposure. The Sutter County Noise Ordinance (Article 21.5 of the Zoning Code) establishes standards and procedures to protect the health and safety of County residents from the harmful effects of exposure to excessive, unnecessary, or offensive noise. All future uses at the site are required to operate in a manner that complies with the noise ordinance.

Future construction associated with a new use at the site will result in temporary phased increases in ambient noise levels or vibrations; however, once construction is complete, ambient noise levels and vibration should return to a level that will not exceed any standards. Sutter County does not establish quantitative noise limits for construction activities occurring in the County. During project construction, exterior noise levels could affect the nearby existing

sensitive receptors in the vicinity. Per Policy N 1.6 of the County's General Plan, all project-related noise-generating construction activities within 1,000 feet of noise-sensitive uses (i.e., residential uses, daycares, schools, convalescent homes, and medical care facilities) are limited to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, 8:00 a.m. and 5:00 p.m. on Saturdays, and prohibited on Sundays and holidays unless permission for the latter has been applied for and granted by the County. To ensure compliance with General Plan Policy N 1.6, the following mitigation measure is proposed. Compliance with this mitigation measure will reduce impacts from construction noise to a less than significant level.

> **Mitigation Measure No. 9 (Noise):** During construction, the applicant shall ensure that all project related noise-generating construction activities are limited to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, 8:00 a.m. and 5:00 p.m. on Saturdays, and are prohibited on Sundays and holidays unless permission for the latter has been applied for and granted by the County.

The project site is located in close proximity to residences to the north, northeast, east, and Barry Elementary School to the south. Due to sensitive receptors being located adjacent to the project site, the applicant for the previously proposed large general truck yard was required to have a Noise Impact Assessment prepared by a qualified consultant to accurately evaluate potential noise impacts of that project. The applicant submitted a Noise Impact Assessment prepared by ECORP Consulting, Inc. (Attachment 15). It is noted that the previous Noise Impact Assessment was prepared for a large general truck yard, which is much more intensive than uses that are currently listed as permitted uses under the proposed CM zone. The nearest sensitive receptors to the project site, which are identified in the Noise Impact Assessment, include a residence located on an adjoining parcel to the east, a residence located approximately 75 feet to the north across Walnut Avenue, a residence located approximately 300 feet to the northeast across Walnut Avenue, and Barry Elementary School located on an adjoining parcel to the south.

The Noise Impact Assessment acknowledged that project activities, including initial construction of that project, would occur throughout the project site and would not be concentrated at the point closest to the nearest structure. Therefore, the center of the project site was referenced to provide a uniform representation of proposed noise sources. The adjacent residence is located approximately 150 feet east of the center of the project site. The Barry Elementary School property line is located 250 feet south of the center of the project site, with the nearest classroom located 500 feet from the center of the project site.

To quantify the existing ambient noise levels, ECORP Consulting, Inc. conducted short-term noise measurements on November 2, 2017. The noise measurement sites were representative of typical existing noise exposure immediately adjacent to the project site. The 10-minute measurements were taken between 1:45 and 2:30 p.m. Short-term (Leq) measurements are considered representative of the noise levels throughout the day. The ambient recorded noise levels near the project site ranged from 55.3 dBA to 61.0 dBA Leq. The most common noise in the project vicinity is produced by automotive vehicles (cars, trucks, buses, motorcycles). Traffic moving along nearby roadways, including Walnut Avenue and State Highway 99, produced a sound level that remains relatively constant and is part of the County's minimum ambient noise level.

Per General Plan Policy N 1.4 of the County's General Plan and Article 21.5 of the Zoning Code, noise levels from new on-site noise sources cannot exceed 55 dB between the hours of 7:00 a.m. to 10:00 p.m. and cannot exceed 45 dB between the hours of 10:00 p.m. to 7:00 a.m.

Daytime noise levels from the previously proposed large general truck were determined not to exceed 55 dB, therefore, the daytime noise impact was found to be less than significant. The previously proposed large general truck yard is much more intensive than uses that are currently listed as permitted uses under the proposed CM zone so it's reasonable to state that a new permitted use at the site will also not exceed a maximum of 45 dB between the hours of 10:00 p.m. to 7:00 a.m. As stated previously, all future uses at the site are required to operate in a manner that complies with the noise ordinance.

As previously described, a fence with vinyl slats is conceptually proposed along the eastern and southern property line. Noise levels may also be reduced by intervening barriers. According to the Federal Highway Administration (FHWA 2006), barriers contribute to decreasing noise levels when the structure breaks the "line of sight" between the source and the receiver, and a barrier such as a fence can potentially reduce noise levels by 3 dBA. As determined by the Noise Impact Assessment, a reduction of 3 dBA at the residential property to the east of the project site will reduce the exposure to levels ranging from 52.9 – 55.0, thus complying with the County daytime noise standard. It is noted that the previous Noise Impact Assessment was prepared for a large general truck yard, which is much more intensive than uses that are currently listed as permitted uses under the proposed CM zone

As discussed in the Noise Impact Assessment, the segment of State Highway 99 adjacent to the project site accommodates an average of 21,000 vehicle trips daily according to Caltrans' 2015 Traffic Counts (2016). As stated in the Transportation section below, the project site could potentially generate up to 61 more daily trips under the proposed zoning. This number of daily trips will be nominal compared to the vehicle trips currently experienced on State Highway 99, and thus, will not result in a perceptible increase in traffic noise levels. According to the 2013 Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol, a doubling of traffic on a roadway would be required in order to produce an increase of 3 dB (a barely perceptible increase). The project's contribution to cumulative noise levels is considered less than cumulatively considerable. Based on the information provided, the results of the previously prepared Noise Impact Assessment, and with the proposed mitigation incorporated, a less than significant impact is anticipated.

c) **No impact.** This project is not located within the vicinity of a private airstrip, public airport, or public use airport; therefore, it will not result in excessive noise levels for people residing or working in the project area. The nearest public airport is the Sutter County Airport, which is located over three miles northeast of the project site. There are no private airstrips located in the vicinity of the project site. Due to the project's distance from these facilities, no impact is anticipated.

(County of Sutter, General Plan 2030. 2011)
(County of Sutter, General Plan Technical Background Report. 2008)
(County of Sutter, Zoning Code. 2024)
(ECORP Consulting, Inc., Noise Impact Assessment. July 2019)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned 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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Responses:

a) **Less than significant impact.** This project will not induce substantial unplanned population growth in an area, directly or indirectly. The proposed project may result in the creation of some additional jobs to the area; however, the number of jobs resulting in people moving to the County is considered less than significant. It is anticipated that at least some employees will come from the local area; therefore, they will not create a direct increase in population. Residential development is not permitted within the CM Zone, with the exception of commercial/industrial caretaker housing and accessory dwelling units. A less than significant impact is anticipated.

b) **No impact.** This project will not displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere. The proposed project will not expand beyond the property boundaries and will not displace any housing or people. No residences currently reside at the project site. Although the project site has had residential zoning since 2006 and had a mobile home on it at one time, it has never been developed residentially. No replacement housing will be required as part of this project. No impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)
(County of Sutter, Zoning Code. 2024)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental 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:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☒	☐
iv) Parks?	☐	☐	☒	☐
v) Other public facilities?	☐	☐	☒	☐

Responses:

i) **Less than significant impact.** This project location is provided fire protection by Sutter County and is located in County Service Area (CSA) F. The nearest fire station is Oswald-Tudor (Station 8), located at 1280 Barry Road, which is at the southeast corner of State Highway 99 and Barry Road and approximately 1,300 feet south of the project site. Referral of this project was sent to the Sutter County Fire Department and they stated that prior to any occupancy or use, a proper code study will need to be provided to determine if the proposed use is in compliance with the appropriate building standards. This project is not anticipated to affect response time for fire protection services. State Highway 99 and County roads will provide adequate transportation routes to reach the project site in the event of a fire. Potential impacts to fire services will be mitigated through the collection of the County's current development impact fee for "Fire Protection." The County will collect impact fees for fire protection prior to issuance of building permits for any new uses at the site. A less than significant impact to fire services is anticipated.

ii) **Less than significant impact.** This project will not have a significant impact on police protection. Law enforcement for unincorporated portions of Sutter County is provided by the Sutter County Sheriff's Department and traffic investigation services by the California Highway Patrol. The Sheriff's Department has reviewed this project and had no comments. This project is not anticipated to affect response time for law enforcement services. Existing State Highways or County roads will provide adequate transportation routes to reach the project site in the event of an emergency. Potential impacts to the Sheriff's Department will be mitigated through the collection of the County's current development impact fee in the "Sheriff" and "Criminal Justice" impact fee categories. The County will collect impact fees for Sheriff and criminal justice prior to issuance of building permits for any new uses at the site. As a result, a less than significant impact is anticipated.

iii) **Less than significant impact.** This project is not anticipated to generate a demand for school services. This project is located within the Yuba City Unified School District. The County will collect school impact fees prior to issuance of building permits for any new uses at the site to offset potential impacts. The Yuba City Unified School District has reviewed this project and had no comments. A less than significant impact is anticipated.

iv) **Less than significant impact.** This project will not have a significant impact upon parks because it will not generate a need for additional park land or create an additional impact upon

existing parks in the region. This project will not have a significant impact on parks countywide. A less than significant impact is anticipated.

v) **Less than significant impact.** The proposed project is not anticipated to have a significant impact on other public facilities. There are a limited number of other public facilities in the area that may be impacted by this project; however, potential impacts to general government and health and social services will be mitigated through the collection of the County's current adopted development impact fees for each category listed. The County will collect impact fees prior to issuance of building permits for any new uses at the site. A less than significant impact is anticipated.

(County of Sutter, Zoning Code. 2024)
(County of Sutter, General Plan Technical Background Report. 2008)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION.				
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?	☐	☐	☒	☐

Responses:

a-b) **Less than significant impact.** This project will not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated nor will the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. There are no existing neighborhood or regional parks in the project vicinity and this project does not propose recreational facilities or require the expansion of existing recreational facilities. This project will not result in residential development, which will generate demand for recreational facilities such that new or expanded facilities will be required. As a result, a less than significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION. Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

Responses:

a) **Less than significant impact.** This project will not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. This property is located in a rural area with the City of Yuba City's southern extent located approximately 0.5 miles to the north. The project area is not substantially served by mass transit or bicycle paths. There are no designated pedestrian or bicycle routes in the project area. Given the rural location, personal vehicles will be the most likely form of transportation.

The project site is a 4.21-acre parcel located at the southeast corner of Walnut Avenue and State Highway 99. Direct access to the project site is provided by Walnut Avenue from State Highway 99. Walnut Avenue is County maintained while State Highway 99 is state maintained. An existing driveway is located approximately midway along the Walnut Avenue frontage approximately 200 feet from the stop bar on the street's westbound approach to the State Highway 99 intersection. A 45-foot-wide driveway is shown on the conceptual site plan with a proposed 45-foot-wide gate. Any future commercial or industrial use will require paved parking and circulation areas.

The County's Commercial and Employment Districts contain specific design requirements for vehicular circulation and parking. As part of any future Design Review application, the applicant will be required to provide an application and plans for the proposed use that demonstrate compliance with applicable requirements contained in the design checklist. At the time of development, the parcel will be required to have access meeting fire standards and obtain an encroachment permit for a driveway constructed to commercial or industrial standards. The Development Services Engineering Division and Caltrans reviewed this project and had no comments; however, they will have a chance to comment on any future commercial or industrial projects that require Design Review.

Walnut Avenue is a two-lane rural road that extends west and east of State Highway 99. This road is approximately 18 to 20 feet wide. This road is not designated for trucks permitted under the Surface Transportation Assistance Act (STAA). State Highway 99 extends in a north-south direction through the County and defines the principal transportation corridor connecting the County to the region. At this location, State Highway 99 is classified as a four-lane Expressway. The highway has two travel lanes in each direction, and long northbound and southbound left turn lanes are provided (i.e., 450 to 490-foot lanes). No right turn lanes (deceleration lanes) are

provided. Traffic is controlled on Walnut Avenue at this intersection by stop signs. Street lights exist on all four corners of the intersection.

The project site is zoned for estate residential use, but does not currently contain a residence. The north portion of the site is developed with an existing 6,300 square foot metal shop building with an attached 3,700 square foot lean-to (10,000 square feet total), which is proposed to remain. The existing zoning trip generation was based on the Institute of Transportation Engineers (ITE) Trip Generation Manual 11th Edition average trip generation rates for Single Family Detached Housing (ITE Code 210) as well as the existing building on the site. Existing project trip generation volumes for the site are summarized in Table 1.

A trip generation was prepared to estimate the potential trips generated by the project if the parcel was occupied by a new business consistent with the proposed zoning. The proposed zoning trip generation was based on ITE average trip generation rates for The General Light Industrial (ITE Code 110) land use. Potential project site trip generation for the proposed zoning is shown in Table 1.

Table 1. Project Trip Generation

Zoning/Use	Source	Units	Quantity	Daily	AM Peak Hour	PM Peak Hour
					Total	Total
Existing Zoning: Estate Residential (ER/ER)	Single-Family Detached Housing (ITE 210)	DU[1]	1	9	1	1
Proposed Zoning: Industrial/ Commercial (CM)	General Light Industrial (ITE 110)[3]	KSF[2]	10.0	70	7.4	9.7
			Difference	**+61**	**+6.4**	**+8.7**

Notes:
[1] Dwelling Unit (Single Family Detached)
[2] KSF = 1,000 square feet
[3] ITE Trip Generation 11th Edition average trip generation rates were used.

The general light industrial land use (Code 110) typically generates approximately 5 to 7 daily vehicle trips per 1,000 square feet of gross floor area with 0.74 AM peak hour trips per 1,000 square feet. and 0.97 PM peak hour trips per 1,000 square feet. As shown in Table 1, under the proposed zoning, the project site could potentially generate up to 61 more daily trips, 6.4 more AM peak hour trips, and 8.7 more PM peak hour trips than the existing site. These are conservative estimates of potential trip increases that could occur if the project expanded to full occupancy under the proposed new zoning and site plan.

The applicant for the previously proposed large general truck yard was required to have a Traffic Assessment prepared by a qualified consultant to accurately evaluate potential traffic impacts of that project. The applicant submitted a Traffic Assessment prepared by KD Anderson & Associates, Inc. (Attachment 16). The Traffic Assessment involved a review of the current traffic condition in the area of the project based on weekday a.m. and p.m. peak hour traffic counts, as well as an estimation of the possible additional traffic associated with that project. The total site daily trip generation from that project was expected to be approximately 100 trips. This information was used to make a determination as to the potential impacts of the project and the need for improvements. It is noted that the previous Traffic Assessment was prepared for a

large general truck yard, which is much more intensive than uses that are currently listed as permitted uses under the proposed CM zone.

As stated in the Traffic Assessment, while formal right turn lanes are not provided on State Highway 99 for vehicles turning onto Walnut Avenue, the standard 8-foot paved shoulder has been widened to approximately 20 feet at the intersection, and turn radii accommodating trucks have been provided. State Highway 99 carries an Annual Average Daily Traffic (AADT) volume of 21,200 vehicles per day in the area of the Walnut Avenue intersection north of Oswald Road.

General Plan Policy M 2.5 requires County roadway segments and intersections to maintain a Level of Service (LOS) D or better (10,600-16,400 trips per day) during peak hours and LOS C or better (7,000-10,600 trips per day) at all other times (as seen in Table 3.2-6 of the General Plan Technical Background Report). LOS “D” represents a high density but stable flow with severe restriction in speed and freedom to maneuver. LOS “C” is in the range of stable flow, but the operation of individual users is significantly affected by the interaction with others in the traffic stream. To address this General Plan policy, KD Anderson & Associates, Inc. obtained current peak hour traffic volumes for the Walnut Avenue/State Highway 99 intersection. These volumes were used to suggest current LOS and to suggest the effect of the large general truck yard project traffic on LOS. A.M. and P.M. peak hour intersection turning movement counts were made at the State Highway 99/Walnut Avenue intersection on April 23, 2019. These counts indicated that Walnut Avenue carried 78 vehicles per hour (vph) in the a.m. peak hour and 24 vph in the p.m. peak hour. Assuming 10% of the daily traffic at that time, the daily volume on Walnut Avenue east of State Highway 99 would be approximately 240 to 780 vehicles per day. This volume falls far below the LOS C threshold of 10,600 vpd and reflects a LOS A for this roadway.

The Traffic Assessment clarified that because the large general truck yard was already in operation at that time, its traffic was included in exiting traffic counts. It determined that even with the addition of 100 vehicle trips per day, this traffic to current background volumes on Walnut Avenue would still result in a total that will not reduce this roadway from its LOS A classification.

The Traffic Assessment was previously reviewed by both Caltrans and the Development Services Engineering Division and neither agency had further comments following their review. Based on the information provided and the results of the Traffic Assessment prepared for the previous large general truck yard project, a less than significant impact is anticipated.

b) **Less than significant impact.** This project will not conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b). This section of CEQA states that vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts. VMT refers to the amount and distance of automobile travel attributable to a project. VMT generally represents the number of vehicle trips generated by a project multiplied by the average trip length for those trips. OPR's Technical Advisory further clarifies that “the term ‘automobile’ refers to on-road passenger vehicles, specifically cars and light trucks.” This section also states VMT exceeding an applicable threshold of significance may indicate a significant impact. The County has not adopted a threshold of significance for VMT.

Senate Bill (SB) 743 governs the application of new CEQA guidelines for addressing transportation impacts based on VMT. Because Sutter County has not yet adopted guidelines or policies for dealing with VMT, guidance from OPR's Technical Advisory was employed to evaluate VMT impacts. Screening criteria can be used to quickly identify whether sufficient

evidence exists to presume a project will have a less than significant VMT impact without conducting a detailed study. Projects meeting at least one of the screening criteria can be presumed to have a less than significant VMT impact, absent substantial evidence that the project will lead to a significant impact.

Small projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact. As stated previously, the proposed project is estimated to generate 63 new net daily trips; these are the additional trips that are generated beyond which the site can construct per the existing zoning. In addition, the traffic study prepared in 2019 (Attachment 16) for this site for a large general truck yard stated that the total site daily trip generation is expected to be roughly 100 trips, which is still fewer than 110 trips per day. It is noted that the previous traffic study was prepared for a large general truck yard, which is much more intensive than uses that are currently listed as permitted uses under the proposed CM zone. Therefore, this project is anticipated to result in fewer than 110 additional daily vehicle trips and a less than significant impact is anticipated.

c-d) **Less than significant impact.** This project will not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) nor will it result in inadequate emergency access. The project site has adequate frontage on Walnut Avenue, which is a County maintained road. All roads in the area of the project run in a straight line. State Highway 99 and Walnut Avenue will provide adequate emergency service access to the site.

The previous traffic study (Attachment 16) reviewed potential sight distance issues and did not identify any impacts. Construction, fencing, and landscaping at all roads and intersections will be required to comply with the County's adopted improvement standards, which includes providing adequate sight distance.

No impacts have been identified by Caltrans, the Development Services Engineering Division or Fire Services indicating an increased hazard will result; however, they will have a chance to comment on any future commercial or industrial projects that require Design Review. This project will be required to comply with all County roadway safety, emergency access, and design standards, and any associated General Plan policies.

The Engineering Division stated that sufficient rights of way exists on Walnut Avenue and no additional land dedications are required by the County. At the time of development, the parcel will be required to have access meeting fire standards and obtain an encroachment permit for a driveway constructed to commercial or industrial standards. The project site will have adequate developed access on Walnut Avenue to accommodate access for emergency vehicles. A less than significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)
(County of Sutter, General Plan 2030. 2011)
(KD Anderson & Associates, Inc., Traffic Assessment. October 2019)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES.				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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:				
i) 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	☐	☐	☒	☐
ii) 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

Responses:

i-ii) **Less than significant impact.** In September of 2014, the California Legislature passed Assembly Bill (AB) 52, which added provisions to the Public Resources Code regarding the evaluation of impacts on tribal cultural resources under CEQA, and consultation requirements with California Native American tribes. In addition, Senate Bill (SB) 18 went into effect on January 1, 2005 and requires local governments to consult with Native American tribes prior to a General Plan Amendment and to provide notice to tribes during the planning process. The County initiated AB 52 and SB 18 consultation through distribution of letters to the seven (7) Native American tribes provided by the Native American Heritage Commission (NAHC), which include the Mechoopda Indian Tribe of Chico, Mooretown Rancheria of Maidu Indians, United Auburn Indian Community of the Auburn Rancheria, Strawberry Valley Rancheria, Enterprise Rancheria of Maidu Indians, Ione Band of Miwok Indians, and Wilton Rancheria. The Mooretown Rancheria responded and stated that they are not aware of any known cultural resources at this site. No requests for consultation were received from Native American tribes during the review period. The property has been extensively disturbed to varying depths due to previous historical agricultural use and more recent development and operations on the site. A less than significant impact to tribal cultural resources as a result of the project is anticipated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?				
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Responses:

a) **Less than significant impact.** This project will not require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. The property is not located in an area served by public services. Any new development or use at the project site that requires water and wastewater treatment will require a well and septic system, which will be installed under permit from the Environmental Health Division. The project is not located in an area served by a public storm water drainage facility. The site currently surface drains westerly. A potential future retention area is located at the south end of the property as depicted on the conceptual site plan to mitigate increased storm water runoff. Mitigation measures are included that require construction of private onsite drainage ditches/basins that provide stormwater retention/detention per a County approved drainage study and maintenance of these private drainage facilities. This project was reviewed by the Pacific Gas and Electric Company (PG&E) and they stated that the proposed project does not appear to directly interfere with existing PG&E facilities or impact their easement rights. Any additional utility needs will tie into existing utilities being provided to the area. The extension of electric power facilities, natural gas facilities, and telecommunication facilities are provided by private companies, none of which have voiced concerns over existing services or extensions of their services to this project site. The project site has been previously disturbed and historically used for agriculture and has no significant environmentally sensitive characteristics present such as wetlands, special status species, cultural resources, or other potentially significant issues that will result in a significant environmental impact. A less than significant impact is anticipated.

b) **Less than significant impact.** This project will have sufficient water supplies available to serve the project and reasonably foreseeable future development. The project site was historically used for agricultural purposes and was served by on-site water supplies. Water demand from the proposed project is not anticipated to be higher over the historic use of the property. Water will be supplied by a private well. Any future well will be required to obtain permits from the Environmental Health Division. Under the Commercial and Employment Design Checklist, any future landscaping will be required comply with the current Model Water Efficient Landscaping Ordinance prepared by the California Department of Water Resources, as required by the California Water Conservation in Landscaping Act (Government Code Section 65591 et seq.). Existing and future landscaping is not expected to use a substantial amount of groundwater. Future uses at the site must comply with standard green building and energy efficiency standards consistent with the California Building Code and Title 24 Energy Code standards. The incorporation of green building measures, as applicable, will reduce energy and water consumption. This project is not anticipated to substantially increase the amount of water used onsite beyond what has been historically used. As a result, a less than significant impact is anticipated.

c) **No impact.** This project will not result in a determination by a wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. This project is not located in an area that is served by a wastewater treatment provider. Individual on-site sewage disposal systems are currently the only method of providing sewage disposal for the project area. Therefore, a demand will not be placed on a local sanitary sewer system and no impact is anticipated.

d-e) **Less than significant impact.** This project will have a less than significant impact on solid waste. Solid waste from any future use of the site will be disposed of through the local waste disposal company in a sanitary landfill in Yuba County which has sufficient capacity to serve this project. Project disposal of solid waste into that facility will comply with all federal, state, and local statutes and regulations related to solid waste, including recycling. As a result, a less than significant impact is anticipated.

(County of Sutter, General Plan Technical Background Report. 2008)

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Responses:

a-d) **No impact.** The subject property is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, no impacts are anticipated with respect to wildfire hazard.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Responses:

a) **Less than significant impact.** No environmental effects were identified in the initial study which indicate this project will have the ability 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 examples of the major periods of California history or prehistory. Mitigation measures are proposed in the biological resources section to mitigate impacts on biological resources. A

mitigation measure is proposed in the cultural resources section to protect possible disturbance of human remains should they be encountered.

b) **Less than significant impact.** No environmental effects were identified in the initial study which indicates the project would have impacts that are individually limited, but cumulatively considerable. This project will generate temporary emissions associated with future construction such as grading, drainage, and utilities. Standard mitigation measures for project construction emissions have been incorporated to minimize construction related emissions; however, the project is not anticipated to contribute to cumulative significant impacts with regard to air quality. In rural areas, noise impacts generally are localized in character and typically do not have cumulative effects. A mitigation measure is proposed in the noise section to reduce noise impacts.

c) **Less than significant impact**. No environmental effects which will cause substantial adverse effects on human beings either directly or indirectly were identified in the initial study. Mitigation measures have been incorporated in the project design to reduce potentially significant impacts to less than significant.

MITIGATION MONITORING PROGRAM – Project #U24-0017 (Singh)

Mitigation Measure	Timing	Monitoring Agency
Mitigation Measure No. 1 (Agriculture and Forestry Resources): Consistent with Sutter County Zoning Code Article 19, a permanent agricultural buffer is required for any new or expanded non-agricultural use or development at the project site. A 300-foot agricultural buffer setback shall be maintained on the west half of the project site as depicted on the conceptual site plan. The buffer setback shall be measured from the property line of the adjacent agricultural property to any new or expanded non-agricultural use or structure. The buffer shall not apply to the existing building previously permitted on the site or to accessory uses and structures such as septic areas, fencing, parking lots, drainage facilities, storage buildings, equipment storage, ground mounted solar facilities, and other similar uses and structures. The buffer shall be shown on the site plan for a new use or structure. A reduction of the 300-foot agricultural buffer setback may be allowed after application and approval of a Use Permit as allowed under Article 19. Buffer requirements may also be waived or subsequently terminated if adjacent AG zoned parcels have been converted to non-agricultural uses as included in Article 19.	Prior to commercial use of the site/ Ongoing	Development Services
Mitigation Measure No. 2 (Air Quality): Prior to any on-site grading, paving, or construction activities, the applicant shall submit a fugitive dust control plan to the Feather River Air Quality Management District (FRAQMD) for review and approval. The applicant shall comply with all FRAQMD standards and construction phase measures. A copy of the approved plan shall be submitted to the Development	Prior to the start of construction	FRAQMD

Mitigation Measure	Timing	Monitoring Agency
Services Department.		
Mitigation Measure No. 3 (Biological Resources): Prior to issuance of any future entitlements at the site, all oak trees five inches in diameter or greater in size (when measured at breast height) shall be identified on the project site and their locations mapped. Any oak trees meeting this requirement that are to be removed as a result of construction shall be replaced at a ratio of three trees to one and identified on the plans. A note shall be placed on the plans stating that no structures shall be constructed or grading permitted within the drip line of any oak trees to be saved and new oak trees planted for mitigation. As an alternative, the applicant may contribute funds to the Oak Woodlands Conservation Fund, per Section 21083.4 (b) of the State Public Resources Code.	Prior to issuance of any future entitlements	Development Services
Mitigation Measure No. 4 (Cultural Resources): Should any subsurface cultural resources, paleontological resources, or human remains be encountered during any future construction, all work within 100 feet of the discovery shall be stopped and the area protected from further disturbance until the discovery is evaluated. The appropriate County personnel shall be notified immediately. The resources shall be examined by qualified personnel to determine their significance and develop appropriate protection and preservation measures. If human remains are discovered, they shall be treated in compliance with applicable state and federal laws, including notifying the County Coroner and consulting with the California Native American Heritage Commission, as appropriate.	During construction	Development Services
Mitigation Measure No. 5 (Geology and Soils): STORM WATER QUALITY PROTECTION – DURING CONSTRUCTION. SWPPP – Prior to construction the applicant shall prepare and submit a Storm Water Pollution and Prevention Plan (SWPPP) if the project's cumulative disturbed area is one acre or more, to be executed through all phases of grading and project construction. The SWPPP shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. These measures shall be consistent with the County's Improvement Standards and Land Grading and Erosion Control Ordinance and the requirements of the National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. The SWPPP shall be submitted to the County for review and to the Central	Before site improvements begin and/or issuance of a grading permit. Maintain SWPPP and BMP's from start to finish of the project.	Development Services Engineering Division/ RWQCB

Mitigation Measure	Timing	Monitoring Agency
Valley Regional Water Quality Control Board (CVRWQCB) as required by the NPDES General Permit in effect during construction. During construction, the applicant shall implement actions and procedures established to reduce the pollutant loadings in storm drain systems. The project applicant shall implement BMPs in accordance with the SWPPP and the County's Improvement Standards. The project applicant(s) shall submit a state storm water permit Waste Discharger Identification (WDID) number for each construction project. If the Project cumulative disturbed area is less than one acre the applicant's engineer shall submit an engineer stamped letter along with a calculation certifying the cumulative disturbed area is less than one acre. NPDES GENERAL CONSTRUCTION PERMIT - If the project size is one acre or more, the applicant shall file a Notice of Intent (NOI) with the Central Valley Regional Water Quality Control Board (CVRWQCB), prior to construction, to obtain coverage under the California State Water Resources - General Construction Activity Storm Water Permit. Permits are issued by the State Water Resources Control Board, which can provide all information necessary to complete and file the necessary documents. Applicant shall comply with the terms of the General Construction Permit, the County's ordinances, and the NPDES Waste Discharge Requirements for the Sutter County Phase II NPDES Permit.		
Mitigation Measure No. 6 (Greenhouse Gas Emissions): Prior to development and use of the property the applicant shall demonstrate compliance with the Sutter County Climate Action Plan by providing information indicating compliance with one of the following: 1) the proposed development meets the thresholds identified by the GHG Pre-Screening Thresholds; 2) buildings built or placed on the property shall be constructed using materials and techniques that obtain 100 points on the County's Greenhouse Gas Emissions screening table; 3) a qualified consultant shall prepare an analysis of GHG emissions, to demonstrate other acceptable means of compliance with the Climate Action Plan.	Prior to the start of construction	Development Services
Mitigation Measure No. 7 (Hydrology and Water Quality): DRAINAGE STUDY, GRADING, AND CONSTRUCTION - Prior to recordation of a map, issuance of a building, grading, or encroachment permit, the applicant shall obtain approval from the Director of a drainage study that reflects final design conditions for the proposed project per County Standards. The Drainage Study shall be completed and stamped by a	Prior to issuance of a building, grading, or encroachment permit	Development Services Engineering Division

Mitigation Measure	Timing	Monitoring Agency
Professional Engineer and determined by the County to be comprehensive, accurate, and adequate. (SCIS Section 9). All impacts to the site must be mitigated in the project area or lands acquired for mitigation by the project. Any Grading or Site Improvements shall be done per an approved plan and in accordance with Sutter County Development Standards. Plans shall be reviewed and approved for construction by the Director of Development Services prior to the start of construction.		
Mitigation Measure No. 8 (Hydrology and Water Quality): PRIVATE DRAINAGE IMPROVEMENTS - The applicant shall construct private onsite drainage ditches/basins that provide storm water retention / detention per a County Approved Drainage Study for this Project. Owner shall limit maximum discharge rates, where applicable, to pre-project "existing" conditions for peak 10- and 100-year storms per an approved onsite drainage study for the project. The drainage ditches/basins shall not be connected to the roadside swales. The applicant must obtain a grading permit from the County prior to any grading for storm water retention / detention ditches or basins. The applicant shall provide an as-built drawing of the drainage improvements, that is stamped and signed by a licensed Engineer verifying that what was constructed complies with the approved plan for the site. PRIVATE DRAINAGE FACILITIES MAINTENANCE AGREEMENT - The property owner shall enter into an agreement with Sutter County committing the property owners and all successors in interest to maintain the private drainage facilities (including on-site peak flow attenuation basins) in perpetuity in a manner to preserve storage capacity, drainage patterns, ultimate discharge points and quantities, and water quality treatment controls for stormwater discharges as identified in the drainage study and approved by Sutter County.	Prior to commercial use of the site	Development Services Engineering Division
Mitigation Measure No. 9 (Noise): During construction, the applicant shall ensure that all project related noise-generating construction activities are limited to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, 8:00 a.m. and 5:00 p.m. on Saturdays, and are prohibited on Sundays and holidays unless permission for the latter has been applied for and granted by the County.	During construction activities	Development Services

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U.S. Department of Agriculture, Soil Conservation Service. 1988. *Sutter County Soil Survey*

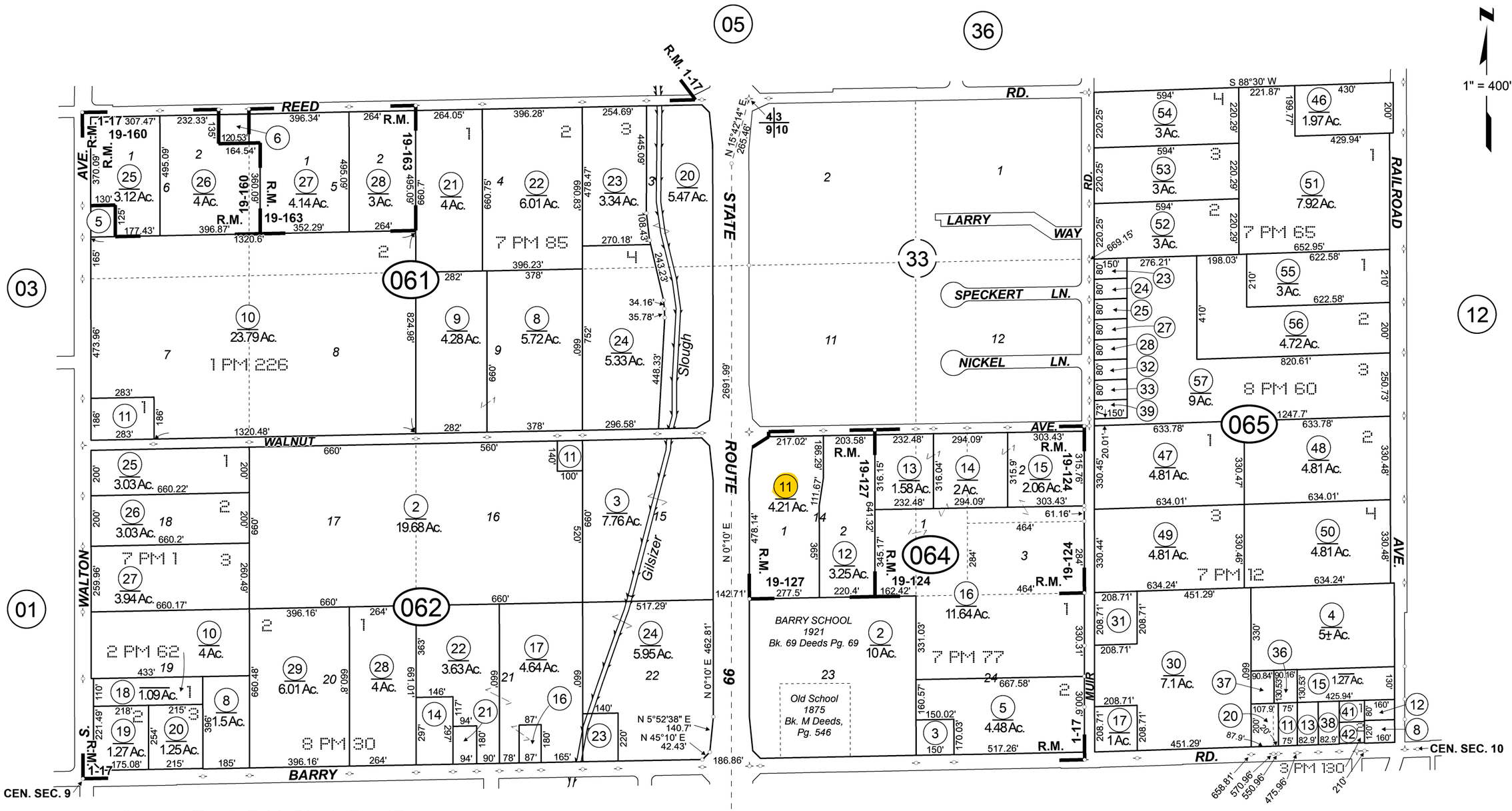
U.S. Fish and Wildlife Service. 2026. *National Wetlands Inventory*

Attachments:

1. Assessor's Map
2. Aerial Photo Exhibit - 2024
3. Existing General Plan
4. Existing Zoning
5. General Plan Amendment Exhibit
6. Rezoning Exhibit
7. Conceptual Site Plan and Landscape Plan
8. Existing Building Elevations
9. Permitted Uses within Existing ER Zone and Proposed CM Zone
10. Zoning Code Table 1500-07-3: Commercial and Employment Design Checklist
11. General Plan Figure 1-3
12. General Plan Figure 3-1
13. General Plan Yuba City Sphere of Influence South Figure A1-6
14. Health Risk Assessment for HSD Trucking Project prepared by ECORP Consulting, Inc., August 2019
15. Noise Impact Assessment for HSD Trucking Project prepared by ECORP Consulting, Inc., July 2019
16. Traffic Assessment for HSD Trucking Project prepared by KD Anderson & Associates, Inc., October 1, 2019

N.E. 1/4 SEC. 9, N.W. 1/4 SEC. 10, T.14 N., R.3 E., M.D.B.& M.

23-06



Stewart Tract, R.M. Bk. 1, Pg. 17
Subdiv. of Lots 13 and 14, Stewart Tract, R.M. Bk. 19, Pg. 124
Subdiv. of Lot 14, Stewart Tract, R.M. Bk. 19, Pg. 127
Cornerstone Subdiv., R.M. Bk. 19, Pg. 160
Bhatti Subdiv., R.M. Bk. 19, Pg. 163

ASSESSOR PARCELS SHOWN ON THIS PAGE DO NOT NECESSARILY CONSTITUTE LEGAL LOTS. CHECK WITH THE COUNTY SURVEYOR OR PLANNING DIVISION TO VERIFY.

Note - Assessor's Block Numbers & Lot Numbers Shown in Circles

Assessor's Map Bk. 23 - Pg. 06
County of Sutter, Calif.
2021

Sutter County Web Mapping - 2024 Aerial

533.3 0 266.67 533.3 Feet

NAD_1983_StatePlane_California_II_FIPS_0402_Feet

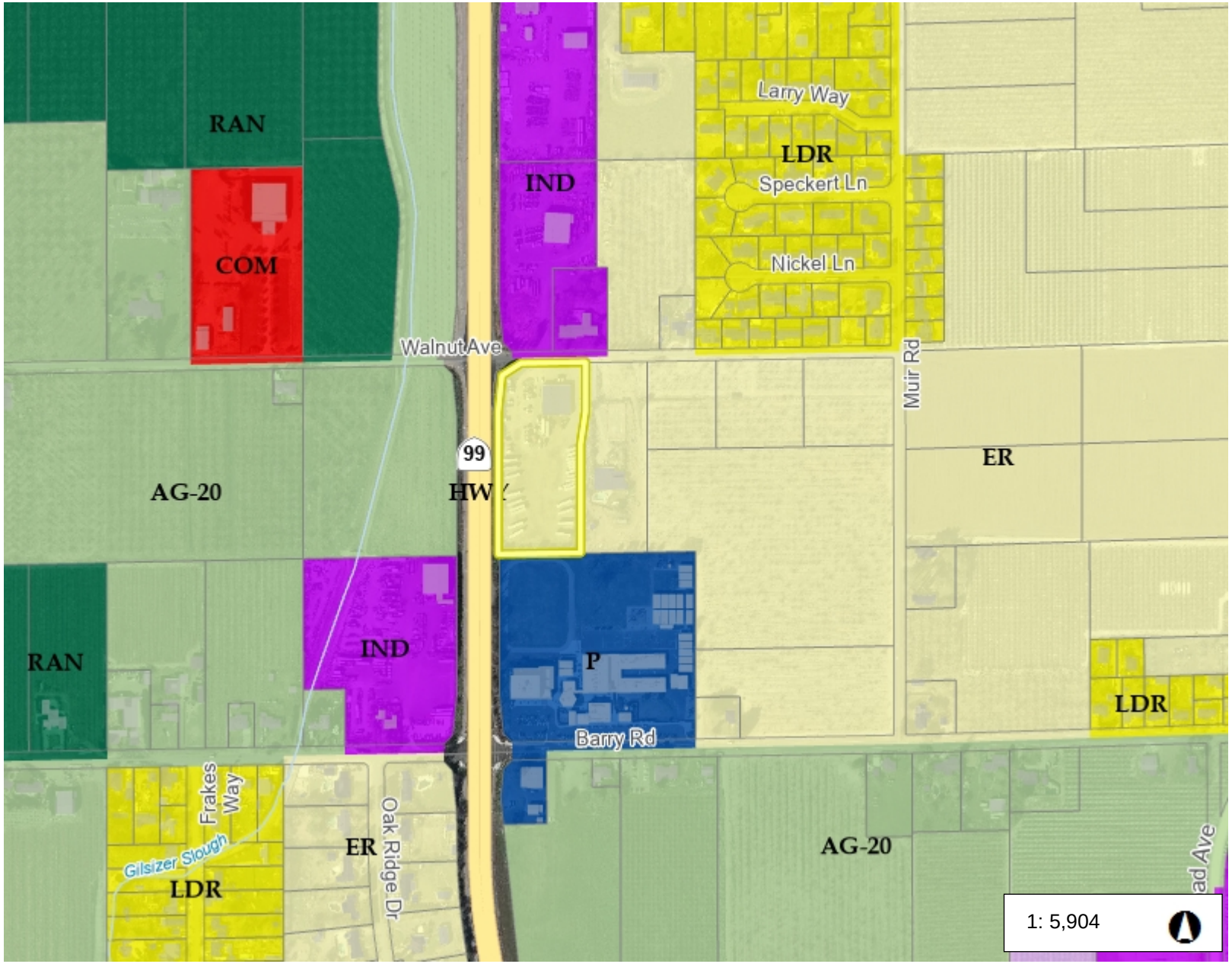
This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION

Legend

- 2024 (2')
  - Red: Band_1
  - Green: Band_2
  - Blue: Band_3
- Addresses
- Building Footprints
- Railroads
- Levees
- Open Waterways
  - Irrigation Canal
  - Creek
  - Drainage Ditch
  - River
  - State Drain
  - Ditch (reclass)
  - Natural Waterway (reclass)
  - <all other values>
- Tax Parcels
- Incorporated Cities
- Road Centerlines
  - 1
  - 3
  - 4
  - 5
  - <all other values>
- County Boundary

Geocortex® Essentials for ArcGIS Server

Existing General Plan



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Legend

- Addresses
- Building Footprints
- Railroads
- Levees
- Open Waterways
  - Irrigation Canal
  - Creek
  - Drainage Ditch
  - River
  - State Drain
  - Ditch (reclass)
  - Natural Waterway (reclass)
  - <all other values>
- Tax Parcels
- General Plan
  - AG-20
  - AG-40
  - AG-80
  - AG-RC
  - AIRPORT
  - COM
  - COM/UR
  - EC
  - ER
  - ER/UR
  - FPARC
  - HDR
  - I/C
  - IND
  - L.O.C.
  - LDR
  - LDR/UR
  - MDR

SUTTER COUNTY · CALIFORNIA ·

Geocortex Essentials for ArcGIS Server

Existing Zoning

Legend

- Addresses
- Building Footprints
- Railroads
- Levees
- Open Waterways
  - Irrigation Canal
  - Creek
  - Drainage Ditch
  - River
  - State Drain
  - Ditch (reclass)
  - Natural Waterway (reclass)
  - <all other values>
- Tax Parcels
- Zoning
  - AG
  - AG-PD
  - AG-SB
  - CM
  - CC
  - CM-PD
  - E1
  - E1-FP
  - E2
  - EC
  - ER
  - ER-PD
  - FPARC
  - GC
  - GC-PD
  - HDR
  - IDB
  - LDR

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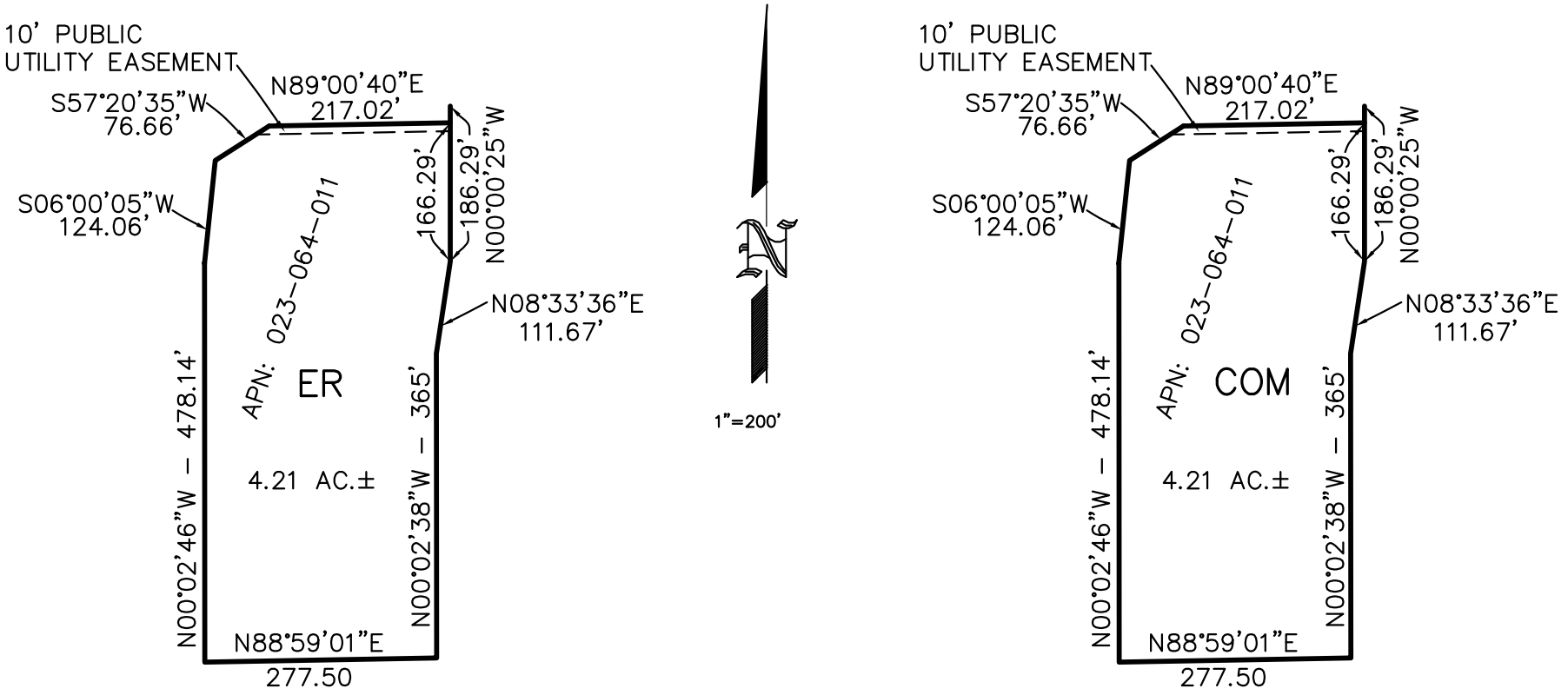
SUTTER COUNTY • CALIFORNIA •



EXISTING GENERAL PLAN

PROPOSED GENERAL PLAN

GENERAL PLAN AMENDMENT

FOR

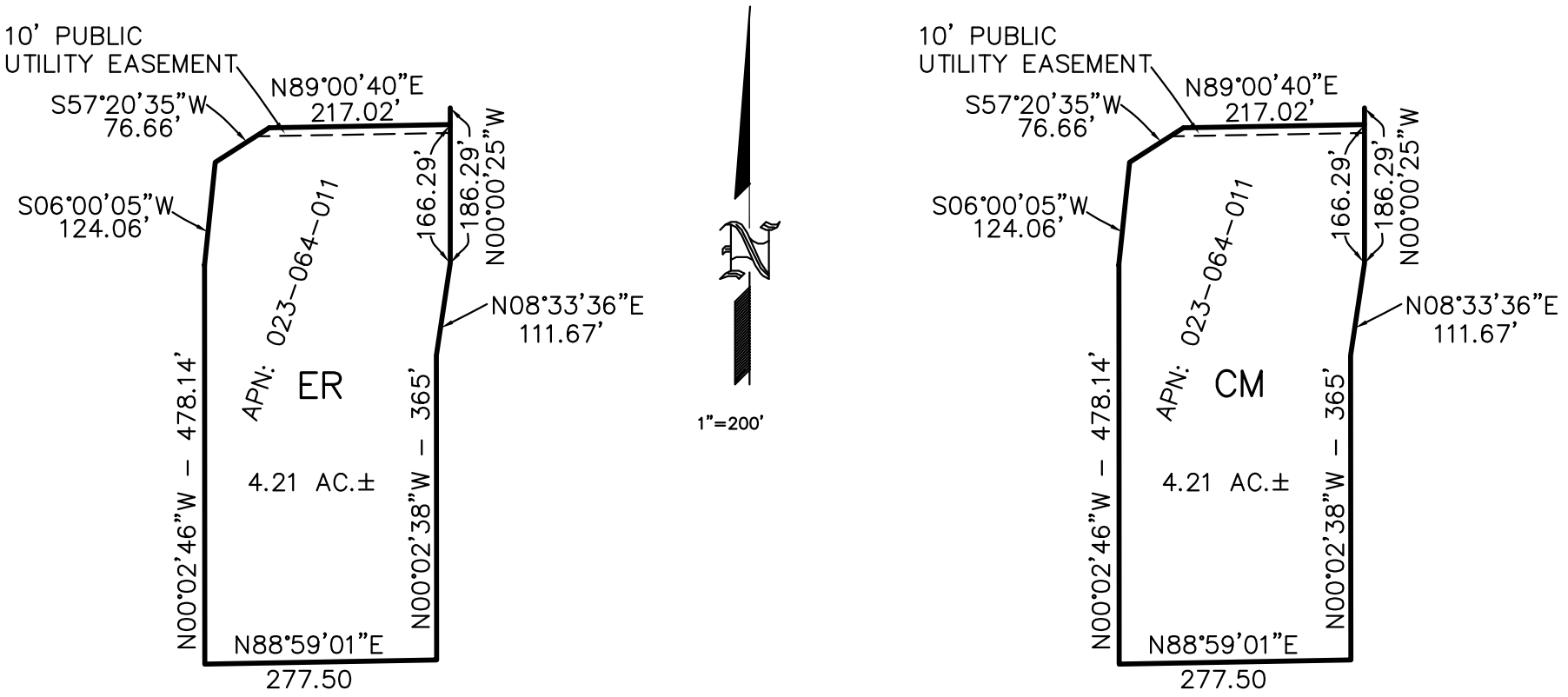
PARDEEP SINGH

SUTTER COUNTY, CALIFORNIA JANUARY 3, 2025

PREPARED BY:
LAUGHLIN AND SPENCE
1008 LIVE OAK BLVD.
YUBA CITY, CA 95991
(530) 671-1008

JOB # **247272**

SHEET 1 OF 1



EXISTING ZONING

PROPOSED ZONING

REZONING

FOR

PARDEEP SINGH

SUTTER COUNTY, CALIFORNIA JANUARY 3, 2025

PREPARED BY:
LAUGHLIN AND SPENCE
1008 LIVE OAK BLVD.
YUBA CITY, CA 95991
(530) 671-1008

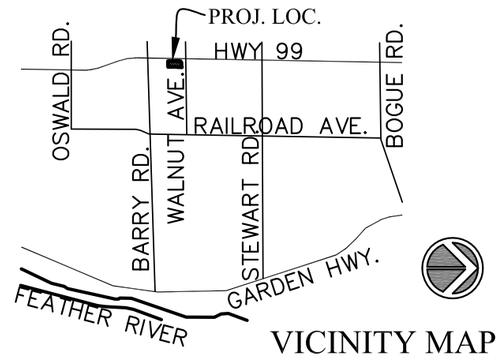
JOB # **247272**

SHEET 1 OF 1

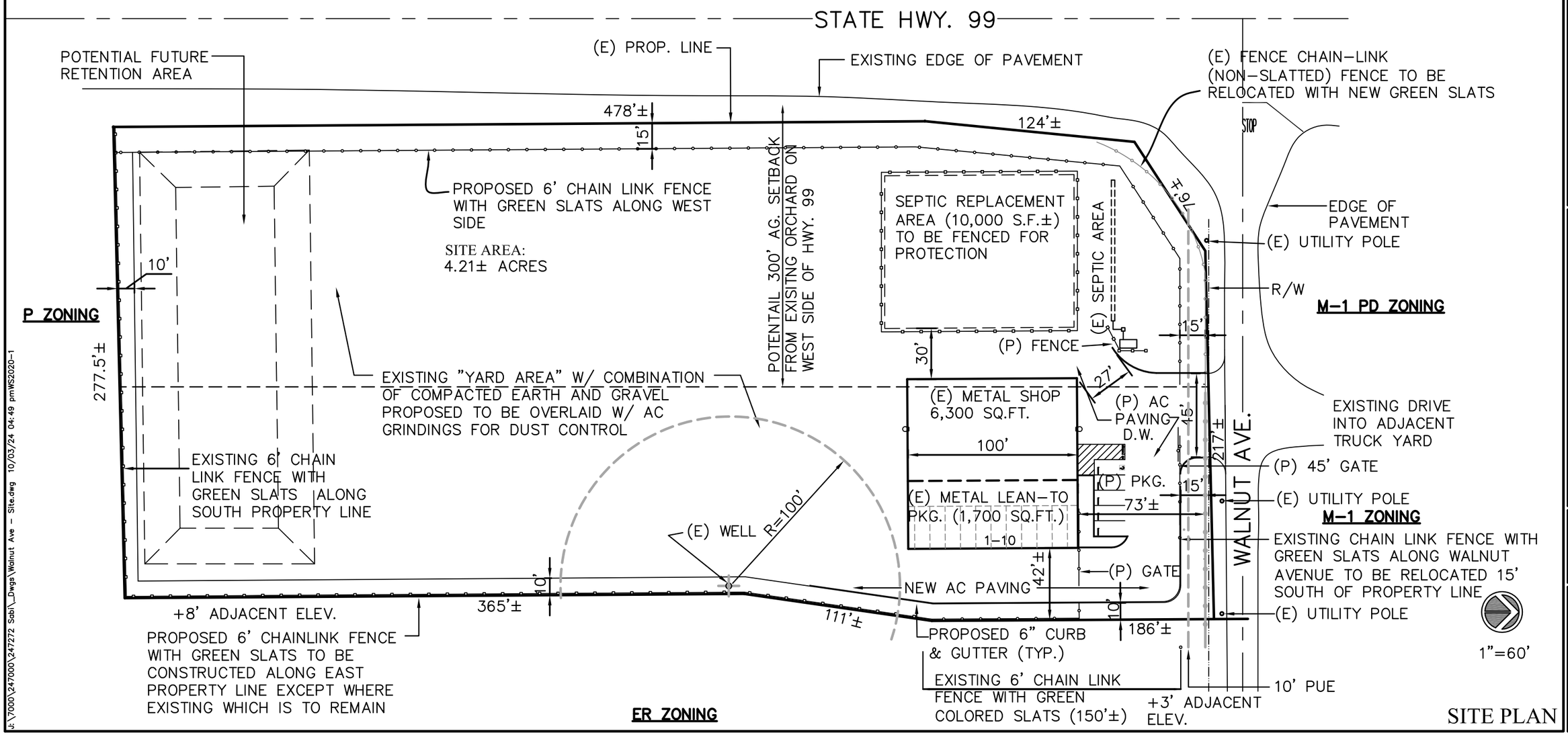
GENERAL NOTES:

1. IMPROVEMENTS SHOWN ON THIS PLAN ARE CONCEPTUAL ONLY AND SHALL BE APPROVED AS A PART OF A DESIGN REVIEW OR OTHER SUTTER COUNTY APPROVAL.
2. NEW AND EXISTING GATES SHALL MEET THE SUTTER COUNTY FIRE ACCESS ROAD AND GATE REQUIREMENTS

SHEET INDEX:



VICINITY MAP
NTS.



SITE PLAN

REVISIONS

PROPOSED SITE PLAN FOR:
PARDEEP SINGH
1280 WALNUT AVE., SUTTER COUNTY, CA
APN: 023-064-011

LAUGHLIN and SPENCE
CIVIL ENGINEERS & SURVEYORS
1008 Live Oak Boulevard
Yuba City, California 95991
(530) 671 1008
fax (530) 671 0822

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LANDSCAPE LEGEND:

EXISTING MATURE TREE (TO REMAIN)
MAJORITY ARE OAKS

EXISTING MATURE OLEANDERS (TO REMAIN)

EXISTING MATURE TREE AT TOP OF ADJACENT ELEVATION BENCH – MAJORITY ARE OAKS

EXISTING MATURE HEDGE AT TOP OF ADJACENT ELEVATION BENCH

EXISTING DEAD LANDSCAPING – REMOVED AND PROPOSED TO BE REPLACED

NEW OLEANDERS (5 GAL.)
NERIUM OLEANDER – SISTER AGNES
PLANT TO FORM SOLID SCREEN (8' O.C.)

NEW PHOTINIA (5 GAL.)
PHOTINIA FRASERI
PLANT TO FORM SOLID SCREEN (6' O.C.)

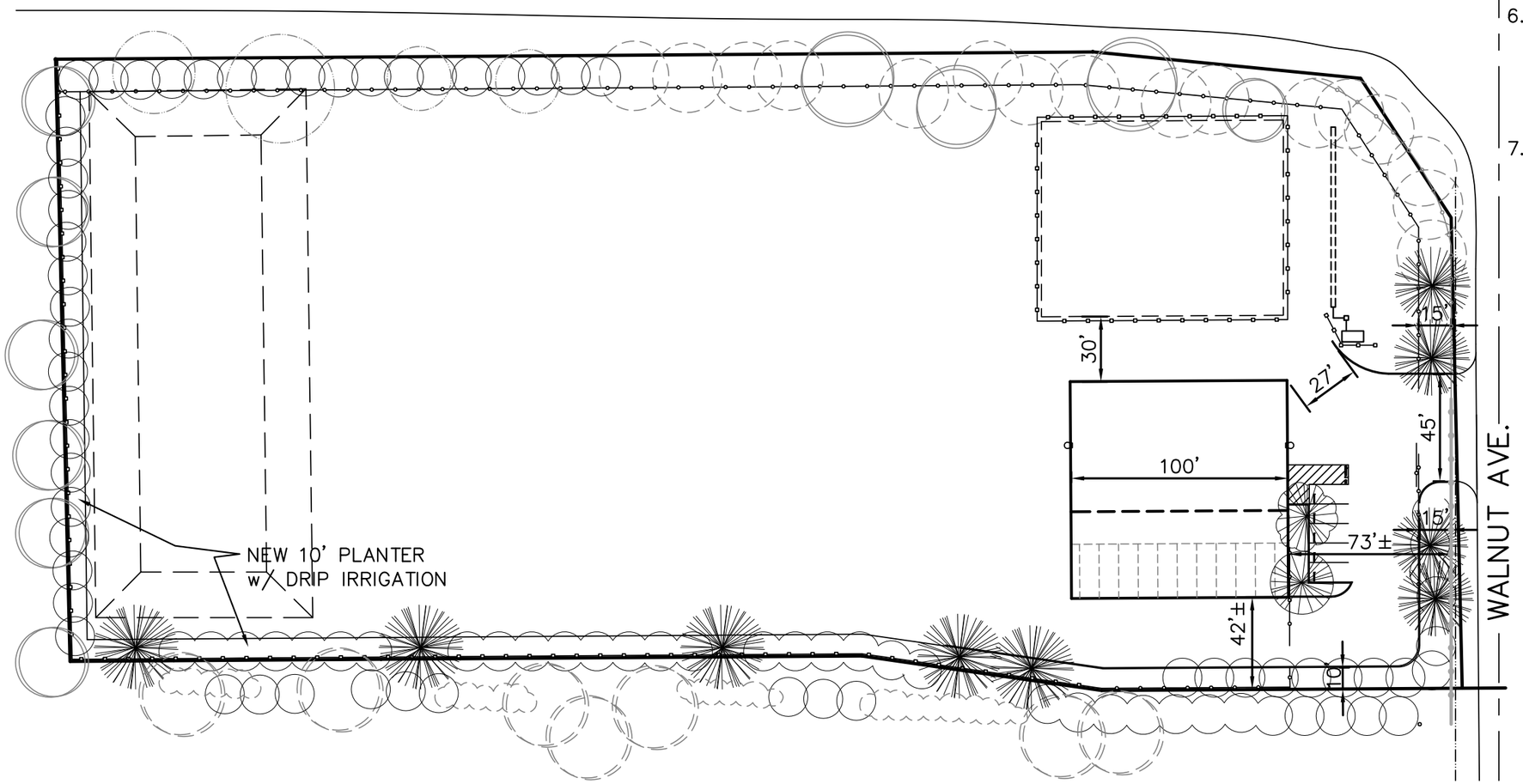
NEW VALLEY OAK TREE (15 GAL.)
QUERCUS LOBATA 35' DIA. (11 TOTAL)

HOLLY OAK (15 GAL.)
QUERCUS ILEX 30' DIA. (3 TOTAL)

BLACK OAK (15 GAL.)
QUERCUS KELLOGGII 30' DIA. (3 TOTAL)

LANDSCAPE NOTES:

1. IMPROVEMENTS SHOWN ON THIS PLAN ARE CONCEPTUAL ONLY AND SHALL BE APPROVED AS A PART OF A DESIGN REVIEW OR OTHER SUTTER COUNTY APPROVAL.
2. PROVIDE "DRIP" IRRIGATION AT ALL NEW LANDSCAPING
3. COVER ALL PLANTER W/ 2" MINIMUM MULCH (WOOD FIBER)
4. LANDSCAPE & IRRIGATION PLAN SHALL BE DESIGNED TO MEET ZONING CODE TABLE 1500–07–3(2) – SEPARATE SUBMITTAL.
5. PROVIDE 6" CONC. CURB AT PLANTERS ADJACENT TO ALL PAVED AREAS (I.E. PARKING, DRIVEWAYS, ETC.)
6. PLANTERS WITHIN PARKING AREAS SHALL BE AUGMENTED WITH SHRUBS AND/OR GROUND COVER TO ACHIEVE 50% COVERAGE. SPECIFIC PLANTS TO BE INCLUDED IN LANDSCAPE & IRRIGATION PLAN
7. AGRICULTURAL BUFFERS, 1500–19–050 REDUCTIONS IN BUFFER WIDTHS THE "REQUIRED" BUFFERING IS TO THE ORCHARD LAND LAYING TO THE WEST ACROSS HIGHWAY 99. THE R/W WIDTH IS APPROXIMATELY 130'. WITH THE PROPOSED INFILL THERE WILL BE A CONTINUOUS SOLID HEDGE OF APPROXIMATELY 15'–20' TALL ALONG THE WEST PROPERTY LINE. THERE IS NO KNOWN CONFLICT BETWEEN THE PROPOSED USE OF THE SITE AND AGRICULTURE. THEREFORE THE APPLICANT WILL REQUEST A BUFFER REDUCTION BASED ON THE MITIGATION NOTED.



1"=60'

LANDSCAPE PLAN

REVISIONS

PROPOSED SITE PLAN FOR:
PARDEEP SINGH
1280 WALNUT AVE., SUTTER COUNTY, CA
APN: 023-064-011

LAUGHLIN and SPENCE
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NORTH ELEVATION

WEST ELEVATION

REZONE & GPA FOR:
PARDEEP SINGH

SOUTH ELEVATION

EAST ELEVATION

REZONE & GPA FOR:
PARDEEP SINGH

Permitted Uses within Existing ER Zone and Proposed CM Zone

The table below lists all use types from the Sutter County Zoning Code that are allowed by right as a Permitted Use within the existing ER (Estate Residential) and proposed CM (Commercial-Industrial) zone. The table does not include uses allowed with approval of an Administrative Permit or Use Permit.

Zoning Clearance

Some uses are permitted and require approval of a Zoning Clearance. A Zoning Clearance is a ministerial action that enables the County to ensure that a proposed use or development complies with the Zoning Code, list of development standards applicable to the use or structure, and the General Plan. Approval does not require a public hearing.

Design Review and Minor Design Review

Some uses are permitted and require approval of Design Review or Minor Design Review. Approval of a Design Review application is required for all projects located within a Commercial or Employment District, regardless of whether or not a building is proposed (i.e. contractors' yard, truck yard, etc.). Design Review and Minor Design Review enable the County to ensure the proposed development is in compliance with the goals, objectives, and policies of the General Plan, any applicable specific plan, the applicable standards specified in the Zoning Code, and any applicable design guidelines. The County may consider site design, architecture, parking, circulation, lighting, landscaping, resource conservation and other design-related issues. This review is intended to promote attractive, compatible and coordinated development projects in the interest of public health, safety and general welfare.

1. A Design Review is a discretionary action.

2. A Minor Design Review is a streamlined and ministerial action implementing existing adopted standards. It involves no personal or subjective judgement by a public official and is uniformly verifiable by reference to an available criterion.

a. Additions to existing residences, new permitted caretaker housing, new or additions to existing agricultural buildings, accessory buildings, solar arrays and similar use types do not require Design Review.
b. Additions to existing commercial and industrial buildings and/or use types require Minor Design Review.
c. New commercial and industrial buildings and/or use types require Design Review in accordance with the following:

i. Building permit applications for projects over 65,000 square feet of area, or a warehouse/outdoor storage use type over 100,000 square feet of area, require Design Review approval by the Board of Supervisors.

ii. Building permit applications for projects under 65,000 square feet of area, or a warehouse/outdoor storage use type under 100,000 square feet of gross floor area, require Minor Design Review approval. If the Director denies the Minor Design Review application, the project may be appealed in accordance with Section 1500-23-080.

(P) Permitted

(-) Not Permitted

(ZC) Zoning Clearance Required

(DR) Design Review or Minor Design Review Required

1500-03-040 Agricultural Use Types	**Existing ER Zone**	**Proposed CM Zone**
Agricultural Manufacturing. Includes the commercial manufacturing, assembly, salvage or storage of agricultural related goods from finished products or raw materials. Typical uses include agricultural chemical storage and repacking; agricultural pesticide and herbicide blending and distribution; agricultural services laboratories; animal waste processing; biomass energy conversion; composting, processing and recycling of crop wastes; farm machinery equipment assembly; food and beverage packaging and services; food storage; indoor bulk product storage; meat and fish cutting and packing provided no slaughtering; soil blending and distribution; and similar uses. Does not include uses defined under "Agricultural Processing" (1500-03-040(D) or "Animal Processing" (1500-03-040(I)).	-	P, DR
Agricultural Processing. Includes facilities for the canning, drying and dehydrating, handling, packaging, packing, sorting, processing, shipping and storing of agricultural commodities. Does not include uses defined under "Animal Processing" (1500-03-040(I)).	-	P, DR
Agricultural Product Sales. Includes facilities for the retail sales of agricultural commodities. Shall be classified into one of the following categories:		

1. **Wayside Stand.** A stand or similar structure of up to 600 square feet of floor area. May include up to 50 square feet of floor area for the sale of prepackaged food and/or drinks.	P	P, DR
2. **Agricultural Store.** A stand, enclosed building or similar sales structure of up to 1,500 square feet. May include food preparation, bakery and up to 150 square feet of floor area for limited retail sales.	-	P, DR
Agricultural Supplies and Services. Includes uses primarily supportive of nearby agricultural operations. Shall be classified into one of the following categories:		
1. **Light.** Includes agricultural organizations and services; agricultural research and development; agricultural management, and maintenance services; animal or equipment auctions; farm supplies; feed, grain and fertilizer sales; and similar uses.	-	P, DR
2. **Heavy.** Includes composting, processing and recycling of crop wastes; farm machinery and equipment sales, rental, repair and storage; fertilizer processing; land leveling and contract harvesting services; propane storage and distribution for the agricultural community; and similar uses.	-	P, DR
Agricultural Truck Yards. Includes yards and terminals exclusively for the transportation of bulk raw agricultural products directly from the harvest location to a processing or storage location by appropriate commodity transporters such as grain trailers with tarps and flat bed/portable bin trailers. Allows for maintenance, storage, repair and servicing of transport vehicles. Does not include uses defined under "General Truck Yards" (1500-03-100(B)). Shall be classified into one of the following categories:		
1. **Small.** Includes Agricultural Truck Yards accommodating five or fewer trucks.	-	P, DR
Agriculture. Includes the raising of crops and animals, as well as uses and structures accessory to and supporting agricultural operations, including non-commercial agricultural equipment repair, barns, composting, corrals, greenhouses, offices and		

farming headquarters, stables, storage, and similar uses. Shall also include equipment and materials storage in support of forestry operations. Shall be classified into one of the following categories:		
1. **Agriculture, Animal Husbandry.** Includes aviaries, bee keeping, fish farms, grazing, livestock pasturing, and similar uses, does not include uses defined under "Intensive Animal Operations" (1500-03-040(J)).	P	-
2. **Agriculture, Crops and Tree Farms**. Includes field crops, floriculture, horticulture, greenhouse growing, row crops, seeds, tree crops, viticulture, and other similar uses.	P	P
1500-03-060 Assembly and Educational Use Types		
Community Assembly and Cultural Facilities. Includes group gatherings and events conducted primarily indoors. Typical uses include banquet facilities, bingo halls, community centers, convention and conference centers, fraternal organizations, lodges, museums, non-profit community service groups, philanthropic and charitable organizations, private clubs, private libraries, and similar uses. May include accessory food and beverage services, multi-purpose rooms, sports and other similar accessory facilities.	-	P, DR
Religious Institutions. Includes sites or buildings used by a religious group for services and activities. Typical uses include churches, mosques, synagogues, temples and other similar places of worship. Also, includes accessory uses on the same site including living quarters for staff, schools, food preparation, temporary resident shelters to provide humanitarian assistance, and day care.	-	P, DR
Schools and Educational Services. Includes public, private or parochial facilities for primary, secondary, or higher education and professional training. Shall be classified into one of the following categories:		
1. **Specialized Education and Training.** Includes business schools, hair styling schools, music schools,	P, ZC	P, ZC, DR

occupational safety training, technical and trade schools, vocational schools, and similar uses.		
1500-03-070 Residential Use Types		
Caretaker Housing. Includes a residence that is provided as an accessory use occupied by a caretaker on the same lot as the primary use that requires the caretaker. Shall be classified into one of the following categories:		
1. **Commercial/Industrial.** A dwelling unit used to house an owner, operator, guard or caretaker, and his or her family, to provide 24-hour service, security or monitoring of the commercial or industrial use and/or site.	-	P
Dwelling Units. Includes a building or portion of a building containing one or more dwelling units used or designed for occupancy by one family for living and sleeping purposes. Each unit shall be independent, containing bathroom facilities and a single kitchen. Also, includes residential accessory structures and facilities such as detached storage buildings, game/pool rooms, and swimming pools. Shall be classified into one of the following categories:		
1. **Single Family.** Includes a detached independent dwelling unit on a single lot occupied by a household. Includes individual manufactured housing units installed on a foundation system pursuant to Section 18551 of the California Health and Safety Code.	P	-
2. **Accessory Dwelling Unit (ADU).** An attached or detached residential dwelling unit that provides complete independent facilities for one or more persons and is proposed on a lot with a proposed or existing primary residence. An ADU shall include permanent provisions for living, sleeping, eating, cooking, and sanitation on the same lot as the single-family or multifamily dwelling is or will be situated. An ADU may be an efficiency unit, as defined at Government Code Section 65852.2; or a manufactured home, as defined at Government Code Section 65852.2.	P, ZC	P, ZC

3. **Junior Accessory Dwelling Unit (JADU).** A dwelling unit that is not more than 500 square feet in size and contained entirely within a single-family unit. A JADU may include separate sanitation facilities or may share sanitation facilities with the existing structure.	P, ZC	P, ZC
Guest Cottage. Includes a detached habitable structure without kitchen facilities and of no more than 500 square feet of floor area, accessory to the primary dwelling.	P	-
1500-03-080 Community Care and Assistance Use Types		
Cold Weather Shelter. Includes facilities and centers such as armories, recreation centers, and religious institutions that are opened for brief intervals during cold and inclement weather to shelter homeless persons from the elements. May provide overnight accommodations.	-	P, ZC
Day Care. Includes state licensed facilities supplying care and supervision of children or adults for periods of less than 24 hours. Shall be classified into one of the following categories:		
1. **Day Care Center.** Commercial or non-profit day care located in a building other than the providers own home.	-	P, DR
2. **Family Day Care, Small:** Day care located in the providers own home accommodating eight or fewer children under the age of 10, or six or fewer adults.	P	-
3. **Family Day Care, Large:** Day care located in the provider's own home accommodating nine to 14 children under the age of 10, or up to 14 adults.	P, ZC	-
Residential Care Facility. Includes a state licensed facility providing 24 hour residential, social and personal care for children, the elderly and/or people with limited ability for self-care, but where medical care is not a major element. Typical uses include children's homes, orphanages, rehabilitation centers, self-help group homes, and similar uses. Shall be classified into one of the following categories:		
1. **Small:** Accommodating six or fewer persons.	P	-

Social Services Facility. Includes a facility providing training, counseling, and other services which help people become more self-sufficient, prevent dependency, strengthen family relationships, and promote successful social functioning and may include housing with no limit on length of stay. Typical uses include food and clothing distribution, life skills training, recovery centers, substance abuse counseling, housing for those served, and similar uses.	-	P, DR
Supportive Housing. Housing with no limit on length of stay, that is occupied by the target population, and that is linked to onsite or offsite services that assist the supportive housing resident in retaining the housing, improving his or her health status, and maximizing his or her ability to live and, when possible, work in the community. (California Health and Safety Code Section 50675.14)	P	-
Transitional Housing. Buildings configured as rental housing developments, but operated under program requirements that call for the termination of assistance and recirculation of the assisted unit to another eligible program recipient at some predetermined future point in time, which shall be no less than six months. (California Health and Safety Code Section 50675.2).	P	-
1500-03-090 Commercial Use Types		
Animal Sales and Services. Includes establishments primarily engaged in animal-related services. Does not include grooming and pet stores (Retail Sales General 1500-03-090(V)). Shall be classified into one of the following categories:		
1. **Kennels.** Includes any establishment in which five or more dogs, cats, or similar small animals of at least 4 months of age are kept. Typical uses include boarding kennels, dog training centers, pet day care facilities, pet rescue facilities, shelters, and similar uses. Shall be classified into one of the following categories:		
a. **Indoor.** A kennel fully enclosed within a building or structure.	-	P, DR

2. **Veterinary Clinic or Hospital, Small Animal.** Includes a fully enclosed veterinary facility containing only enough cage arrangements as necessary to provide services for small animals requiring medical or surgical care, boarding, and grooming.	-	P, DR
Banks and Credit Unions. Includes financial institutions providing retail banking services and similar uses. Does not include stand-alone ATM's defined under "Personal Services" (1500-03-090(Q)).	-	P, DR
Business Support Services. Includes establishments providing goods and services to other businesses. Typical uses include advertising services, blueprint services, commercial art and design production, custodial services, equipment rental and repair, mailbox services, office security, printing and copying, window cleaning, and similar uses.	-	P, DR
Commercial Entertainment and Recreation. Includes participant or spectator entertainment. May include accessory food and beverage services. Does not include uses defined under "Open Space and Recreational Use Types" (1500-03-050). Shall be classified into one of the following categories:		
1. **Indoor.** Includes establishments primarily engaged in the provision of indoor entertainment, sports and recreation. Typical uses include amusement centers, arcades, athletic clubs, bowling alleys, gyms, indoor paintball, health and fitness clubs, sports courts and fields, movie theaters, performing arts theaters, skating rinks, swimming pools, and similar uses.	-	P, DR
Communication Services. Includes commercial and public communications uses including radio, telephone, and television broadcasting stations and studios; television production and sound recording studios; and similar uses with facilities entirely within buildings. Antenna, dishes and towers are included under the definition of "Wireless Telecommunication Facilities" (1500-03-110(H)).	-	P, DR
Eating and Drinking Establishments. Includes establishments primarily engaged in the sale of food prepared on-premises for		

on-site or off-site consumption. Shall be classified into one of the following categories:		
1. **Bars and Drinking Places.** Includes establishments where alcoholic beverages are sold for on-premises consumption as a primary use. Typical uses include bars and pubs, brew pubs, taverns, wine bars, and similar establishments where any food service is subordinate to the sale of alcoholic beverages. Does not include uses defined under "Nightclubs" (1500-03-090(O)).	-	P, DR
2. **Restaurant, Fast Food.** Includes establishments primarily engaged in the preparation and retail sale of food and beverages at a walk up counter and/or at a drive-through window. May or may not include seating. Typical uses include drive-through restaurants, take-out only food services, and similar uses.	-	P, DR
3. **Restaurant, Full Service.** Includes establishments primarily engaged in the preparation and retail sale of food and beverages, where food is ordered and served at a table, and which may include sales of alcoholic beverages, to-go food, and live entertainment as an accessory use. Typical uses include full or partial service restaurants with indoor and/or outdoor seating.	-	P, DR
4. **Mobile Food Truck.** Includes licensed, motorized vehicles where food or beverages are sold on a temporary basis to walk up customers, with at least some of the food preparation done in the vehicle.	-	P, DR
Funeral and Internment Services. Includes establishments primarily engaged in the care, preparation, or disposition of human or pet remains and conducting memorial services. Typical uses include crematories, mausoleums, mortuaries, or similar uses. Does not include "Cemeteries" (Community Facilities and Services, Major 1500-03-110(B)).	-	P, DR
Lodging. Includes establishments primarily engaged in the provision of temporary commercial lodging on a less than monthly basis to transient patrons. Does not include uses defined under "Group Quarters" (1500-03-070(D)). Shall be classified into one of the following categories:		

1. **Hotels and Motels.** Includes a building or series of buildings under common ownership which provide interrelated overnight lodging services, with or without individual cooking facilities. May include accessory convention and banquet facilities, meeting rooms, recreation, restaurant, retail, spa and personal service, and similar uses.	-	P, DR
Maintenance, Repair and Rental Services. Includes uses that provide maintenance, repair, and rental of light equipment (i.e., bicycles, furniture, garden equipment, home electronics, home repair equipment, household appliances, light construction equipment, and similar uses). Does not include the sales, rental and service of heavy equipment as defined under "Vehicle Rentals, Sales and Leasing, Heavy" and "Vehicle Repairs, Heavy" (1500-03-090(W)).	-	P, DR
Manufactured Home Sales and Rentals. Includes establishments for the sale or rental of prefabricated manufactured housing.	-	P, DR
Medical Offices and Clinics. Includes medical, dental, psychiatric, surgical, diagnostic, treatment, therapeutic or other health related services that see patients. Typical uses include blood banks, dental clinics, immediate care facilities, medical and dental laboratories, medical offices, medical clinics, mental health clinics, substance abuse clinics, and offices for acupuncturists, chiropractors, physical therapists, and similar uses. Does not include uses defined under "Hospitals" (1500-03-909(I)).	-	P, DR
Nursery. Includes businesses that grow, propagate, and sell plants and plant materials grown on-or off site, as well as garden supplies and related equipment. Shall be classified into one of the following categories:		
1. **Wholesale.** Includes nurseries where plants are sold in bulk form for the purposes of retail resale, for purchase by landscape contractors or to agricultural operations.	-	P, DR
2. **Retail.** Includes nurseries where a majority of the plants are grown off-site and sold to the public for personal or household consumption.	-	P, DR

Personal Services. Includes establishments providing services to individuals as a primary use, and may provide accessory retail sales of products related to the services provided. Typical uses include ATM's, barber and beauty shops, day spas, dry cleaning, massage therapists, pedicurists and manicurists, photocopying and photo finishing, self-service laundries, shoe repair, tailors and seamstresses, tanning salons, tattoo studios, travel agencies, taxidermy, and similar uses. Includes massage establishments as defined and regulated by Chapter 467 of the Sutter County Ordinance Code.	-	P, DR
Personal Storage. A structure or group of structures containing individual stalls or lockers rented as individual storage spaces. No activities other than rental of storage units, pick-up and deposit of storage, sale of packing supplies or rental of moving equipment shall be allowed on the premises. Does not include uses defined under "Recreational Vehicle Storage" (1500-03-090(T)).	-	P, DR
Professional Offices. Includes offices for business and professional uses which may or may not provide direct services to consumers. Typical uses include offices for accountants, architects, attorneys, brokers, call centers, computer programming, consulting, engineers, financial services and investments, graphic design, insurance, interior design, public relations, real estate, word processing, and similar uses. Does not include uses defined under "Medical Offices and Clinics" (1500-03-090(N)).	-	P, DR
Recreational Vehicle Storage. Includes indoor and outdoor facilities for the storage of recreational vehicles including boats, boat trailers, recreational vehicles, travel trailers, and similar vehicles.	-	P, DR
Retail Sales. Includes establishments primarily engaged in the sales of a wide variety of goods and merchandise to the public, and not defined under other use types. Shall be classified into one of the following categories:		
1. **General.** Includes retail sales where a majority of the display and sales occur indoors. Typical uses include antiques shops, auto parts stores, bakeries, bicycle shops, clothing and accessories stores, cameras and	-	P, DR

photography supplies, convenience stores, department stores, drug stores, electronic equipment stores, firearms sales, floor covering stores, florists, galleries, grocery stores, grooming and pet stores, home furnishing & appliance stores, home improvement stores, hardware stores, jewelry stores, liquor stores, medical supplies, office supplies, paint and wallpaper stores, pawn shops, pet supplies, pharmacies, specialty shops, sporting goods, thrift stores, toy and hobby stores, and similar uses.		
2. **Outdoor.** Includes retail sales where the use is conducted primarily outdoors. Typical uses include the sale of landscaping materials, building materials, sand and rock, lumberyards, and similar uses. Does not include uses defined under "Nursery" (1500-03-090(P)).	-	P, DR
Vehicle and Equipment Sales and Service. Includes establishments primarily engaged in automotive, truck or heavy equipment sales or services. Shall be classified into one of the following categories:		
1. **Fuel Stations.** Includes establishments primarily engaged in the retail sale of vehicle fuels. May include accessory car washes, minor repair services, as well as the sale of replacement items, limited retail goods, and similar uses. Typical uses include automobile service stations, co-branded fuel sales and fast food restaurants, mini-marts with gas sales, and similar uses.	-	P, DR
2. **Vehicle Rentals, Sales and Leasing, Light.** Includes the retail or wholesale sales, rental, or leasing of new or used automobiles, light trucks, boats, recreational vehicles and, motorcycles together with associated enclosed repair services and parts sales. Typical uses include automobile dealers, car rental agencies, recreational vehicle sales agencies, and similar uses.	-	P, DR
3. **Vehicle Rentals, Sales and Leasing, Heavy.** Includes the retail or wholesale sales, rental, or leasing of new or used tractor-trailer, semi-trucks and heavy construction equipment with associated repair services and parts	-	P, DR

sales. Typical uses include heavy equipment rental agencies, semi-truck dealers, and similar uses.		
4. **Vehicle Repairs, Light.** Includes repair, servicing, alteration or restoration of automobiles, light trucks, boats, recreational vehicles and motorcycles and the sale, installation, and servicing of associated equipment and parts completely within an enclosed building. Does not include body repair and painting (Vehicle Repairs, Heavy). Typical uses include automobile glass shops, automobile repair garages, oil change, muffler shops, stereo and car accessory installation, tire installation, tune-up/lube shops, upholstery shops, and similar uses.	-	P, DR
5. **Vehicle Washing.** Includes washing, polishing and detailing of vehicles as the principal use of a site. Typical uses include full and self-service automobile car washes, detailing services, truck washing facilities, and similar services.	-	P, DR
1500-03-100 Industrial Use Types		
Equipment and Materials Storage Yards. Includes the outdoor storage of construction equipment or machinery, company vehicles and fleets, or large quantities of other materials for use off-site. May include office and limited facilities for maintenance of equipment owned and operated by the business owner. Typical uses include contractor's storage yards, as well as yards and facilities for appliance service, building maintenance, janitorial, heating and air conditioning, landscaping, moving and storage, painting, pest control, plumbing, roofing, septic tank service, tree removal, and similar uses.	-	P, DR
Impound and Towing Yards. Includes the storage of inoperable vehicles for limited periods of time, within a secured enclosure. Does not include "Wrecking, Junk, Dismantling, Recycling, Pick-and-Pull, and Salvage" (Manufacturing, Heavy 1500-03-100(D)(3)).	-	P, DR
Manufacturing. Includes manufacturing, assembly, processing, or salvage of goods from finished products or raw materials. Shall be classified into one of the following categories:		

1. **Light.** Includes the manufacturing and assembly of finished products or parts, primarily taking place indoors using previously prepared materials, where such uses produce minimal impacts to surrounding land uses. Typical uses include clothing and fabric product manufacturing; commercial kitchens and bakeries; commercial laundry, dry-cleaning plants, and carpet cleaning plants; electronics, software, equipment, and appliance manufacturing; food and beverage packaging and services; ice making and food storage; indoor bulk product storage; manufacturing and assembling of small products primarily by hand, including jewelry, pottery and other ceramics; manufacturing and repair of small mechanical components and hardware; meat and fish cutting and packing provided no slaughtering; printing, publishing and lithography; photo processing labs; and similar uses. Accessory retail sales areas of products produced on-site are allowed. Does not include businesses primarily engaged in the sale of consumer products produced off-site.	-	P, DR
Research and Development. Includes facilities for scientific research, design, development, and testing of chemical, biotechnology, electrical, electronic, magnetic, medical, optical, and pharmaceutical components in advance of product manufacturing. May include assembly of related products from parts produced off-site where the manufacturing activity is secondary to the research and development. Typical uses include electronics research firms, pharmaceutical research laboratories, soils and materials testing laboratories, and similar uses.	-	P, DR
1500-03-110 Transportation, Communication, and Utilities Use Types		
Community Facilities and Services. Includes public services, utilities and other facilities involving major structures or land areas required to support the community. Does not include uses defined under "Wireless Telecommunication Facilities" (1500-03-110(F)). Shall be classified into one of the following categories:		
1. **Major.** Includes public facilities generally determined to be compatible with surrounding uses. Typical uses	-	P, DR

include ambulance services, court houses, electric substations, governmental office centers, human or pet cemeteries, sheriff and fire stations, post offices, public libraries, regional power transmission lines, roads, sewer pump stations, water storage tanks/towers and reservoirs, transformers, and similar uses.		
Intermodal Transportation Services. Includes facilities primarily engaged in the transportation of persons. Typical uses include depots, dispatch centers, stations, yards, and other facilities for bus, train, taxi and/or other transportation modes.	-	P, DR
Parking Facilities. Includes publically or privately owned and operated parking lots, garages, park-and-ride facilities, and similar uses.	-	P, DR

(County of Sutter, Zoning Code. 2024)

Zoning Code Table 1500-07-3: COMMERCIAL AND EMPLOYMENT DESIGN CHECKLIST		
Y Yes, Project Complies **N** No, Project Does Not Comply **NA** Criteria Not Applicable or Appropriate to Project		
1.	**Building Design and Architecture**	**Plan Complies (Y / N / NA)**
a.	Buildings provide for variation of materials, colors, and articulation. Particular attention is given to the design of buildings that are located in close proximity to highways and arterial roadways.	
b.	Building design incorporates architectural treatments to break up uninterrupted expanses of wall. Examples of appropriate architectural enhancements include offsetting or varying building setbacks, wall planes, and rooflines; varied building materials and colors; covered porches, balconies, entries, windows, and building projections; or other features.	
c.	All building elevations that are publically visible are designed with a complementary level of architectural detail and quality of materials. Building walls that face or that are highly visible from highways and arterial roadways have received special consideration in their architectural treatment.	
d.	Main entries to buildings are emphasized through distinctive building forms and materials, architectural detailing, lighting and other similar features.	
e.	Commercial and office projects incorporate ground floor architectural detail, transparent windows, awnings, overhangs and/or other similar elements to enhance pedestrian scale and comfort.	
f.	Building designs, architecture, materials and colors are coordinated within defined centers and complexes to create unified, harmonious, and identifiable projects.	
g.	The design of accessory or utility buildings is complementary to the primary building(s). In situations where the accessory or utility building is determined to not be visible from the public right-of-way or from adjacent properties, the County may consider a "relaxation" of this design criteria.	
h.	Except for alternative energy systems such as solar and wind, all roof and ground mounted mechanical equipment is screened from view from adjacent properties, adjacent roadways and public right-of-way, and parking areas. The required screening is provided as an integral aspect of the building's design.	
i.	Trash enclosures are located in low profile locations away from streets, project entries, and pedestrian activity areas. Trash enclosures are 6 feet in height, consistent with the design of the building(s), and constructed of decorative masonry block with metal gates.	
j.	Loading areas, driveways, trash enclosures, and storage areas are located a minimum of 20 feet from abutting parcels developed with an existing residence(s) or parcels that would permit the construction of a future residence(s).	
k.	Building designs, materials, and other methods are incorporated as appropriate to minimize consumption of non-renewable resources in compliance with Sutter County's Climate Action Plan.	
2.	**Landscaping**	**Plan Complies (Y / N / NA)**
a.	A minimum 15-foot-wide landscape planter, excluding curbing and sidewalk, is provided along all highways and arterial roadways. A minimum 10-foot-wide landscape planter is provided along all other road frontages where development is proposed.	
b.	A minimum 10-foot-wide landscape planter, excluding curbing, is provided where development is proposed adjacent to residentially zoned properties. Within this planter, screen trees from the Landscape Plant Materials List maintained by the Development Services Department are planted in combination with other plant materials to provide a dense visual screen.	
c.	Trees within required landscape planters are a minimum 15-gallon size and shrubs a minimum five-gallon size at time of planting and are planted in accordance with County standards. Selected trees are planted at an equivalent rate of one per 30 feet of frontage. Shrubs and/or vegetative groundcover are planted to achieve 50% ground coverage of the planter area within 5 years. All trees, shrubs and groundcover are from the Sutter County Preferred Landscape Plant Materials List maintained by the Development Services Department.	

Zoning Code Table 1500-07-3: COMMERCIAL AND EMPLOYMENT DESIGN CHECKLIST	
Y Yes, Project Complies **N** No, Project Does Not Comply **NA** Criteria Not Applicable or Appropriate to Project	
d. Trees and shrubs are planted so as to minimize impacts to sidewalks or individual driveways and away from leach lines as specified on the Landscape Plant Materials List maintained by the Development Services Department.	
e. All landscaping is within planters separated from required parking and driveways with six-inch concrete curbing. No planter is smaller than 25 square feet, excluding curbing. Each planter includes an irrigation system.	
f. Not more than 25 percent of any planter or landscaped area is covered with hard surfaces such as gravel, landscaping rock, artificial turf, decorative concrete or other impervious materials. Bus shelters are excluded from this limitation.	
g. A minimum of 1 tree per 4 spaces within a planter adjacent to a double row or single row parking is provided. As an alternative, the applicant has provided a shading plan prepared by a certified landscape architect or arborist (applying commonly accepted methodology), that 50 percent shading of paved parking surfaces (stalls, aisles & maneuvering areas) will be achieved based upon the canopy spread of trees within 15 years of planting. All required parking lot shading trees have large canopies, produce low liter and are deep rooted.	
h. Landscape planter "islands" are provided within parking lots to meet the shading requirements and to break up large expanses of parking spaces. All landscape planter islands contain a tree, are planted with shrubs and ground cover, and are similar in size to the adjacent parking stalls.	
i. Deciduous trees are planted on the west and south sides of buildings where possible to help reduce cooling loads during summer months and permit solar gain during winter months.	
j. Landscaping and lighting plans have been coordinated to assure that vegetation growth will not interfere with intended illumination of security and parking lot lighting.	
k. All landscaped areas comply with the current Model Water Efficient Landscaping Ordinance prepared by the California Department of Water Resources (DWR), as required by the California Water Conservation in Landscaping Act (Government Code Section 65591 et seq.). If conflicts occur between the Model Water Efficient Landscaping Ordinance and this Zoning Code or other County regulations, the more restrictive shall apply.	
l. Pervious paved surfaces, vegetative groundcover, natural bio-swales, and other practices may be incorporated where possible to increase filtration and reduce project run-off.	
m. Conditions are incorporated satisfactory to the County to ensure that all landscaping will be installed consistent with approved plans and specifications, in a manner designed to promote and maintain healthy plant growth. Landscaping shall be deemed to have met this requirement upon the following: i. All of the required landscaping is installed in conformance with the requirements and standards; or ii. An agreement is on file with the County which may include a financial deposit which guarantees that the required landscaping shall be installed within a reasonable period of time after issuance of a temporary certificate of occupancy. At such time as the landscaping is completed a final certificate of occupancy may be issued.	
n. Conditions are incorporated satisfactory to the County to ensure that: (1) trees will be maintained in good growing condition by property owners and shall be free from physical damage or injury arising from lack of water, chemical damage, insects, and diseases; (2) trees showing such damage will be replaced by the same species or similar tree from the Landscape Plant Materials List maintained by the Development Services Department; and (3) planting areas will be kept free from weeds, debris, and undesirable materials which may be detrimental to safety, drainage, or appearance.	
o. Conditions are incorporated satisfactory to the County to ensure that trees, shrubs, hedges, and other plant materials will be maintained so as not to create a sight hazard from driveways and corners as determined by the Development Services Department. Within 15 feet of any driveway opening, all mature trees shall have a 6-foot foliage clearance and other plant materials will not exceed 30 inches in height.	

3.	**Vehicular Circulation and Parking**	**Plan Complies (Y / N / NA)**
a.	Parking areas are generally located to the rear or side of the property rather than along street frontages in order to minimize visual impacts. When adjacent to a street frontage, parking areas are screened to the extent practical through the use of berms, low screen walls, and/or landscaping.	
b.	Site design has been coordinated between adjacent projects to maximize opportunities for reciprocal access and parking between parcels thereby enhancing connectivity, minimizing driveway cuts along public streets, and maximizing the efficiency of parking areas.	
c.	Internal vehicular circulation is designed to promote efficiency and convenience, and provides adequate areas for maneuvering, stacking, loading, truck staging, and emergency access.	
d.	All loading areas are generally located to the sides or rear of buildings or other areas where they can be concealed by architectural features and/or landscaping.	
e.	Driveways are minimized and located as far as possible from intersections. Sight distances are maximized at all intersections and driveways. All crossings, driveways, intersections and other transportation facilities (loading bays, bus turnouts, bike racks, loading zones, etc.) are located and designed so that easy access is provided with a minimum of conflicts with other uses.	
f.	Where a transit stop exists or is planned adjacent to the project, connections are provided from the transit stop to the place of business.	
g.	Required public and employee parking spaces, accessways, and display areas are paved in accordance with the improvement standards of Zoning Code Section 1500-20-080. Storage or parking areas that are separated from required parking areas, gated, and adequately screened may be gravel surfaced in accordance with Zoning Code Section 1500-20-080.	
h.	Drive-through stacking lanes are located to not overflow onto a public street or major internal aisle. A minimum stacking distance of 8 cars or 160 feet is provided for drive-throughs for eating and drinking establishments, and a minimum stacking distance of 4 cars or 80 feet for other uses with a drive-through.	
i.	The project is in compliance with all other requirements of Article 20 (Parking and Loading).	
4.	**Pedestrian and Bicycle Facilities**	**Plan Complies (Y / N / NA)**
a.	Facilities for pedestrian and bicycle circulation are physically separated from vehicular circulation to the extent feasible. Primary pedestrian routes and access points are specially treated and include shade trees, adequate lighting, paving, and/or other elements that distinguishes pedestrian from automobile areas.	
b.	Pedestrian crossings of vehicular routes are emphasized with a change in grade, materials, textures, colors and/or other elements to improve visibility and safety.	
c.	Bicycle racks and lockers, where provided, are located near building entries in highly visible and well lighted areas.	
d.	Pedestrian and bicycle access between adjacent projects and uses is provided as appropriate.	
5.	**Walls**	**Plan Complies (Y / N / NA)**
a.	Walls that are either proposed by the applicant or that are required (i.e. for screening purposes, to attenuate noise impacts, etc.) along highways and arterial roadways are solid, located outside of any required landscape planter, and are constructed of either decorative masonry block (i.e. split face block, masonry block with stucco coat), or solid wood frame with stucco coat that complements the design of the building(s).	
b.	If a wall is required due to noise impacts, it has been clearly demonstrated that the proposed materials and construction will adequately attenuate noise to acceptable levels.	
c.	Changes in wall planes, materials, and surface textures as well as the placement of pilasters, trim caps, landscape massing's, vines and similar elements are incorporated as appropriate to break up long sections of walls along highways and arterial roadways.	

d.	Projects that abut residentially zoned parcels include a minimum 6-foot-high solid wall (i.e. decorative masonry block such as split face or masonry block with stucco coat, solid wood frame with stucco coat, or similar alternative as approved by the Director) along the shared property boundary. The height of the wall may be reduced to a minimum of 4.5 feet high along a shared property boundary that abuts a parking area.	
e.	Wall openings are provided as appropriate to allow pedestrian and bicycle access between uses.	
6.	**Lighting**	**Plan Complies (Y / N / NA)**
a.	Parking lot lighting does not exceed 20 feet in total height, is oriented and shielded to direct the light downward onto the subject property and not spill onto adjacent properties or road rights-of-way. Lower lighting standards may be required adjacent to single-family development in order to minimize light spillage.	
b.	Full cutoff lighting fixtures, diffusers and other "dark-sky" and low glare technologies are used to reduce light pollution and glare.	
c.	Energy efficient lighting fixtures, sources and practices are incorporated as appropriate.	
d.	Conditions are incorporated satisfactory to the County to ensure that, prior to issuance of a building permit, a point-by-point exterior lighting (photometric) plan will be submitted which demonstrates compliance with the following illumination requirements: i. Parking lots, driveways and trash enclosures are illuminated with a minimum maintained 1 foot-candle of light, a uniform ration (maximum to minimum) of 4:1, and an average not to exceed 4 foot-candles of light. ii. Pedestrian walkways are illuminated with a minimum maintained 0.5 foot-candle of light and an average not to exceed 2 foot-candles of light. iii. Exterior doors are illuminated with a minimum maintained 1 foot-candle of light, measured within a five-foot radius on each side of the door at ground level.	
7.	**Signs**	**Plan Complies (Y / N / NA)**
a.	The design of signs integrates with the architectural style, materials, and other design features of the building(s) or complex they identify.	
b.	Sign design within defined centers and complexes is coordinated and complementary.	
c.	All signage complies with the requirements of Article 21 (Signs).	
8.	**Screening**	**Plan Complies (Y / N / NA)**
a.	To the extent possible, outdoor storage areas are located behind buildings and to the rear of the property.	
b.	Storage areas are screened with solid fencing with moderate to fast growing screening trees, shrubs and/or vines selected from the Preferred Landscape Plant Materials List (maintained by the Development Services Department) provided on all sides of the designated storage area to create a dense visual screen. A landscape plan to provide for screening of these areas has been provided to the Planning Division for review and approval.	
c.	The 15-foot or 10-foot wide required landscape planter referenced in 2(a), if used for screening of outdoor storage areas on one or more sides, provides solid fencing adjacent to the planter and the planting of trees and/or shrubs within the planter area is sufficiently supplemented to provide a dense visual screen of the storage area.	
9.	**Natural Features**	**Plan Complies (Y / N / NA)**
a.	Existing significant natural features such as mature trees (6-inches in diameter or greater at breast height), other native vegetation, natural ground forms, rock outcroppings, water features, drainage courses, and scenic views are retained to the extent practical.	

10. **Highway 20 Supplemental Design Requirements**		**Plan Complies (Y / N / NA)**
a.	A minimum 30-foot-wide landscape planter, excluding curbing and sidewalk, is provided on all Highway 20 frontages. Lower growing trees and shrubs are used within the required landscape planter to maintain views of the Sutter Buttes.	
b.	When viewed from Highway 20, the heights of buildings, structures and other constructed elements do not obstruct views to the ridgeline of the Sutter Buttes, defined as the areas above the 1,200 foot elevations line. Minor exceptions may be permitted for towers, spires, domes, cupolas, and other limited architectural features; as well as water tanks, silos, granaries, cooling towers, and similar structures necessary to perform the intended function of the use, provided such features and structures do not substantively impact views of the Buttes and are in compliance with the building height standards for the applicable zoning district.	
c.	Visual “corridors” are provided between adjacent on-site and off-site structures and landscaping to maintain views of the Sutter Buttes.	

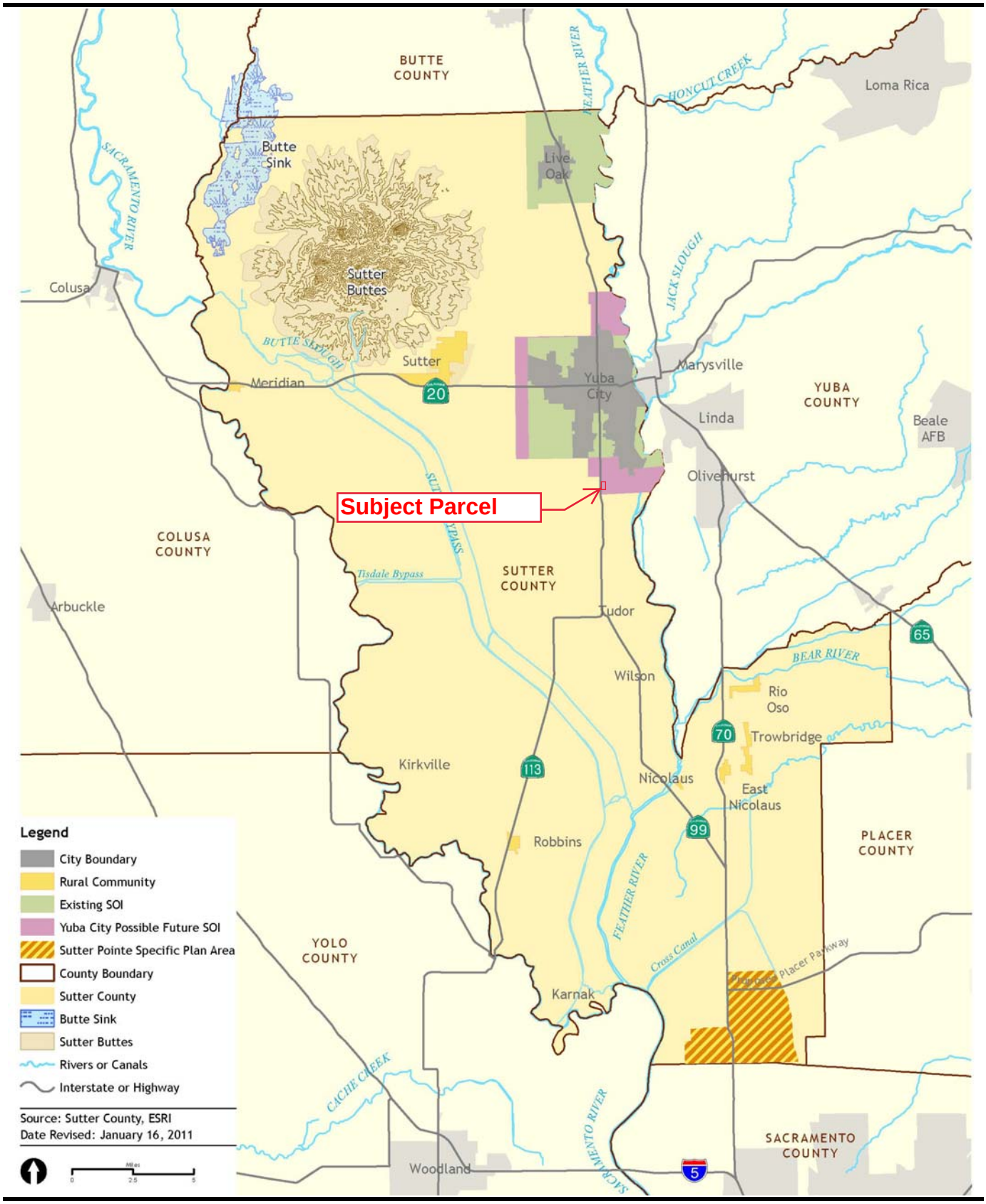


FIGURE 1-3 **Sutter County**

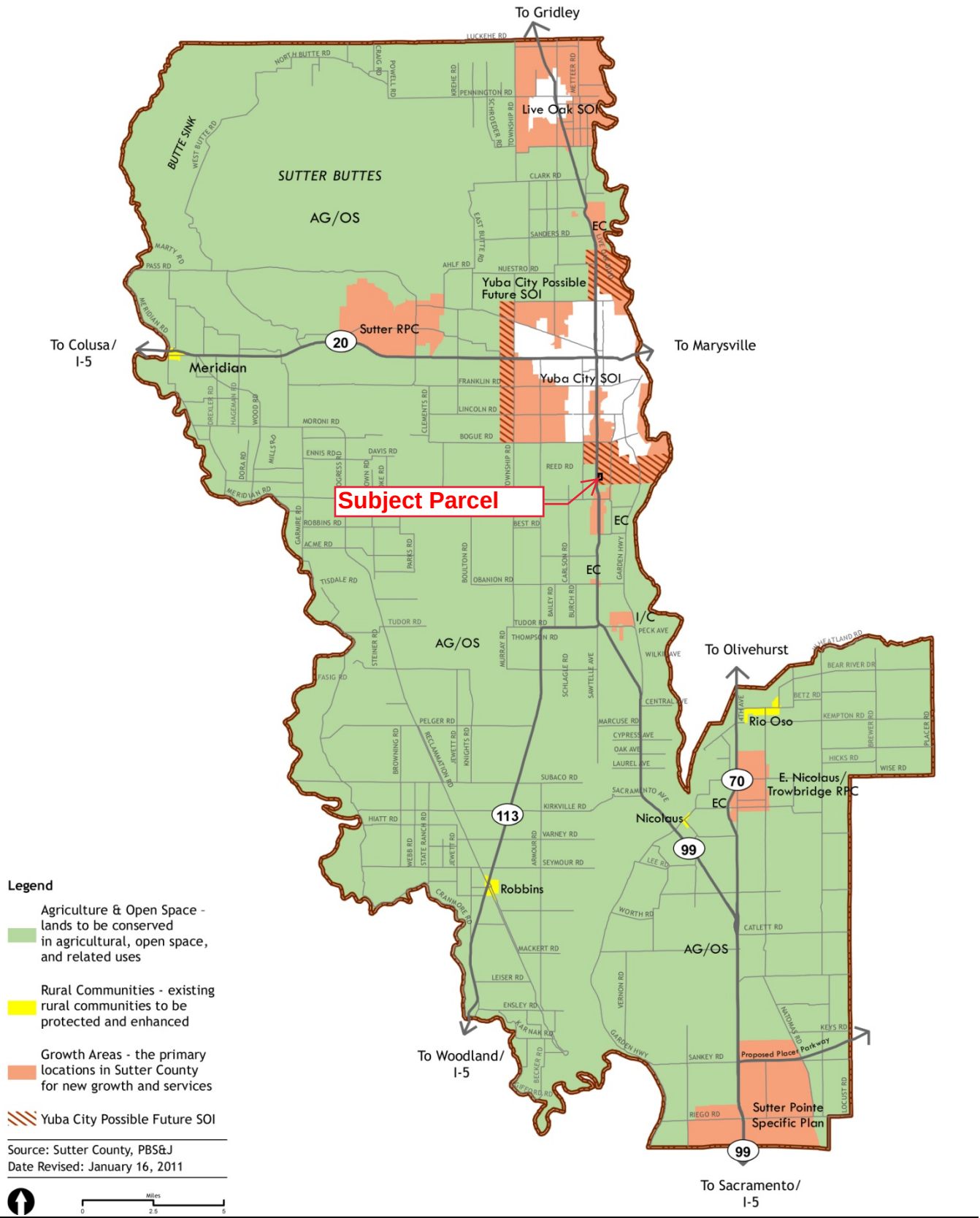
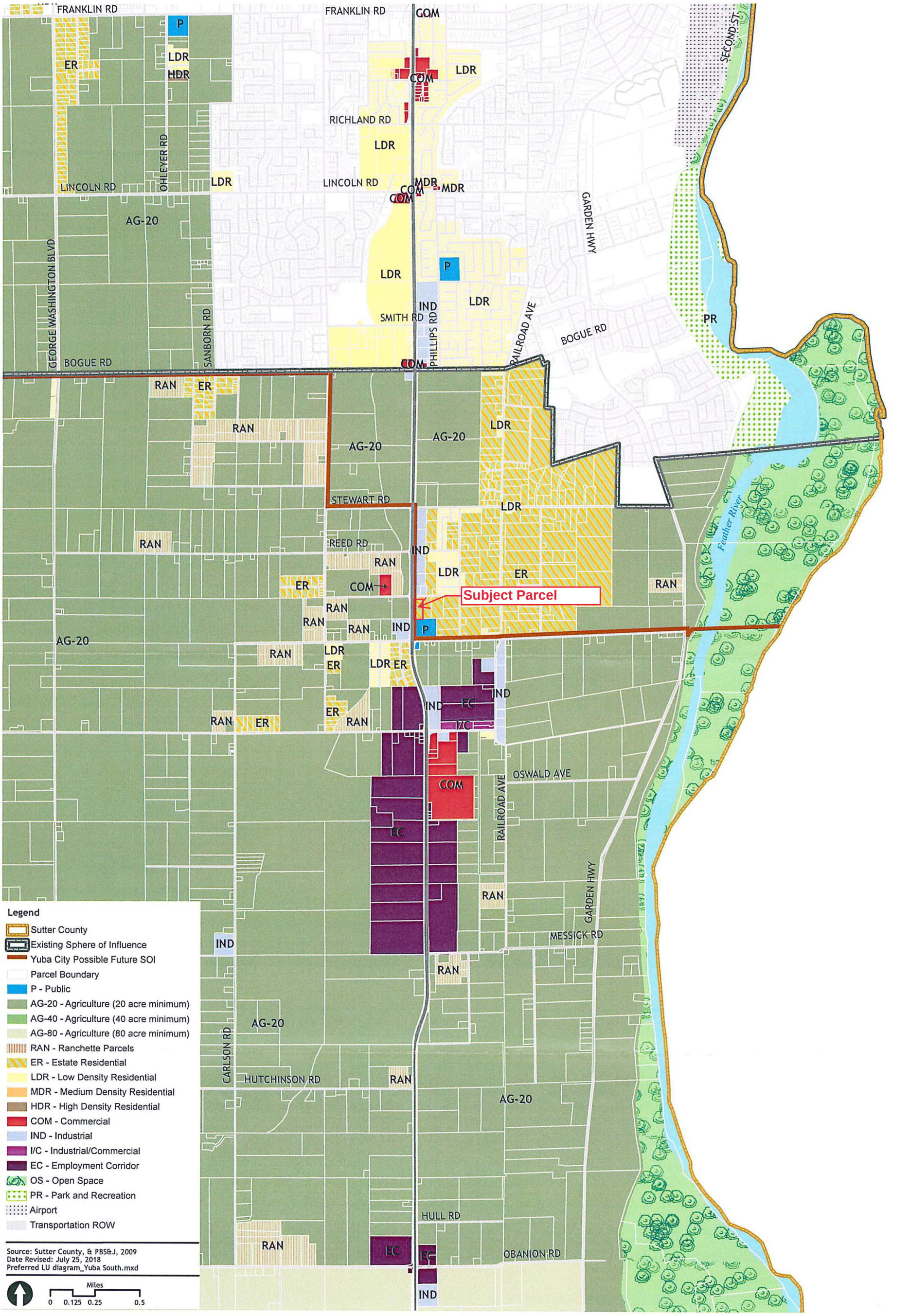


FIGURE 3-1 **Conservation and Growth Areas**

SUTTER COUNTY
General Plan

SUTTER COUNTY
GENERAL PLAN



PBS&J®

YUBA CITY SPHERE OF INFLUENCE SOUTH
FIGURE A1-6

HSD Trucking – 1280 Walnut Avenue Project

Health Risk Assessment

Sutter County, California

Prepared For:

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August 2019

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APPENDICES

1.0 INTRODUCTION

This report evaluates the potential health risks associated with the HSD Trucking 1280 Walnut Avenue Project in Sutter County, California. The purpose of this Health Risk Assessment is to evaluate potential health risks associated with Toxic Air Contaminant (TAC), Diesel Particulate Matter (DPM) resulting from the implementation of the Proposed Project (Project). This Health Risk Assessment was prepared in accordance with the requirements of the Office of Environmental Health Hazard Assessment (OEHHA) to determine if health risks are likely to occur from the proposed Project. Technical data is included as see **Appendix A**.

1.1 Project Location

The proposed Project site is located on 4.21 acres in the southeast corner of the intersection of State Route 99 and Walnut Avenue in unincorporated Sutter County, approximately 1.3 miles south of Yuba City. The site is generally bounded by a residence and other light industrial to the north, State Route 99 to the west, with agricultural orchards beyond, Barry Elementary School to the south, and a residence to the east. The north portion of the Project site currently accommodates a 10,000-square foot industrial shop building surrounded by a circular driveway. This shop building currently accommodates trucks to be serviced. There is also an existing modular building adjacent to the northwestern corner of the shop building.

The site has been used for a welding business until the recent past, and currently contains numerous vehicles, equipment, and miscellaneous materials. According to the Traffic Assessment prepared for the Project (KD Anderson 2019), the Project site is currently operating as a heavy-duty truck parking yard. The western, southern, and eastern borders of the site are lined with trees and shrubs, which currently act to screen the site visually.

1.2 Project Description

The proposed Project is requesting a Sutter County General Plan Amendment to re-designate the land use designation of the Project site to "Industrial" from its current land use designation of "Estate Residential". In addition, the Project is proposing to rezone the site "Light Industrial (M-1)" from the "Estate Residential" zone. These proposed land use designation changes are to allow the continued industrial use of the existing shop building and site as the designation of Estates Residential and does not allow for such uses. It is noted that while industrial-type operations are not allowed under the Estates Residential land use designation, the site has been operating as a welding operation for nearly a decade. Additionally, the site is currently operating as a heavy-duty truck parking yard. These heavy-duty trucks are primarily used for agricultural harvests. Under current conditions, drivers arrive in the morning and either park or are dropped off. Trucks are dispatched and return in the evening, and drivers leave at that time.

The Project applicant, HSD Trucking, proposes to use the existing shop building for the repair of their truck and trailer equipment. Repairs would primarily take place in the shop building. The Project further proposes to continue to park/store company trucks and trailers in the vacant "yard area" characterizing the southern portion of the site. In addition to providing heavy-duty truck repair and storage services for HSD Trucking Operations, the Project would accommodate a limited number of customers with the same

services. There is no fuel dispensing proposed. Based on traffic information provided by the Traffic Assessment prepared for the Project (KD Anderson 2019), Project operations are expected to generate a maximum of 100 automobile trips daily, including up to 60 heavy-duty truck trips (KD Anderson 2019). It is anticipated that 2 of these heavy-duty trucks would be trailer refrigeration units (TRUs). According to the Project Traffic Assessment (KD Anderson 2019), the Project site is currently in operation, and the proposed Project would not result in an increased number of truck trips beyond that already occurring. Specifically, a maximum total of 15 trucks would be based at the site at any single point in time (KD Anderson 2019).

In addition to using the existing shop building, the Project would pave the area surrounding the existing shop building for internal circulation and parking purposes. The existing modular building on-site would be removed and replaced with a new, 1,440 square feet modular building. While approximately 0.7 acre of the Project site would be set aside as a buffer area between Project operations and Barry Elementary School at the southern portion of the site, the area between this buffer area and the shop building would be outfitted with a combination of compacted earth and gravel to accommodate the proposed truck and trailer storage area. This area would span approximately 75,000 square feet. Additionally, the Project proposes a fence with vinyl slats along the eastern and southern property line.

The Project would operate Mondays through Saturdays from the hours of 6:00 a.m. to 10:00 p.m.

2.0 HEALTH RISK ASSESSMENT

2.1 Environmental Setting

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project site lies within the south-central portion of the Northern Sacramento Valley Air Basin (NSVAB). The NSVAB consists of seven counties: Sutter, Yuba, Colusa, Butte, Glenn, Tehama, and Shasta. The NSVAB is bounded on the north and west by the Coastal Mountain Range and on the east by the southern end of the Cascade Mountain Range and the northern end of the Sierra Nevada. These mountain ranges reach heights in excess of 6,000 feet above mean sea level, with individual peaks rising much higher. The mountains form a substantial physical barrier to locally created pollution as well as to pollution transported northward on prevailing winds from the Sacramento metropolitan area.

The environmental conditions of Sutter County are conducive to potentially adverse air quality conditions. The basin area traps pollutants between two mountain ranges to the east and the west. This problem is exacerbated by a temperature inversion layer that traps air at lower levels below an overlying layer of warmer air. Prevailing winds in the area are generally from the south and southwest. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Growth and urbanization in Sutter County have also contributed to an increase in emissions.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Hazardous Air Pollutants (HAP) is a term used by the Federal Clean Air Act (FCAA) that includes a variety of pollutants generated or emitted by industrial production activities. Identified as TACs under the California Clean Air Act (CCAA), ten have been singled out through ambient air quality data as being the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. CARB provides emission inventories for only the larger air basins.

TACs do not have ambient air quality standards because no safe levels of TACs can be determined. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588) apply to facilities that use, produce, or emit toxic chemicals. Facilities subject to the toxic emission inventory requirements of the act must prepare and submit toxic emission inventory plans and reports, and periodically update those reports.

Toxic contaminants often result from fugitive emissions during fuel storage and transfer activities, and from leaking valves and pipes. For example, the electronics industry, including semiconductor manufacturing, uses highly toxic chlorinated solvents in semiconductor production processes. Sources of air toxics go beyond industry, however. Automobile exhaust also contains toxic air pollutants such as benzene and 1,3-butadiene. The following are health effects related to common TACs:

Acetaldehyde. Acetaldehyde is directly emitted into the atmosphere and is also formed in the atmosphere from photochemical oxidation. Acetaldehyde is generated as exhaust from mobile sources and fuel combustion from stationary internal combustion engines, boilers, and process heaters. Acetaldehyde is a carcinogen that can also cause chronic non-cancer toxicity in the respiratory system. Symptoms of chronic intoxication of acetaldehyde in humans resemble those of alcoholism. The primary short-term effect of inhalation exposure to acetaldehyde is irritation of the eyes, skin, and respiratory tract. At higher exposure levels, erythematic, coughing, and pulmonary edema, and necrosis may also occur.

Benzene. Approximately 84 percent of the benzene emitted in California comes from motor vehicles, including evaporative leakage and unburned fuel exhaust. Benzene is highly carcinogenic and occurs throughout California. Benzene also has non-cancer health effects. Brief inhalation exposure to high concentrations can cause central nervous system symptoms of nausea, tremors, drowsiness, dizziness, headache, intoxication, and unconsciousness.

Neurological symptoms of inhalation exposure to benzene include drowsiness, dizziness, headaches, and unconsciousness. Ingestion of large amounts of benzene may result in vomiting, dizziness, and convulsions. Exposure to liquid and vapor may irritate the skin, eyes, and upper respiratory tract. Redness and blisters may result from dermal exposure to benzene. Chronic inhalation of certain levels of benzene causes blood disorders because benzene specifically affects bone marrow, which produces blood cells. Aplastic anemia, excessive bleeding, and damage to the immune system (by changes in blood levels of antibodies and loss of white blood cells) may develop. Increased incidence of leukemia (cancer of the tissues that form white blood cells) has been observed in humans occupationally exposed to benzene.

1,3-Butadiene. The majority of 1,3-butadiene emissions comes from incomplete combustion of gasoline and diesel fuels. 1,3-butadiene has been identified as a carcinogen in California. Butadiene vapors at elevated levels cause neurological effects such as blurred vision, fatigue, headache, and vertigo. Dermal exposure to 1,3-butadiene causes a sensation of cold, followed by a burning sensation, and can lead to frostbite. Chronic exposure to 1,3-butadiene via inhalation has been shown to result in an increase in cardiovascular diseases, and increase in the occurrence of leukemia, and an increased incidence of respiratory, bladder, stomach, and lymphato-hematopoietic cancers.

Carbon Tetrachloride. The primary sources of carbon tetrachloride in California include chemical manufacturing facilities and petroleum refineries. Carbon tetrachloride has been identified as a probable human carcinogen in California. Carbon tetrachloride is also a central nervous system depressant and mild eye and respiratory tract irritant. Acute inhalation and oral exposures to high levels of carbon tetrachloride can damage the liver and kidneys in humans and animals. Symptoms of acute exposure in humans include headache, weakness, lethargy, nausea, and vomiting.

Chromium, Hexavalent. Chromium planting and other metal finishing processes are the primary sources of hexavalent chromium emissions in California. California has identified hexavalent chromium as a carcinogen. Exposure to inhaled hexavalent chromium may result in lung cancer, and short-term exposure symptoms may include renal toxicity, gastrointestinal hemorrhage, and intravascular hemolysis.

Inhalation exposure of hexavalent exposure targets the respiratory tract. Exposure to very high concentrations of hexavalent chromium can include burns, effects on the respiratory tract such as perforations and ulcerations of the septum, bronchitis, decreased pulmonary function, pneumonia, asthma, and nasal itching and soreness. Chronic human exposure to high levels of hexavalent chromium by inhalation or oral exposure may adversely affect the liver, kidney, and gastrointestinal and immune system.

Para-Dichlorobenzene. The primary sources of para-dichlorobenzene include consumer products such as non-aerosol insect repellents and solid air fresheners. These sources contribute 99 percent of statewide para-dichlorobenzene emissions. In California, para-dichlorobenzene has been identified as a carcinogen. Acute exposure to 1,4-dichlorobenzene via inhalation in humans results in irritation to the eyes, skin, and throat. In addition, long-term inhalation exposure may affect the liver, skin, and central nervous system.

Formaldehyde. Formaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation. Formaldehyde is a product of incomplete combustion, and one of the primary sources of formaldehyde is vehicular exhaust. Formaldehyde can also be found in many consumer products as an antimicrobial agent and is used in fumigants and soil disinfectants.

Acute formaldehyde inhalation exposure can result in eye, nose, and throat irritation and effects on the nasal cavity. Other effects seen from exposure to high levels of formaldehyde in humans are coughing, wheezing, chest pains, and bronchitis. Chronic inhalation exposure to formaldehyde has been associated with respiratory symptoms and eye, nose, and throat irritation. In California, formaldehyde has been identified as a carcinogen, and occupational studies have shown associations between exposure to formaldehyde and increased incidence of lung and nasopharyngeal cancer.

Methylene Chloride. Methylene chloride is a solvent used in paint stripping operations and as a blowing and cleaning agent in the manufacture of polyurethane foam and plastic. Paint removers account for the largest use of methylene chloride in California. Inhalation exposure to extremely high levels of methylene chloride can be fatal to humans. Acute inhalation exposure to high levels of methylene chloride can result in decreased visual, auditory, and psychomotor functions, but these effects are reversible once exposure ceases. Methylene chloride also irritates the nose and throat at high concentrations. The major effects from chronic inhalation exposure to methylene chloride are headaches, dizziness, nausea, and memory loss. Chronic exposure can also lead to bone marrow, hepatic, and renal toxicity. California considers methylene chloride to be carcinogenic.

Perchloroethylene. Perchloroethylene is used as a solvent, primarily in dry cleaning operations. Perchloroethylene is also used in degreasing operations, paints and coatings, adhesives, aerosols, specialty chemical production, printing inks, silicones, rug shampoos and laboratory solvents. Perchloroethylene vapors are irritating to the eyes and respiratory tract and chronic exposure can result in

liver toxicity, kidney dysfunction, and neurological disorders. California identifies perchloroethylene as a carcinogen.

Diesel Particulate Matter. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled engines contribute approximately 24 percent of the statewide total, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5 percent of total DPM. It should be noted that CARB has developed several plans and programs to reduce diesel emissions such as the Diesel Risk Reduction Plan (DRRP), the Statewide Portable Equipment Registration Program (PERP), and the Diesel Off-Road Reporting System (DOORS). The PERP and DOORS programs allow owners or operators of portable engines and certain other types of equipment can register their units in order to operate their equipment throughout California without having to obtain individual permits from local air districts.

Diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by OEHHA. CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

In its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term exposure to diesel exhaust increases the risk of lung cancer. Using information from OEHHA's assessment, CARB estimates that diesel particle levels measured in California's air in 2000 could cause 540 "excess" cancers in a population of 1 million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health, have calculated cancer risks from diesel exhaust similar to those developed by OEHHA and CARB.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine particulate pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood

illnesses and can also reduce lung function in children. In California, diesel exhaust particles have been identified as a carcinogen.

Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. **Table 1** lists the distances and locations of sensitive receptors within the Project vicinity. The distances depicted in **Table 1** are based on the distance from the Project site to the vicinity sensitive receptors.

Table 1. Nearest Sensitive Receptors

Type	Distance from Project Site (feet)[1]	Direction from Project Site	Location
Residential	Directly Adjacent	East	Directly Adjacent to Project Site
Residential	75	North	Across Walnut Avenue from Project Site
Barry Elementary School	Directly Adjacent	South	Directly Adjacent to Project Site
Residential	300	Northeast	Across Walnut Avenue from Project Site

Source: [1]Google Earth 2019

2.2 Regulatory Framework

Federal

Clean Air Act

The Federal Clean Air Act (FCAA) was amended in 1990 to address a large number of air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. 188 specific pollutants and chemical groups were initially identified as HAPs, and the list has been modified over time. The FCAA Amendments included new regulatory programs to control acid deposition and for the issuance of stationary source operating permits.

In 2001, the U.S. Environmental Protection Agency (EPA) issued its first Mobile Source Air Toxics Rule, which identified 21 mobile source air toxic (MSAT) compounds as being HAPs that required regulation. A subset of six of these MSAT compounds were identified as having the greatest influence on health and included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and DPM. More recently, the EPA issued a second MSAT Rule in February 2007, which generally supported the findings in the first rule and provided additional recommendations of compounds having the greatest impact on health. The rule also identified several engine emission certification standards that must be implemented. Unlike the criteria

pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective.

National Emissions Standards for Hazardous Air Pollutants (NESHAPs) were incorporated into a greatly expanded program for controlling toxic air pollutants. The provisions for attainment and maintenance of the NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs.

Section 112 of the FCAA Amendments governs the federal control program for HAPs. NESHAPs are issued to limit the release of specified HAPs from specific industrial sectors. These standards are technology-based, meaning that they represent the best available control technology an industrial sector could afford. The level of emissions controls required by NESHAPs are not based on health risk considerations because allowable releases and resulting concentrations have not been determined to be safe for the general public. The FCAA does not establish air quality standards for HAPs that define legally acceptable concentrations of these pollutants in ambient air.

State

California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Diesel Risk Reduction Plan

The identification of DPM as a TAC in 1998 led CARB to adopt the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (Risk Reduction Plan) in October 2000. The Risk Reduction Plan's goals include an 85 percent reduction in DPM by 2020 from the 2000 baseline (CARB 2000). The Risk Reduction Plan includes regulations to establish cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen (NO_X) emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks must be retrofitted with PM filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses would need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally-owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks by reporting and there are a number of extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of the CARB Air Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling is to reduce public exposure to diesel particulate matter and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles.[1] The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system (APS) for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, beginning in 2008, would require that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

2.3 Health Risk and Hazard Assessment

Thresholds of Significance

In order to determine whether or not a proposed project would cause a significant effect on the environment, the impact of the project must be determined by examining the types and levels of air toxics generated and the associated impacts on factors that affect air quality. The thresholds for air toxic emissions are as follows.

[1] The ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is codified in Title 13 of the California Code of Regulations, Chapter 10, Section 2485.

- Cancer Risk: Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million.

- Non-Cancer Risk: Emit toxic contaminants that exceed the maximum hazard quotient of 1 in one million.

Cancer risk is expressed in terms of expected incremental incidence per million population. An incidence rate of 10 persons per million as the maximum acceptable incremental cancer risk due to DPM exposure has been established by virtually every air district in California (exceptions include the Feather River Air Quality Management District, which does not promulgate any cancer risk threshold, as well as the San Joaquin Valley Air Pollution Control District, which establishes a rate of 20 persons per million as the maximum acceptable incremental cancer risk). This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact. The 10 in one million standard is a very health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million which is 100 times more than the threshold of 10 in one million. The 10 in one million is consistent with the mandates of the Air Toxics "Hot Spots" Information and Assessment Act.

Non-carcinogenic risk parameters for use in health risk assessments (HRAs) has also been established. Noncarcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant.

Methodology

This HRA evaluates potential health risks associated with the emission of diesel particulate matter resulting from the implementation of the proposed Project. As previously described, CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

The air dispersion modeling for the HRA was performed using the U.S. EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Surface and upper air meteorological data provided by CARB for Beale Air Force Base was selected as being the most representative meteorology based on proximity.

Emissions sources in the model include two area source to represent truck parking and the source of idling emissions. Additionally, emissions sources in the model include a line source (comprised of 3 volume sources) representing the truck circulation at the Project site and along Walnut Avenue, and a line source (comprised of 17 volume sources) representing the truck travel on State Route 99 (see **Appendix A**). The maximum daily exhaust emissions for all diesel equipment was used to produce an emission rate in terms of grams per second per square meter. Emissions from heavy trucks were assigned a release height of 3.65 meters in order to provide a conservative analysis (i.e., using a higher-release heights would result in a smaller impact by allowing pollutants to disperse before they affect a receptor).

The model was run to obtain the peak 24-hour and annual average concentration in micrograms per cubic meter [$\mu g/m^3$] at nearby sensitive receptors. Air dispersion modeling is required to estimate (a) annual average concentrations to calculate the Maximum Individual Cancer Risk (MICR), the maximum chronic HI, the zones of impact, and excess cancer burden and (b) peak hourly concentrations to calculate the health impact from substances with acute non-cancer health effects. To achieve these goals, the receptor grid should extend to cover the zone of impact.

Note that the concentration estimates developed using this methodology is considered conservative and is not a specific prediction of the actual concentrations that would occur as a result of the Project any one point in time. Actual 24-hour and annual average and concentrations are dependent on many variables, particularly the number and type of equipment working at specific distances during time periods of adverse meteorology.

A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 70-year lifetime basis, 30-year, and 9-year exposure scenarios. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the U.S. EPA Human Health Evaluation Manual (1991) and the OEHHA Guidance Manual (2015).

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average DPM concentrations are calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home (for residents only) or at school (for students only), and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. It is important to note that exposure duration is based on continual heavy truck operations at the Project site. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kg body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function the breathing rate, the exposure frequency, and the concentration of a substance in the air. For receptor exposure, the breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\textbf{Dose-air} = (C_{air} * \{BR/BW\} * A * EF * 10^{-6})$$

Where:

Dose-air = dose through inhalation (mg/kg/day)

C_{air} = air concentration (µg/m^3) from air dispersion model

{BR/BW} = daily breathing rate normalized to body weight (L/kg body weight – day) (225 L\kg BW-day for 3rd Trimester, 658 L/kg BW-day for 0<2 years, 535 L/kg BW-day for 2<9 years, 452 L/kg BW-day for 2<16 years, 210 L/kg BW-day for 16<30 years, and 185 L/kg BW-day 16<70 years)

A = Inhalation absorption factor (unitless [1])

EF = exposure frequency (unitless), days/365 days (0.96 [approximately 350 days per year])

10^{-6} = conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to take into account the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the following FAH values: from the third trimester to age <2 years, 85 percent of time is spent at home; from age 2 through <16 years, 72 percent of time is spent at home; from age 16 years and greater, 73 percent of time is spent at home. However, the analysis contained in this Assessment relies on calculations factoring the amount of time spent at home at 100 percent.

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$\mathbf{Risk_{inh\text{-}res} = (Dose_{air} * CPH * ASF * ED/AT * FAH)}$$

Where:

$Risk_{inh\text{-}res}$	=	inhalation cancer risk (potential chances per million)
$Dose_{air}$	=	daily dose through inhalation (mg/kg-day)
CPF	=	inhalation cancer potency factor (mg/kg-day^{-1})
ASF	=	age sensitivity factor for a specified age group (unitless)
ED	=	exposure duration (in years) for a specified age group (0.25 years for 3rd trimester, 2 years for 0<2, 7 years for 2<9, 14 years for 2<16, 14 years for 16<30, 54 years for 16-70)
AT	=	averaging time of lifetime cancer risk (years)
FAH	=	fraction of time spent at home (unitless)

Chronic Non-Cancer Hazard

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

Hazard Quotient = Ci/RELi

Where:

Ci	=	Concentration in the air of substance i (annual average concentration in µg/m^3)
RELi	=	Chronic noncancer Reference Exposure Level for substance i (µg/m^3)

Acute Non-Cancer Hazard

The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts. The equation is as follows:

Acute HQ = Maximum Hourly Air Concentration (µg/m^3) / Acute REL (µg/m^3)

Impact Analysis

PROJECT RISK AND HAZARD ASSESSMENT

CARB identified DPM as a TAC in 1998. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Diesel exhaust is composed of two phases, either gas or particulate – both contribute to the risk. The gas phase is composed of many of the urban HAPs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particulate phase has many different types that can be classified by size or composition. The sizes of diesel particulates of greatest health concern are fine and ultrafine particles. These particles may be composed of elemental carbon with adsorbed[2] compounds such as organics, sulfates, nitrates, metals, and other trace elements. Diesel exhaust is emitted from a broad range of on- and off-road diesel engines. As the Project would accommodate daily visits from heavy-duty diesel trucks during operations, an analysis of DPM was performed using the EPA-approved AERMOD model.

Non-Carcinogenic Hazards

The significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index at a sensitive receptor associated with DPM emissions from the Project would be 0.001 and 0.03, respectively. This concentration would occur at the property line of the residence directly across Walnut Avenue to the north of the Project site. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits and a less than significant impact would occur.

[2] This term is specifically used for gases.

Carcinogenic Risk

Vehicle DPM emissions were estimated using emission factors for fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$)[3] generated with the 2014 version of the EMission FACtor model (EMFAC) developed by CARB. EMFAC 2014 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to project changes in future emissions from on-road mobile sources. The most recent version of this model, EMFAC 2014, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day. The most important improvement in EMFAC 2014 is the integration of the new data and methods to estimate emissions from diesel trucks and buses. The model includes the emissions benefits of the truck and bus rule and the previously adopted rules for other on-road diesel equipment.

For this Project, annual average $PM_{2.5}$ emission factors were generated by running EMFAC 2014 in EMFAC Mode for vehicles in Sutter County. The EMFAC Mode generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of vehicle speed, temperature, and relative humidity. The model was run for speeds traveled on and within the vicinity of the Project site. The vehicle travel speeds for each segment modeled are summarized below.

- Idling – on-site; and
- 15 miles per hour – vehicle movement on Walnut Avenue and on-site vehicle movement including driving and maneuvering; and
- 25 miles per hour –vehicle movement on Highway 99 including driving and maneuvering.

The average $PM_{2.5}$ emission factors for heavy trucks were calculated based on the annual average emission factors for various exposure periods associated with assumptions for evaluating exposure over three different periods (i.e., 70-, 30-, and 9-year exposure scenarios).

Based on the AERMOD outputs, the expected annual average diesel $PM_{2.5}$ emission concentrations at the most exposed sensitive receptor resulting from operation of the Project would be 0.006 $\mu g/m^3$ at the greatest.

Cancer risk calculations for residences are based on 70-, 30-, and 9-year exposure periods. The calculated carcinogenic risk at Project vicinity residences as a result of the Project is depicted in **Table 2**. Cancer risk calculations for schools are based on a 9-year exposure period. However, this analysis further considers a

[3] $PM_{2.5}$ is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., $PM_{2.5}$), according to CARB. Most $PM_{2.5}$ derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.

30-year exposure period at Barry Elementary School. The calculated carcinogenic risk at Barry Elementary School, as a result of the Project is depicted in **Table 3**.

Table 2. Maximum Operational Health Risk at the Project Vicinity Residential Neighborhoods			
Exposure Scenario	**Maximum Cancer Risk (Risk per Million)**	**Significance Threshold (Risk per Million)**	**Exceeds Significance Threshold?**
Residence to the North, across Walnut Avenue			
70-Year Exposure	6.51	*10*	No
30-Year Exposure	5.48	*10*	No
9-Year Exposure	3.81	*10*	No
Residence to the Northeast, across Walnut Avenue			
70-Year Exposure	0.31	*10*	No
30-Year Exposure	0.27	*10*	No
9-Year Exposure	0.18	*10*	No
Residence to the East, directly adjacent to the Project Site			
70-Year Exposure	1.11	*10*	No
30-Year Exposure	0.94	*10*	No
9-Year Exposure	0.65	*10*	No

*Source: ECORP Consulting 2019. Refer to **Appendix A** for Model Data Outputs.*

As shown, impacts related to health risk from heavy trucks would be less than significant at the nearest residences.

Table 3. Maximum Operational Health Risk at Barry Elementary School (as measured at the northern property line of the school)			
Exposure Scenario	**Maximum Cancer Risk (Risk per Million)**	**Significance Threshold (Risk per Million)**	**Exceeds Significance Threshold?**
Residence to the North, across Walnut Avenue			
30-Year Exposure	1.43	*10*	No
9-Year Exposure	1.00	*10*	No

*Source: ECORP Consulting 2019. Refer to **Appendix A** for Model Data Outputs.*

As shown, impacts related to health risk from heavy trucks would be less than significant at Barry Elementary School.

Conclusion

In conclusion, non-carcinogenic hazards resulting from the proposed Project are calculated to be within acceptable limits. Additionally, potential cancer risk from Project trucks would be below the 10 in one million threshold which was developed based on the requirements of the Air Toxics "Hot Spots" Information and Assessment Act and serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact. This conclusion is consistent with the finding of the California Air Pollution Control Officer's Association (CAPCOA), which identify trucking operations that accommodate more than 100 heavy-duty trucks daily to be potential health risks (CAPCOA 2009). The Project is anticipated to accommodate less than 60 heavy-duty trucks daily. Therefore, impacts related to health risk from the Project would be less than significant.

3.0 REFERENCES

CAPCOA (California Air Pollution Control Officer's Association). 2009. *Health Risk Assessments for Proposed Land Use Projects*.

CARB (California Air Resources Board). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*.

OEHHA (California Environmental Protection Agency's Office of Environmental Health Hazard Assessment). 2003. *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*.

———. 2015. *Guidance Manual for Preparation of Health Risk Assessments*.

Sacramento Valley Air Quality Engineering and Enforcement Professionals. 2015. *Northern Sacramento Valley Planning Area: 2015, Triennial Air Quality Attainment Plan*.

U.S. EPA (United States Environmental Protection Agency). 1991. *Human Health Evaluation Manual*.

APPENDIX A

Health Risk Calculations and AERMOD Outputs

HSD Trucking 1280 Walnut Avenue Project

DPM Emissions Calculations

On-Site/Walnut Ave Truck Movement			Avg Speed (mph)	Emission Factor (g/mi)	Daily Truck Trips	length (mi)	g/day	g/sec
Project Trucks			15	0.006293	60	0.1	3.78E-02	4.37E-07

Off-Site (Hwy 99) Truck Movement			Avg Speed (mph)	Emission Factor (g/mi)	Daily Truck Trips	length (mi)	g/day	g/sec
Project Trucks			25	0.004591	60	0.5	1.38E-01	1.59E-06

On-Site Vehicle Storage Emissions		Emission Factor (g/veh/day)	Idling Time (min)	Idling Time (hrs/day)	Daily Trucks	Release Height Above Ground (m)	g/day	g/sec
Project Trucks		0.004558	10	6.94E-03	15	3.65	4.75E-04	5.50E-09

Sources:

CARB, EMFAC2014. PM2.5 Emission Factors are derived from a weighted aggregate of the truck fleet spanning over the life of the Project.

CARB, D*iesel Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

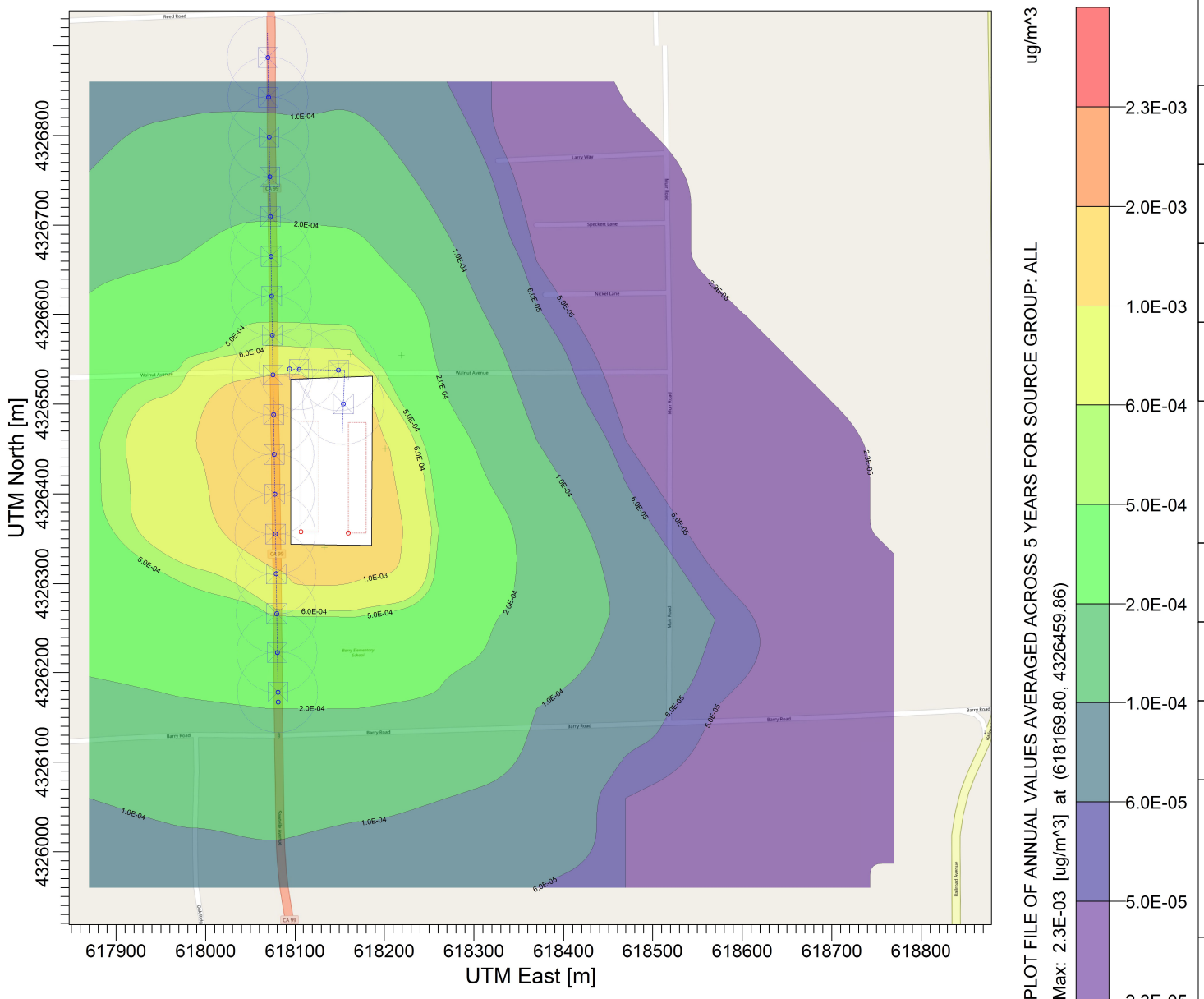
Notes:

The Project will accommodate 60 truck trips daily.

According to the Project Traffic Assessment (KD Anderson 2019), the Project site is currently in operation, and the proposed Project would not result in an increased number of truck trips beyond that already occurring. Specifically, a maximum total of 15 trucks would be based at the site at any single point in time (KD Anderson 2019).

PROJECT TITLE:

C:\Lakes\AERMOD View\HSD Trucking 1280 Walnute Ave\HSD Trucking 1280



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: ALL

Max: 2.3E-03 [ug/m^3] at (618169.80, 4326459.86)

COMMENTS:

SOURCES:

4

RECEPTORS:

108

OUTPUT TYPE:

Concentration

MAX:

2.3E-03 ug/m^3

COMPANY NAME:

MODELER:

DATE:

8/7/2019

SCALE: 1:6,946

0 0.2 km

PROJECT NO.:

Sensitive Receptor Summary

C:\Lakes\AERMOD View\HSD Trucking 1280 Walnute Ave\HSD Trucking 1280

PM2.5 - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	0.03759	ug/m^3	North Res	618162.54	4326555.17	120.00	0.00	120.00	9/19/2013, 5
1-HR	1ST	0.04702	ug/m^3	NE Res	618219.22	4326554.31	120.00	0.00	120.00	10/23/2013, 5
1-HR	1ST	0.04035	ug/m^3	East Res	618201.19	4326450.41	120.00	0.00	120.00	8/6/2013, 4
1-HR	1ST	0.05124	ug/m^3	School	618133.35	4326340.49	120.00	0.00	120.00	11/25/2012, 8
24-HR	1ST	0.00462	ug/m^3	North Res	618162.54	4326555.17	120.00	0.00	120.00	7/20/2013, 24
24-HR	1ST	0.00302	ug/m^3	NE Res	618219.22	4326554.31	120.00	0.00	120.00	7/30/2013, 24
24-HR	1ST	0.00467	ug/m^3	East Res	618201.19	4326450.41	120.00	0.00	120.00	8/6/2013, 24
24-HR	1ST	0.01048	ug/m^3	School	618133.35	4326340.49	120.00	0.00	120.00	12/17/2013, 24
ANNUAL		0.00062	ug/m^3	North Res	618162.54	4326555.17	120.00	0.00	120.00	
ANNUAL		0.00031	ug/m^3	NE Res	618219.22	4326554.31	120.00	0.00	120.00	
ANNUAL		0.00106	ug/m^3	East Res	618201.19	4326450.41	120.00	0.00	120.00	
ANNUAL		0.00162	ug/m^3	School	618133.35	4326340.49	120.00	0.00	120.00	

DPM Health Risk at the Residence Directly North

Risk Calculations

1 Hour Avg Concentration:	0.0375
24 Hour Avg Concentration:	0.0046
Annual Avg Concentration:	0.0062

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	2.14622E-06	6.48027E-06	5.11882E-06	4.42918E-06	1.99164E-06	1.7241E-06
Risk = DOSEair * CPF * ASF * ED/AT * FAH	8.43158E-08	2.03666E-06	1.68921E-06	2.92326E-06	4.381616E-07	1.463E-06

		Risk	in one million
Cancer Risk:	70-year exposure	6.51E-06	6.51
	30-year exposure	5.48E-06	5.48
	9-year exposure	3.81E-06	3.81
Threshold:			10 in one million

	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.0062	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.96	days/year	Exposure frequency (days/year)
ED	ED (3rd trimester)	0.25	years	Exposure duration (years)
	ED (0 < 2 years)	2		
	ED (2 < 9 years)	7		
	ED (2 < 16, 16 < 30 years)	14		
	ED (16 - 70 years)	54		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 years)	1		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	1		
	FAH (16 - 70 years)	1		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = 1.24E-03

C_i 6.20E-03 Concentration (annual average)

REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = 3.26E-02

Max Hourly 6.20E-03

Acute REL (Acrolein) 0.19

Risk Calculations

1 Hour Avg Concentration:	0.0470
24 Hour Avg Concentration:	0.0030
Annual Avg Concentration:	0.0003

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	1.03849E-07	3.13562E-07	2.47685E-07	2.14315E-07	9.63699E-08	8.3425E-08
Risk = DOSEair * CPF * ASF * ED/AT * FAH	4.07979E-09	9.85479E-08	8.1736E-08	1.41448E-07	2.120137E-08	7.0792E-08

		Risk	in one million
Cancer Risk:	70-year exposure	3.15E-07	0.31
	30-year exposure	2.65E-07	0.27
	9-year exposure	1.84E-07	0.18
Threshold:			10 in one million

	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.0003	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.96	days/year	Exposure frequency (days/year)
ED	ED (3rd trimester)	0.25	years	Exposure duration (years)
	ED (0 < 2 years)	2		
	ED (2 < 9 years)	7		
	ED (2 < 16, 16 < 30 years)	14		
	ED (16 - 70 years)	54		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 years)	1		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	1		
	FAH (16 - 70 years)	1		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = 6.00E-05

C_i	3.00E-04	Concentration (annual average)
REL_i	5	Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = 1.58E-03

Max Hourly	3.00E-04
Acute REL (Acrolein)	0.19

DPM Health Risk at the Residence Directly to the East

Risk Calculations

1 Hour Avg Concentration:	0.0404
24 Hour Avg Concentration:	0.0046
Annual Avg Concentration:	0.0011

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	3.66934E-07	1.10792E-06	8.75153E-07	7.57247E-07	3.40507E-07	2.9477E-07
Risk = DOSEair * CPF * ASF * ED/AT * FAH	1.44153E-08	3.48203E-07	2.88801E-07	4.99783E-07	7.491151E-08	2.5013E-07

		Risk	in one million
Cancer Risk:	70-year exposure	1.11E-06	1.11
	30-year exposure	9.37E-07	0.94
	9-year exposure	6.51E-07	0.65
Threshold:			10 in one million

	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.00106	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.96	days/year	Exposure frequency (days/year)
ED	ED (3rd trimester)	0.25	years	Exposure duration (years)
	ED (0 < 2 years)	2		
	ED (2 < 9 years)	7		
	ED (2 < 16, 16 < 30 years)	14		
	ED (16 - 70 years)	54		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 years)	1		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	1		
	FAH (16 - 70 years)	1		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = 2.12E-04

C_i	1.06E-03	Concentration (annual average)
REL_i	5	Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = 5.58E-03

Max Hourly	1.06E-03
Acute REL (Acrolein)	0.19

Risk Calculations

1 Hour Avg Concentration:	0.0512
24 Hour Avg Concentration:	0.0105
Annual Avg Concentration:	0.0016

Cancer Risk

	3rd trimester	0<2 years	2<9 years	2<16 years	16<30 years	16<70 years
DOSEair = (Cair*(BR/BW)*A*EF*10^{-6})	5.60786E-07	1.69323E-06	1.3375E-06	1.1573E-06	5.20397E-07	4.5049E-07
Risk = DOSEair * CPF * ASF * ED/AT * FAH	2.20309E-08	5.32159E-07	4.41375E-07	7.63819E-07	1.144874E-07	3.8228E-07

Cancer Risk:	Risk	in one million
30-year exposure	1.43E-06	1.43
9-year exposure	9.96E-07	1.00
Threshold:		10 in one million

	DOSEair		mg/kg-d	Dose through inhalation
	CPF	1.1	$(mg/kg/day)^{-1}$	Cancer Potency Factor for DPM
BR/BW	BR/BW (3rd trimester)	361	L/kg bodyweight-day	Daily Breathing rate normalized to body weight
	BR/BW (0 < 2 years)	1090		
	BR/BW (2 < 9 years)	861		
	BR/BW (2 < 16 years)	745		
	BR/BW (16 < 30 years)	335		
	BR/BW (16 < 70 years)	290		
	10^{-6}	1.00E-06		Micrograms to milligrams conversions, liters to cubic meters conversion
	Cair	0.00162	ug/m^3	Concentration in air (ug/m^3), modeled annual average concentration
	A	1		Inhalation absorption factor
	EF	0.96	days/year	Exposure frequency (days/year)
ED	ED (3rd trimester)	0.25	years	Exposure duration (years)
	ED (0 < 2 years)	2		
	ED (2 < 9 years)	7		
	ED (2 < 16, 16 < 30 years)	14		
	ED (16 - 70 years)	54		
	AT	70	years	Averaging time period over which exposure is averaged
ASF	ASF (3rd trimester - 2 years)	10		Age Sensitivity Factor
	ASF (2 - 16 years)	3		
	ASF (16 - 70 years)	1		
FAH	FAH (3rd trimester - 2 years)	1		Fraction of time spent at home (unitless)
	FAH (2 - 16 years)	1		
	FAH (16 - 70 years)	1		

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = 3.24E-04

C_i	1.62E-03	Concentration (annual average)
REL_i	5	Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = 8.53E-03

Max Hourly	1.62E-03
Acute REL (Acrolein)	0.19

Source Pathway - Source Inputs

Area Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Length of X Side [m]	Length of Y Side [m]	Orientation Angle from North [deg]	Initial Vertical Dim. [m]
AREA	AREA1	618107.28	4326357.79	3.72	3.65	2.75E-9	20.00	123.01	0.00	
AREA	AREA2	618160.00	4326356.44	3.72	3.65	2.75E-9	20.00	123.01	0.00	

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE2 (Circulation - Hwy 99)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	9.38E-8		618081.00	4326167.00	14.43	3.65
			618069.00	4326914.00	16.00	3.65

Source Type: LINE VOLUME

Source: SLINE3 (Circulation Walnut Ave and Onsite)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
22.15	1.46E-7		618093.77	4326538.93	12.80	3.65
			618155.95	4326537.58	12.80	3.65
			618153.25	4326467.29	12.80	3.65

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE2	L0000203	618080.82	4326178.07	14.45	3.65	5.52E-9	22.15		20.60	2.37
	L0000204	618080.11	4326222.37	14.55	3.65	5.52E-9	22.15		20.60	2.37
	L0000205	618079.40	4326266.66	14.64	3.65	5.52E-9	22.15		20.60	2.37
	L0000206	618078.69	4326310.96	14.73	3.65	5.52E-9	22.15		20.60	2.37
	L0000207	618077.98	4326355.25	14.83	3.65	5.52E-9	22.15		20.60	2.37
	L0000208	618077.26	4326399.54	14.92	3.65	5.52E-9	22.15		20.60	2.37
	L0000209	618076.55	4326443.84	15.01	3.65	5.52E-9	22.15		20.60	2.37
	L0000210	618075.84	4326488.13	15.10	3.65	5.52E-9	22.15		20.60	2.37
	L0000211	618075.13	4326532.43	15.20	3.65	5.52E-9	22.15		20.60	2.37
	L0000212	618074.42	4326576.72	15.29	3.65	5.52E-9	22.15		20.60	2.37
	L0000213	618073.71	4326621.02	15.38	3.65	5.52E-9	22.15		20.60	2.37
	L0000214	618073.00	4326665.31	15.48	3.65	5.52E-9	22.15		20.60	2.37
	L0000215	618072.28	4326709.60	15.57	3.65	5.52E-9	22.15		20.60	2.37
	L0000216	618071.57	4326753.90	15.66	3.65	5.52E-9	22.15		20.60	2.37
	L0000217	618070.86	4326798.19	15.76	3.65	5.52E-9	22.15		20.60	2.37
	L0000218	618070.15	4326842.49	15.85	3.65	5.52E-9	22.15		20.60	2.37
	L0000219	618069.44	4326886.78	15.94	3.65	5.52E-9	22.15		20.60	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
SLINE3	L0000220	618104.84	4326538.69	12.80	3.65	4.87E-8	22.15		20.60	2.37
	L0000221	618149.13	4326537.73	12.80	3.65	4.87E-8	22.15		20.60	2.37
	L0000222	618154.51	4326500.13	12.80	3.65	4.87E-8	22.15		20.60	2.37

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	617869.80	4325959.86	10	10	100.00	100.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	618162.54	4326555.17			
2	618219.22	4326554.31			
3	618201.19	4326450.41			
4	618133.35	4326340.49			

Plant Boundary Receptors

Cartesian Plant Boundary

Primary

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	618187.04	4326531.09	FENCEPRI		
2	618185.89	4326342.65	FENCEPRI		
3	618095.12	4326343.80	FENCEPRI		
4	618095.12	4326527.65	FENCEPRI		

Receptor Groups

Record Number	Group ID	Group Description
1	FENCEPRI	Cartesian plant boundary Primary Receptors

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: K:\Projects\2017\2017-253 HSD Trucking 1280 Walnut Avenue\01-July 2019 Submittal\HRA\Model files\7248

Format Type: Default AERMET format

Profile Met Data

Filename: K:\Projects\2017\2017-253 HSD Trucking 1280 Walnut Avenue\01-July 2019 Submittal\HRA\Model files\7248

Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 120.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2009			
Upper Air		2009			

Data Period

Data Period to Process

Start Date: 1/1/2009 Start Hour: 1 End Date: 1/2/2014 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

```
 *** AERMOD - VERSION  18081 ***   *** C:\Lakes\AERMOD View\HSD
Trucking 1280 Walnute Ave\HSD Trucking 1280 ***        08/06/19
 *** AERMET - VERSION  14134 ***   ***
***        16:38:21

PAGE   1
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  RURAL

                                              ***     MODEL SETUP
OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration
Values.

   --  DEPOSITION LOGIC  --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION.  DRYDPLT  =  F
 **Model Uses NO WET DEPLETION.  WETDPLT  =  F

 **Model Uses RURAL Dispersion Only.

 **Model Allows User-Specified Options:
         1. Stack-tip Downwash.
         2. Model Assumes Receptors on FLAT Terrain.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Full Conversion Assumed for NO2.

 **Other Options Specified:
         CCVR_Sub - Meteorological data includes CCVR
substitutions
         TEMP_Sub - Meteorological data includes TEMP
substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_2.5

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates ANNUAL Averages

 **This Run Includes:     22 Source(s);       1 Source Group(s);
and     108 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                  and:    20 VOLUME source(s)
                  and:     2 AREA type source(s)
```

```
                and:       0 LINE source(s)
                and:       0 OPENPIT source(s)
                and:       0 BUOYANT LINE source(s) with      0
line(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  14134

 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by
Receptor (RECTABLE Keyword)
          Model Outputs External File(s) of High Values for
Plotting (PLOTFILE Keyword)
          Model Outputs Separate Summary File of High Ranked
Values (SUMMFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:
c for Calm Hours

m for Missing Hours

b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =
120.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =     0.0
                  Emission Units = GRAMS/SEC
;  Emission Rate Unit Factor =   0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of
RAM.

 **Input Runstream File:          aermod.inp
 **Output Print File:             aermod.out

 **Detailed Error/Message File:   HSD Trucking 1280 Walnute
Ave.err
 **File for Summary of Results:   HSD Trucking 1280 Walnute
Ave.sum
```

*** MODELOPTs: NonDFAULT CONC FLAT RURAL

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: K:\Projects\2017\2017-253 HSD Trucking 1280 Walnut Avenue\01-July 2019 Submittal Met Version: 14134
Profile file: K:\Projects\2017\2017-253 HSD Trucking 1280 Walnut Avenue\01-July 2019 Submittal
Surface format: FREE
Profile format: FREE
Surface station no.: 93216 Upper air station no.: 3198
Name: UNKNOWN Name: UNKNOWN
Year: 2009 Year: 2009

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
09	01	01	1	01	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	0.91	1.00	0.00	0.	10.0	277.2	2.0
09	01	01	1	02	-5.1	0.089	-9.000	-9.000	-999.	63.	12.5	0.19	0.91	1.00	1.76	58.	10.0	277.2	2.0
09	01	01	1	03	-5.1	0.089	-9.000	-9.000	-999.	63.	12.5	0.19	0.91	1.00	1.76	54.	10.0	277.4	2.0
09	01	01	1	04	-3.1	0.064	-9.000	-9.000	-999.	39.	7.6	0.04	0.91	1.00	1.76	113.	10.0	277.4	2.0
09	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	0.91	1.00	0.00	0.	10.0	277.5	2.0
09	01	01	1	06	-16.5	0.285	-9.000	-9.000	-999.	366.	128.0	0.27	0.91	1.00	2.86	142.	10.0	277.6	2.0
09	01	01	1	07	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	0.91	1.00	0.00	0.	10.0	277.1	2.0
09	01	01	1	08	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	0.91	1.00	0.00	0.	10.0	277.4	2.0
09	01	01	1	09	-6.0	0.191	-9.000	-9.000	-999.	200.	105.5	0.04	0.91	0.42	2.86	77.	10.0	277.4	2.0
09	01	01	1	10	5.0	-9.000	-9.000	-9.000	36.	-999.	-99999.0	0.14	0.91	0.29	0.00	0.	10.0	277.8	2.0
09	01	01	1	11	13.2	-9.000	-9.000	-9.000	101.	-999.	-99999.0	0.14	0.91	0.25	0.00	0.	10.0	278.1	2.0
09	01	01	1	12	17.8	0.156	0.419	0.012	150.	148.	-19.4								

```
0.05   0.91   0.23    1.76  186.   10.0  278.1    2.0
 09 01 01   1 13   18.4  0.191  0.456  0.010  187.  200.    -34.5
0.14   0.91   0.23    1.76  999.   10.0  278.0    2.0
 09 01 01   1 14   15.0 -9.000 -9.000 -9.000  193. -999. -99999.0
0.14   0.91   0.24    0.00    0.   10.0  278.1    2.0
 09 01 01   1 15    7.9  0.190  0.349  0.010  196.  199.    -79.0
0.05   0.91   0.27    2.36  182.   10.0  278.1    2.0
 09 01 01   1 16   -1.6  0.121 -9.000 -9.000 -999.  102.     97.6
0.05   0.91   0.37    1.76  194.   10.0  278.1    2.0
 09 01 01   1 17   -7.1  0.129 -9.000 -9.000 -999.  112.     27.6
0.27   0.91   0.63    1.76  141.   10.0  277.9    2.0
 09 01 01   1 18  -19.9  0.346 -9.000 -9.000 -999.  488.    188.4
0.27   0.91   1.00    3.36  157.   10.0  277.9    2.0
 09 01 01   1 19 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0
0.14   0.91   1.00    0.00    0.   10.0  278.0    2.0
 09 01 01   1 20  -19.9  0.346 -9.000 -9.000 -999.  489.    188.8
0.27   0.91   1.00    3.36  167.   10.0  278.4    2.0
 09 01 01   1 21  -19.9  0.346 -9.000 -9.000 -999.  489.    188.8
0.27   0.91   1.00    3.36  140.   10.0  278.4    2.0
 09 01 01   1 22 -999.0 -9.000 -9.000 -9.000 -999. -999. -99999.0
0.14   0.91   1.00    0.00    0.   10.0  278.5    2.0
 09 01 01   1 23  -29.8  0.521 -9.000 -9.000 -999.  901.    428.0
0.27   0.91   1.00    4.86  120.   10.0  278.9    2.0
 09 01 01   1 24  -19.8  0.346 -9.000 -9.000 -999.  515.    189.1
0.27   0.91   1.00    3.36  130.   10.0  278.8    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW
sigmaV
 09 01 01 01   10.0 1 -999.  -99.00   277.3   99.0  -99.00  -
99.00

 F indicates top of profile (=1) or below (=0)
```

*** MODELOPTs: NonDFAULT CONC FLAT RURAL

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 5 YEARS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS 0.00227 AT (618169.80, 4326459.86, 120.00, 120.00, 0.00)	GC	UCART1
	2ND HIGHEST VALUE IS 0.00197 AT (618069.80, 4326459.86, 120.00, 120.00, 0.00)	GC	UCART1
	3RD HIGHEST VALUE IS 0.00166 AT (618169.80, 4326359.86, 120.00, 120.00, 0.00)	GC	UCART1
	4TH HIGHEST VALUE IS 0.00162 AT (618133.35, 4326340.49, 120.00, 120.00, 0.00)	DC	
	5TH HIGHEST VALUE IS 0.00142 AT (618185.89, 4326342.65, 120.00, 120.00, 0.00)	DC	
	6TH HIGHEST VALUE IS 0.00138 AT (618069.80, 4326359.86, 120.00, 120.00, 0.00)	GC	UCART1
	7TH HIGHEST VALUE IS 0.00131 AT (618095.12, 4326343.80, 120.00, 120.00, 0.00)	DC	
	8TH HIGHEST VALUE IS 0.00109 AT (618095.12, 4326527.65, 120.00, 120.00, 0.00)	DC	
	9TH HIGHEST VALUE IS 0.00106 AT (618201.19, 4326450.41, 120.00, 120.00, 0.00)	DC	
	10TH HIGHEST VALUE IS 0.00083 AT (617969.80, 4326459.86, 120.00, 120.00, 0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: NonDFAULT CONC FLAT RURAL

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.06113	ON 13110607: AT (618185.89, 4326342.65, 120.00, 120.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: NonDFAULT CONC FLAT RURAL

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.01282b ON 13110824:	AT (618095.12, 4326343.80, 120.00, 120.00, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: NonDFAULT CONC FLAT RURAL

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 1 Warning Message(s)
A Total of 9638 Informational Message(s)

A Total of 43872 Hours Were Processed

A Total of 6847 Calm Hours Identified

A Total of 2791 Missing Hours Identified (6.36 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
MX W481 43873 MAIN: Data Remaining After End of Year. Number of Hours= 48

Noise Impact Assessment

HSD Trucking – 1280 Walnut Avenue Project

Sutter County, California

Prepared For:

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July 2019

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ENVIRONMENTAL CONSULTANTS

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1.0 INTRODUCTION

This report documents the results of a noise impact assessment completed for the HSD Trucking 1280 Walnut Avenue Project in Sutter County, California. The purpose of this assessment is to estimate noise emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

1.1 Project Location

The proposed Project site is located on 4.21 acres in the southeast corner of the intersection of State Route 99 and Walnut Avenue in unincorporated Sutter County, approximately 1.3 miles south of Yuba City. The site is generally bounded by a residence and other light industrial to the north, State Route 99 to the west, with agricultural orchards beyond, Barry Elementary School to the south, and a residence to the east. The north portion of the Project site currently accommodates a 10,000-square foot industrial shop building surrounded by a circular driveway. This shop building currently accommodates trucks to be serviced. There is also an existing modular building adjacent to the northwestern corner of the shop building.

The site has been used for a welding business until the recent past, and currently contains numerous vehicles, equipment, and miscellaneous materials. According to the Traffic Assessment prepared for the Project (KD Anderson 2019), the Project site is currently operating as a heavy-duty truck parking yard. The western, southern, and eastern borders of the site are lined with trees and shrubs, which currently act to screen the site visually.

1.2 Project Description

The proposed Project is requesting a Sutter County General Plan Amendment to re-designate the land use designation of the Project site to "Industrial" from its current land use designation of "Estate Residential". In addition, the Project is proposing to rezone the site "Light Industrial (M-1)" from the "Estate Residential" zone. These proposed land use designation changes are to allow the continued industrial use of the existing shop building and site as the designation of Estates Residential and does not allow for such uses. It is noted that while industrial-type operations are not allowed under the Estates Residential land use designation, the site has been operating as a welding operation for nearly a decade. Additionally, the site is currently operating as a heavy-duty truck parking yard. These heavy-duty trucks are primarily used for agricultural harvests. Under current conditions, drivers arrive in the morning and either park or are dropped off. Trucks are dispatched and return in the evening, and drivers leave at that time.

The Project applicant, HSD Trucking, proposes to use the existing shop building for the repair of their truck and trailer equipment. Repairs would primarily take place in the shop building. The Project further proposes to continue to park/store company trucks and trailers in the vacant "yard area" characterizing the southern portion of the site. In addition to providing heavy-duty truck repair and storage services for HSD Trucking Operations, the Project would accommodate a limited number of customers with the same services. There is no fuel dispensing proposed. Based on traffic information provided by the Traffic Assessment prepared for the Project (KD Anderson 2019), Project operations are expected to generate a maximum of 100 automobile trips daily, including up to 60 heavy-duty truck trips (KD Anderson 2019). It is anticipated that 2 of these heavy-duty trucks

would be trailer refrigeration units (TRUs). According to the Project Traffic Assessment (KD Anderson 2019), the Project site is currently in operation, and the proposed Project would not result in an increased number of truck trips beyond that already occurring. Specifically, a maximum total of 15 trucks would be based at the site at any single point in time (KD Anderson 2019).

In addition to using the existing shop building, the Project would pave the area surrounding the existing shop building for internal circulation and parking purposes. The existing modular building on-site would be removed and replaced with a new, 1,440 square feet modular building. While approximately 0.7 acre of the Project site would be set aside as a buffer area between Project operations and Barry Elementary School at the southern portion of the site, the area between this buffer area and the shop building would be outfitted with a combination of compacted earth and gravel to accommodate the proposed truck and trailer storage area. This area would span approximately 75,000 square feet. Additionally, the Project proposes a fence with vinyl slats along the eastern and southern property line.

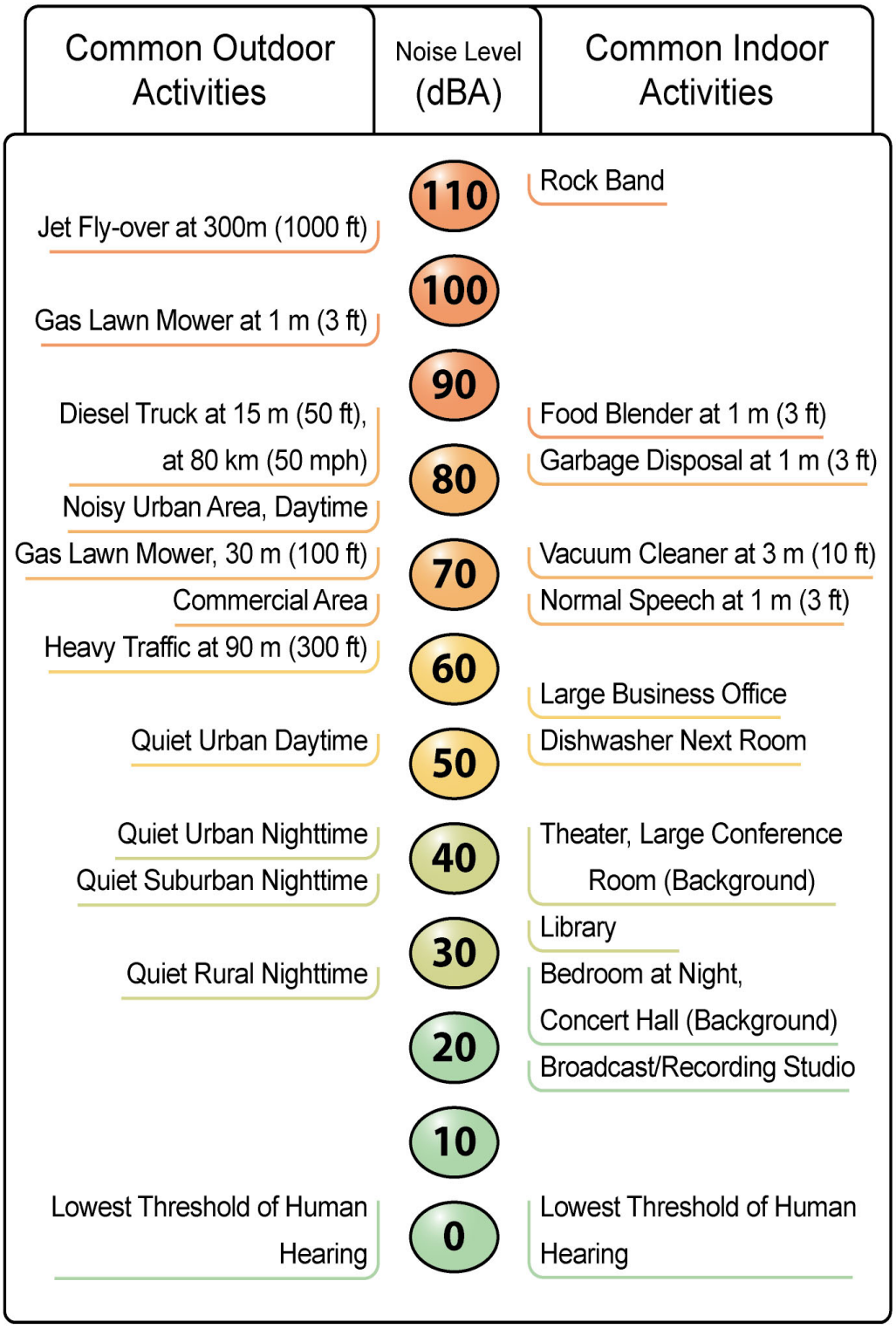
The Project would operate Mondays through Saturdays from the hours of 6:00 a.m. to 10:00 p.m.

2.0 FUNDAMENTALS OF SOUND AND ENVIRONMENTAL NOISE

2.1 Addition of Decibels

The decibel scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions (FTA 2006). For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Under the decibel scale, three sources of equal loudness together would produce an increase of 5 dB.

Typical noise levels associated with common noise sources are depicted in **Figure 1**.



Source: Caltrans 2012

Figure 1 Common Noise Levels

2.2 Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (FHWA 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed (FHWA 2011).

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA (FHWA 2006). In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

2.3 Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined in **Table 1**.

The A weighted decibel sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Table 1 Common Acoustical Descriptors

Descriptor	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or 20 micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
L_{max}, L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01}, L_{10}, L_{50}, L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	A 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
Community Noise Equivalent Level, CNEL	A 24-hour average L_{eq} with a 5 dBA "weighting" during the hours of 7:00 p.m. to 10:00 p.m. and a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

2.4 Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are

generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in A-weighted noise levels (dBA), the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. An increase of 5 dBA is typically considered substantial.
- A 10 dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

2.5 Effects of Noise on People

Hearing Loss

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise, but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise.

The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. For ground vehicles, a noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance.

3.0 FUNDAMENTALS OF ENVIRONMENTAL GROUNDBORNE VIBRATION

3.1 Vibration Sources and Characteristics

Sources of earthborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration magnitude is measured in vibration decibels (VdB).

3.2 Vibration Effects

Table 2 displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment.

Table 2 Human Reaction and Damage to Buildings for Continuous or Frequent Intermittent Vibration Levels

Approximate Vibration Velocity Level (VdB)	Human Reaction	Effect on Buildings
64–74	Range of threshold of perception	Vibrations unlikely to cause damage of any type
87	Vibrations readily perceptible	Recommended upper level to which ruins and ancient monuments should be subjected
92	Level at which continuous vibrations may begin to annoy people, particularly those involved in vibration sensitive activities	Virtually no risk of architectural damage to normal buildings
94	Vibrations may begin to annoy people in buildings	Threshold at which there is a risk of architectural damage to normal dwellings
98–104	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Architectural damage and possibly minor structural damage

Source: Caltrans 2004

4.0 ENVIRONMENTAL NOISE SETTING

4.1 Noise Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

Nearby noise-sensitive land uses consist predominantly of rural residential land uses and an elementary school. The nearest sensitive receptor to the Project site is a residence located adjacent to the eastern boundary of the site. It is acknowledged that Project activities, including initial construction of the Project, would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. Therefore, the center of the Project site is referenced to provide a uniform representation of proposed noise sources. The adjacent residence is located approximately 150 feet east of the center of the Project site. The elementary school property line is located 250 feet south of the center of the Project site, with the nearest classroom located 500 feet from the center of the Project site (see **Attachment A**).

4.2 Existing Ambient Noise Environment

Sutter County contains extensive agricultural land uses along with a range of residential, industrial, commercial, recreational, and open space areas. Key noise sources in the County include motor vehicle traffic, agricultural activities, airplane traffic, railroads, and stationary sources such as food processing plants.

Existing Ambient Noise Measurements

In order to quantify existing ambient noise levels in the Project area, ECORP Consulting conducted short-term noise measurements on November 2, 2017 (see **Attachment A**). The noise measurement sites were representative of typical existing noise exposure immediately adjacent to the Project site. The 10-minute measurements were taken between 1:45 and 2:30 p.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in **Table 3**.

Table 3 Existing Noise Measurements

Site No.	Location	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)	Time
1	Along Walnut Avenue, across the street from 1261 Walnut Avenue; Adjacent to mailboxes/ driveway	61.0	47.5	80.7	1:55 p.m.
2	Along Walnut Avenue; northeast corner of vacant lot	55.3	47.2	76.3	2:06 p.m.

*Source: ECORP Consulting. See **Attachment A** for noise measurement outputs.*

As shown, the ambient recorded noise levels near the Project site ranged from 55.3 dBA to 61.0 dBA L_{eq}. The most common noise in the Project vicinity is produced by automotive vehicles (cars, trucks, buses, motorcycles). Traffic moving along nearby roadways, including Walnut Avenue and Highway 99, produces a sound level that remains relatively constant and is part of the City's minimum ambient noise level. Vehicular noise varies with the volume, speed, and type of traffic. Slower traffic produces less noise than fast-moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, garbage and construction vehicle activity, and honking of horns. These noises add to urban noise and are regulated by a variety of agencies.

Existing Roadway Noise Levels

Existing roadway noise levels were calculated for the roadway segments in the Project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Noise Prediction Model (FHWA-RD-77-108) (**Attachment B**) and data from *2015 Traffic Counts* (CalTrans 2016). The FHWA model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along the roadway segments in the Project vicinity are presented in **Table 4**.

Table 4 Existing Traffic Noise Levels

Roadway Segment	L_{dn} at 100 Feet from Centerline of Roadway
State Route 99: Between Barry Road and Walnut Avenue	67.9

*Source: Traffic noise levels were calculated using the FHWA roadway noise prediction model. See **Attachment B** for modeling assumptions and results.*

As shown, the modeled noise levels near the Project site are 67.9 L_{dn}. It should be noted that the modeled noise levels depicted in **Table 4** may differ from measured levels in **Table 3** because the measurements represent noise levels at different locations on the Project site and are also reported in different noise metrics (e.g., noise measurements are the L_{eq} values and traffic noise levels are reported in L_{dn}).

5.0 REGULATORY FRAMEWORK

5.1 Federal

Occupational Safety and Health Act of 1970

The Federal Occupational Safety and Health Administration (OSHA) regulates on-site noise levels and protects workers from occupational noise exposure. To protect hearing, worker noise exposure is limited to 90 decibels with A-weighting (dBA) over an 8-hour work shift (29 Code of Regulations [CFR] 1910.95). Employers are required to develop a hearing conservation program when employees are exposed to noise levels exceeding 85 dBA. These programs include provision of hearing protection devices and testing employees for hearing loss on a periodic basis.

5.2 State

State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines (State of California 2003), published by the Governor's Office of Planning and Research (OPR), also provides guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

State Office of Planning and Research Noise Element Guidelines

The State Office of Planning and Research Noise Element Guidelines include recommended exterior and interior noise level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The Noise Element Guidelines contain a land use compatibility table that describes the compatibility of various land uses with a range of environmental noise levels in terms of the L_{dn}. **Table 5** presents guidelines for determining acceptable and unacceptable community noise exposure limits for various land use categories. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise

control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

Table 5 Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 – 60	55 - 70	70-75	75-85
Residential - Multiple Family	50 – 65	60 - 70	70 – 75	70 - 85
Transient Lodging - Motel, Hotels	50 – 65	60 - 70	70 – 80	80 - 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 - 70	70 – 80	80 - 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	NA	65 - 85
Sports Arenas, Outdoor Spectator Sports	NA	50 - 75	NA	70 - 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 – 75	72.5 - 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 – 80	80 - 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 - 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 - 80	75 – 85	NA

Source: Office of Planning and Research, California, General Plan Guidelines, October 2003.
Notes:
NA: Not Applicable; L_{dn}: average day/night sound level; CNEL: Community Noise Equivalent Level

Normally Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable - New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable – New construction or development should generally not be undertaken.

5.3 Local

Sutter County 2011 General Plan

The purpose of the Sutter County General Plan Noise Element is to ensure the long-term operations of agricultural activities and provide opportunities for new growth and industries, while protecting existing and future uses sensitive to noise that might be generated from those activities and growth. The Noise Element contains policies and programs that are intended to protect Sutter County residents, businesses, and visitors by establishing maximum allowable interior and exterior noise levels, as well as maximum noise standards from stationary sources and vibration activities. The General Plan policies most applicable to the proposed Project are included below.

Policy N 1.2: **Exterior Incremental Environmental Noise Standards**. Require new development to mitigate noise impacts on noise sensitive uses where the projected increases in exterior noise levels exceed those shown in **Table 6**, below.

Table 6 Exterior Incremental Environmental Noise Impact Standards for Noise-Sensitive Uses (dBA)

Residences and Buildings Where People Normally Sleep [a]		Institutional Land Uses with Primarily Daytime and Evening Uses [b]	
Existing L_{dn}	Allowable Noise Increment	Existing Peak Hour L_{eq}	Allowable Noise Increment
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

Source: Sutter County General Plan (2011), Noise Element, Table 11-2.
Notes:
a. This category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
b. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

Policy N 1.3: **Interior Noise Standards**. Require new development to mitigate noise impacts to ensure acceptable interior noise levels appropriate to the land use type as shown in **Table 7**, below.

Table 7 Maximum Allowable Environmental Noise Standards

Land Use	Exterior Noise Level Standard for Outdoor Activity Areas [a]	Interior Noise Level Standard	
	L_{dn}/CNEL, dB	L_{dn}/CNEL, dB	L_{eq}, dB [b]
Residential (Low Density Residential, Duplex, Mobile Homes)	60[c]	45	N/A
Residential (Multi Family)	65[d]	45	N/A
Transient Lodging (Motels/Hotels)	65[d]	45	N/A
Schools, Libraries, Churches, Hospitals, Nursing Homes, Museums	70	45	N/A
Theaters, Auditoriums	70	N/A	35
Playgrounds, Neighborhood Parks	70	N/A	N/A
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75	N/A	N/A
Office Buildings, Business Commercial and Professional	70	N/A	45
Industrial, Manufacturing, Utilities, and Agriculture	75	N/A	45

Source: Sutter County General Plan (2011), Noise Element, Table 11-1.
Notes:
a. Outdoor activity areas for residential developments are considered to be the back yard patios or decks of single-family residential units, and the patios or common areas where people generally congregate for multi-family development. Outdoor activity areas for nonresidential developments are considered to be those common areas where people generally congregate, including outdoor seating areas. Where the location of outdoor activity areas is unknown, the exterior noise standard shall be applied to the property line of the receiving land use.
b. As determined for a typical worst-case hour during periods of use.
c. Where it is not possible to reduce noise in outdoor activity areas to 60 dB, Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior level of up to 65 dB, Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
d. Where it is not possible to reduce noise in outdoor activity areas to 65 dB, Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior level of up to 70 dB, Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Policy N 1.4: **New Stationary Noise Sources**. Require new stationary noise sources to mitigate noise impacts on noise-sensitive uses wherever the noise from that source alone exceeds the exterior levels specified in **Table 8**, below.

Table 8 Noise Level Standards from Stationary Sources

Noise Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly Leq, dB	55	45
Maximum level, dB	70	65

Source: Sutter County General Plan (2011), Noise Element, Table 11-3.

Policy N 1.5: **Frequent, High-Noise Events**. Require development of noise sensitive uses subject to a discretionary permit and proposed in areas subject to frequent, high-noise events (such as aircraft over flights, or train and truck passbys) to adequately evaluate and mitigate the potential for noise-related impacts to ensure that noise-related annoyance, sleep disruption, speech interference, and other similar effects are minimized using metrics and methodologies appropriate to the effect(s) to be assessed and avoided.

Policy N 1.6: **Construction Noise**. Require discretionary projects to limit noise-generating construction activities within 1,000 feet of noise-sensitive uses (i.e., residential uses, daycares, schools, convalescent homes, and medical care facilities) to daytime hours between 7:00 A.M. and 6:00 P.M. on weekdays, 8:00 A.M. and 5:00 P.M. on Saturdays, and prohibit construction on Sundays and holidays unless permission for the latter has been applied for and granted by the County

Policy N 1.7: **Vibration Standards**. Require construction projects and new development anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby noise-sensitive uses based on Federal Transit Administration criteria as shown in **Table 9**, below.

Table 9 Groundborne Vibration Impact Criteria for General Assessment

Land Use Category	Impact Levels (VdB)		
	Frequent Events [a]	Occasional Events [b]	Infrequent Events [c]
Category 1: Buildings where vibration would interfere with interior operations	65	65	65
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Source: Sutter County General Plan (2011), Noise Element, Table 11-4.
Notes:
a. "Frequent Events" is defined as more than 70 vibration events of the same source per day.
b. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
c. "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.
d. This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels.

6.0 IMPACTS AND MITIGATION MEASURES

6.1 Standards of Significance

Significance Criteria

Criteria for determining the significance of noise impacts were developed based on information contained in the CEQA Guidelines Appendix G. According to the guidelines, a project may have a significant effect on the environment if it would result in the following conditions:

a) Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or of applicable standards of other agencies.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

e) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, would the project expose people residing or working in the Project area to excessive noise levels.

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.

The Project is not located within two miles of a public airport or private airstrip. As a result, the Project site is not subject to high levels of aircraft noise. Implementation of the proposed Project would not affect airport operations nor result in increased exposure of noise-sensitive receptors to aircraft noise. For these reasons, exposure to aircraft noise levels would be considered less than significant and is not discussed further.

For purposes of this analysis and where applicable, Sutter County noise and vibration standards were used for evaluation of Project-related noise impacts.

6.2 Impact Assessment

Result in a Substantial Temporary or Periodic Increase in Ambient Noise Levels in the Project Vicinity above Levels Existing without the Project and above County Standards

Construction noise associated with the proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for on-site construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., building construction, paving). Noise

generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect residences in the vicinity of the construction site. As previously stated, the closest residence is approximately 150 feet east of the center of the Project site. It is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to this sensitive receptor.

Noise levels associated with individual construction equipment are summarized in **Table 10**.

Table 10 Typical Construction Equipment Noise Levels

Type of Equipment	Maximum Noise (L_{max}) at 50 Feet (dBA)	Maximum 8-Hour Noise (L_{eq}) at 50 Feet (dBA)
Crane	80.6	72.6
Dozer	81.7	77.7
Generator	80.6	77.6
Grader	85.0	81.0
Paver	77.2	74.2
Roller	80.0	73.0
Tractor	84.0	80.0
Dump Truck	76.5	72.5
Concrete Pump Truck	81.4	74.4
Welder	74.0	70.0

Source: *FHWA 2006*

As depicted in **Table 10**, noise levels generated by individual pieces of construction equipment typically range from approximately 70.0 dBA L_{eq} to 81.0 dBA L_{eq} at 50 feet. Noise levels associated with construction projects can vary, depending on the activities performed. Short-term increases in vehicle traffic, including worker commute trips and haul truck trips, may also result in temporary increases in ambient noise levels.

During Project construction, exterior noise levels could affect the nearby existing sensitive receptor in the vicinity. As previously mentioned, the nearest sensitive receptor to the Project site is a residence located approximately 150 feet east of the center of the Project site. The elementary school property line is located 250 feet south of the center of the Project site, with the nearest classroom located 500 feet from the center of the Project site (see **Attachment A**). Based on the construction equipment noise levels listed in **Table 10** and assuming an average noise attenuation rate of 6 dB per doubling of distance from the source, predicted maximum 8-hour noise levels at the nearest sensitive receptor 150 feet away would range from approximately 61.0 dBA L_{eq} to 72.0 dBA L_{eq}. The predicted maximum 8-hour noise levels at the elementary school property line 250 feet away would range from approximately 56.5 dBA L_{eq} to 67.5 dBA L_{eq}.

Per Policy N 1.6 of the County's General Plan, noise-generating construction activities within 1,000 feet of noise-sensitive uses (i.e., residential uses, daycares, schools, convalescent homes, and medical care facilities) is limited to daytime hours between 7:00 A.M. and 6:00 P.M. on weekdays,

8:00 A.M. and 5:00 P.M. on Saturdays, and prohibited construction on Sundays and holidays unless permission for the latter has been applied for and granted by the County. The proposed Project would be required to adhere to General Plan Policy N 1.6. Therefore, since construction noise is temporary, intermittent, and limited to the daytime hours shown above, the impact would be less than significant.

Result in the Exposure of Persons to or Generation of Excessive Groundborne Vibration or Groundborne Noise Levels

Short-Term Construction-Generated Vibration

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Vibration decreases rapidly with distance. Groundborne vibration levels associated with representative construction equipment are summarized in **Table 11**.

Table 11 Representative Vibration Source Levels for Construction Equipment

Equipment	Approximate Vibration Velocity Level (VdB)	
	50 Feet	100 Feet
Large Bulldozer	81	75
Caisson Drilling	81	75
Loaded Trucks	80	74
Jackhammer	73	67
Small Bulldozer	52	46

Source: FTA 2006

Notes: The vibration levels at the off-site sensitive uses are determined with the following equation from the FTA Transit Noise and Vibration Impact Assessment, Final Report: Lv(D)=Lv(25 ft)–20log(D/25), where Lv = vibration level of equipment, D = distance from the equipment to the receiver, Lv(25 ft) = vibration level of equipment at 25 feet.

The nearest sensitive receptor to the Project site is a residence located approximately 150 feet east of the center of the construction site. The elementary school property line is located 250 feet south of the center of the construction site, with the nearest classroom located 500 feet from the center of the construction site. Based on the vibration levels presented in **Table 11**, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 75 VdB at 100 feet.

As previously described in Policy N 1.7 of the County's General Plan, that standard for infrequent vibration events (fewer than 30 vibration events of the same source per day) is 80 VdB for residences and buildings where people normally sleep and 83 VdB for institutional land uses with primarily daytime uses. Therefore, the use of virtually any type of construction equipment would not result in a groundborne vibration velocity level above the County standards. Furthermore, Project construction would be limited to daytime hours between 7:00 A.M. and 6:00 P.M. on weekdays, 8:00 A.M. and 5:00 P.M. on Saturdays, and prohibited construction on Sundays and holidays unless permission for the latter has been applied for and granted by the County. Therefore, the impact would be less than significant.

Long-Term Operational-Generated Vibration

The Project proposes to use the existing shop building for the repair of truck and trailer equipment. Repairs would primarily take place in the shop building. The Project further proposes to park/store company trucks and trailers in the vacant "yard area" characterizing the southern portion of the site. At the maximum, Project operations are expected to generate 100 automobile trips to the site daily, including up to 60 heavy-duty trucks (KD Anderson 2019). These activities would not be a source of groundborne vibration. The operational impact is less than significant.

Result in a Substantial Permanent Increase in Ambient Noise Levels in the Project Vicinity above Levels Existing without the Project in Excess of County Standards

The Project site is located within the vicinity of sensitive noise receptors, specifically residences and an elementary school. The nearest sensitive noise receptors to the Project include a residential property adjacent to the east, an elementary school to the south, a residential property to the north, across Walnut Avenue, and a residential property to the northeast, across Walnut Avenue.

Project Vicinity (Off-Site) Vehicular Traffic

At the maximum, Project operations are expected to generate 100 automobile trips to the site daily, including up to 60 heavy-duty trucks (KD Anderson 2019). Existing and existing plus Project roadway noise levels were calculated for the roadway segments in the Project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Noise Prediction Model (FHWA-RD-77-108) (**Attachment B**), data from *2015 Traffic Counts* (Caltrans 2016), and trip generation information provided by the Traffic Assessment prepared for the Project (KD Anderson 2019). The FHWA model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. Existing and existing plus Project noise levels along the roadway segments in the Project vicinity are presented in **Table 12**.

Table 12 Existing and Existing Plus Project Traffic Noise Levels

Roadway Segment	L_{dn} at 100 Feet from Centerline of Roadway
Existing: State Route 99: Between Barry Road & Walnut Avenue	67.9
Existing plus Project: State Route 99: Between Barry Road & Walnut Avenue	67.9

*Source: Traffic noise levels were calculated using the FHWA roadway noise prediction model. See **Attachment B** for modeling assumptions and results.*

As shown, the modeled existing and existing plus Project noise levels near the Project site are both 67.9 dBA. Since there will be no increase in exterior noise levels over existing conditions as a result of the new Project-related trips, there is no noise impact associated with off-site vehicular traffic.

On-Site Truck Movements

The Project proposes to park/store company trucks and trailers in the vacant "yard area" characterizing the southern portion of the site. According to the Project Traffic Assessment (KD Anderson 2019), the Project site is currently in operation, and the proposed Project would not result in an increased number of trucks parked/stored beyond that already occurring. Specifically, a maximum total of 15 trucks would be based at the site at any single point in time (KD Anderson 2019). Predicted on-site noise levels were calculated in order to capture on-site truck movements. This task was accomplished using the Federal Highway Administration (FHWA) Highway Noise Prediction Model (FHWA-RD-77-108) (**Attachment B**) and traffic volumes provided by the Traffic Assessment prepared for the Project (KD Anderson 2019). In order to provide a conservative analysis, all 15 heavy-duty trucks expected to be stored on the proposed "yard area" are assumed to arrive in the same hour of the day and travel the entire length of the site.

The FHWA model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by the California Department of Transportation (Caltrans). The Caltrans data shows that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels on the Project site are presented in **Table 13**.

Table 13 Projected On-Site Truck Movement Noise Levels

Roadway Segment	Peak Hour (L_{eq})
On-Site Circulation	54.7

*Source: Traffic noise levels were calculated using the FHWA roadway noise prediction model. See **Attachment B** for modeling assumptions and results.*

As shown, the modeled on-site truck movements at the nearest sensitive receptor (adjacent residence to the east) is 54.7 L_{eq}. (Based on attenuation rates of 6 dBA per doubling distance, the noise level at the school property line (250 to the south), is expected to be approximately 35.2 dBA.) Per Policy N 1.4 of the County's General Plan, noise levels from new on-site noise sources cannot exceed 55 dB during between the hours of 7:00 a.m. to 10:00 p.m. and cannot exceed 45 dB between the hours of 10:00 p.m. to 7:00 a.m.

As previously described, the Project would operate Mondays through Saturdays from the hours of 6:00 a.m. to 10:00 p.m. Since daytime on-site activities do not exceed 55 dB, the daytime noise impact is less than significant. However, since the Project proposes to begin daily operations at 6:00 a.m., it could potentially exceed the County nighttime noise standard of 45 dB for one hour (the hour between 6:00 a.m. and 7:00 a.m. *It is noted that the Project site is currently in operation, and the proposed Project would not result in an increased number of trucks parked/stored beyond that already occurring, and thus would not increase the amount of noise generated on-site under current conditions.* Nonetheless, mitigation measure **MM 1** is recommended to reduce impacts to the nearby residences during the nighttime hours.

Recommended Mitigation Measure MM 1:

MM 1: To reduce impacts to the nearby residences during the defined nighttime hour between 6:00 a.m. and 7:00 a.m., truck movement along the eastern side of the Project site shall not take place. Additionally, no repair activities involving mechanized equipment shall take place between the nighttime hour of 6:00 a.m. to 7:00 a.m.

On-site truck movements would not exceed the County's daytime noise standard. Additionally, adherence to **MM 1** would ensure that nighttime noise standards are not surpassed.

On-Site Truck Repairs and Trailer Refrigeration Units

The site has historically been used for industrial processes. The last business being a commercial welding business for approximately 7 years. During the use as a welding business, the site had numerous vehicles, equipment, outside materials storage, etc. located around the site. Currently, the site is operating as a heavy-duty truck parking yard. These heavy-duty trucks are primarily used for agricultural harvests. Under current conditions, drivers arrive in the morning and either park or are dropped off. Trucks are dispatched and return in the evening, and drivers leave at that time. Additionally, the existing 10,000-square foot industrial shop building currently accommodates trucks to be serviced.

The existing modular building is to be removed and replaced with a newer modular building. Repairs would primarily take place in the existing shop building. The exception could consist of a tire change, inspection of a trailer undercarriage, inspection/repair to a trailer refrigeration unit, etc.

Typical noise sources associated with the proposed repair shop would include pneumatic air wrenches, compressors, impact tools, grinders, and panel cutters. Additionally, as previously described the Project would accommodate the potential for one to two trailer refrigeration units (TRUs) on-site at any given time in order to be inspected or repaired. TRUs are refrigeration systems powered by diesel internal combustion engines or electric-powered engines designed to refrigerate or heat perishable products that are transported in various containers, including semi-trailers, truck vans, shipping containers, and rail cars. Although TRU engines are relatively small, ranging from 9 to 36 horsepower, when significant numbers of these engines congregate at distribution centers, truck stops, and other facilities, they can result in the potential for substantial noise. Increasingly, TRUs are powered with electricity as opposed to diesel gasoline and are thus substantially quieter.

As previously described, the Project would operate Mondays through Saturdays from the hours of 6:00 a.m. to 10:00 p.m. Per Policy N 1.4 of the County's General Plan, noise levels from new stationary (on-site) noise sources cannot exceed 55 dB during between the hours of 7:00 a.m. to 10:00 p.m. and cannot exceed 45 dB between the hours of 10:00 p.m. to 7:00 a.m.

Project noise from proposed on-site sources have been calculated with the SoundPLAN 3D noise model, which predicts noise levels based on the location, noise level, and frequency spectra of the noise sources as well as the geometry and reflective properties of the local terrain, buildings and barriers. **Table 14** shows the predicted Project noise levels at the nearest noise-sensitive land uses

as a result of Project on-site noise sources, as modeled by the SoundPLAN 3D noise model. Also see **Figure 2**.

Table 14 Daytime Noise Levels at the Nearest Sensitive Receptors from Project On-Site Sources

Description	Estimated Exterior Noise Level @ Residence to the North	Estimated Exterior Noise Level @ Residence to the Northeast	Estimated Exterior Noise Level @ Residence to the East	Estimated Exterior Noise Level @ the School Property Line to the South	Daytime Noise Standard (dBA L_{eq})	Exceed Standard?
Combined Project On-Site Source Noise Level (Shop Activity, TRUs)	44.2	40.9	**55.9 – 58.0**	46.7	55.0	**Yes**

Source: On-site source noise levels were calculated by ECORP Consulting using the SoundPLAN 3D noise model.

As shown in **Table 14**, County daytime noise standards would be exceeded at the residential property located adjacent to the eastern boundary of the Project site (also see **Figure 2**). As previously described, the Project proposes a fence with vinyl slats along the eastern and southern property line. Noise levels may also be reduced by intervening barriers. According to the Federal Highway Administration (FHWA 2006), barriers contribute to decreasing noise levels when the structure breaks the "line of sight" between the source and the receiver, and a barrier such as a fence can potentially reduce noise levels by 3 dBA. A reduction of 3 dBA at the residential property to the east of the Project site would reduce the exposure to Project noise to levels ranging from 52.9 – 55.0, thus complying with the County daytime noise standard. In order to ensure the proposed fence along the eastern Project property line is sufficient enough to achieve the necessary noise reduction to meet the County daytime standard, **MM 2** is recommended.

Recommended Mitigation Measure MM 2:

MM 2: The proposed fence along the eastern boundary of the Project site shall be constructed to a height that breaks the "line of sight" between the ground level of the Project industrial shop building and the existing residence directly adjacent to the eastern boundary of the Project site. The proposed fence shall be constructed of an acoustic absorption material such as vinyl or fiberglass absorbers attached to chain link, on the Project side, meeting a noise reduction coefficient rating of 0.70 or greater in accordance with American Society for Testing and Materials Test Method C423. The fence must be constructed with no visible gaps between construction materials or at the base of the fence.

Adherence to **MM 2** would ensure that stationary sources of noise would not exceed the County daytime noise standards at the nearest sensitive noise receptor.

As shown in **Table 14**, County nighttime noise standards would be potentially exceeded at the school property located adjacent to the southern boundary of the Project site. However, **MM 1** (described above) would limit truck movements and repair activities involving mechanized equipment between the nighttime hour of 6:00 a.m. to 7:00 a.m. Therefore, the only Project noise

the would be emitted during the nighttime hours (10:00 p.m. to 7:00 a.m.) would be associated with visiting TRUs. The SoundPLAN 3D noise model was employed to calculate the noise generated by 2 TRUs running during the nighttime hours (see **Figure 3**). As shown in **Figure 3**, the noise levels associated with 2 TRUs running during the nighttime hours would not exceed County nighttime standards.

Map Date: 7/29/2019
Photo (or Base) Source: *SoundPLAN 3-D Noise Model*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2 Project Daytime Stationary Noise

2017-253 HSD Trucking

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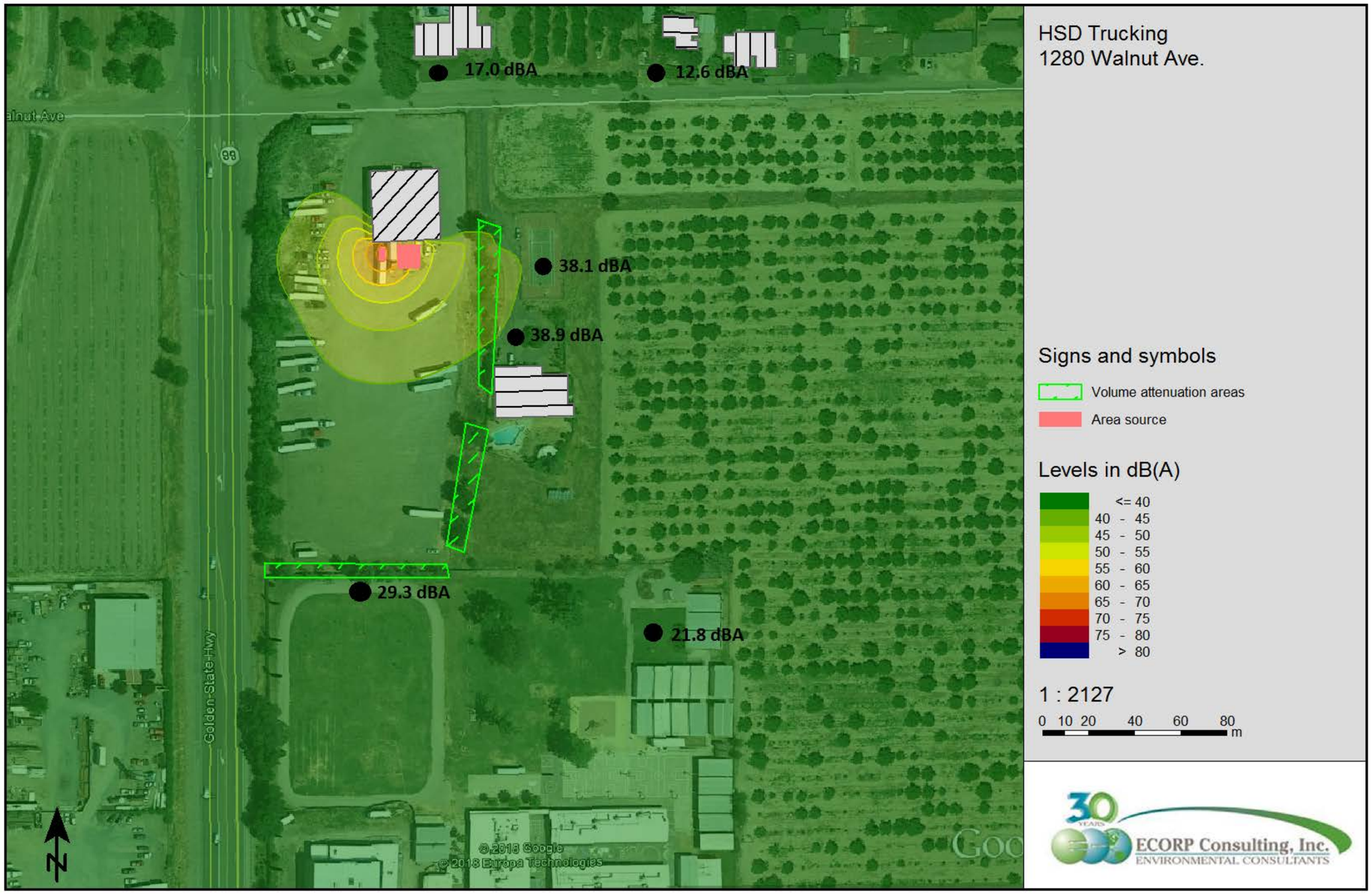

Map Date: 7/29/2019
Photo (or Base) Source: *SouundPLAN 3-D Noise Model*

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 3 Project Nighttime Stationary Noise

2017-253 HSD Trucking

Cumulative Noise

Short-Term Construction-Generated Noise

Impacts associated with noise from on-site construction activities were considered less than significant. The Project area is rural with few sensitive receptors and construction noise would occur for a limited duration. Therefore, the Project's contribution to cumulative noise levels is considered less than cumulatively considerable during construction.

Long-Term Operational-Generated Noise

According to Caltrans' *2015 Traffic Counts* (2016), the segment of Highway 99 traversing the Project site accommodates an average of 21,000 vehicle trips daily. According to the Traffic Assessment prepared for the Project (KD Anderson 2019), the maximum number of daily trips is anticipated to be 100 automobile trips to the site daily, including up to 60 heavy-duty trucks. This number of daily trips would be nominal compared to the vehicle trips currently experienced on Highway 99, and thus, would not result in a perceptible increase traffic noise levels. According to the 2013 California Department of Transportation (Caltrans) *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, a doubling of traffic on a roadway would be required in order to produce an increase of 3 dB (a barely perceptible increase). The Project's contribution to cumulative noise levels is considered less than cumulatively considerable during operations.

6.3 Conclusion

Criteria for determining the significance of noise impacts associated with the proposed Project were developed based on Appendix G of the CEQA Guidelines in combination with Sutter County noise and vibration standards. As shown, Project construction-generated noise and vibration are below County standards and is therefore considered less than significant. The Project itself would not result in a substantial permanent increase in noise or vibration levels over existing conditions on the site, and there is no impact surrounding the proposed Project concerning airport noise, including from a private airstrip.

7.0 REFERENCES

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Sutter County. 2011. Noise Element. *Sutter County General Plan*.

Attachment A – Noise Measurement Output Files

Site Number: 1			
Recorded By: Lindsay Taylor			
Job Number: 2017-253			
Date: 11/2/2017			
Time: 1:55 p.m.			
Location: Along Walnut Avenue, across the street from 1261 Walnut Avenue; Adjacent to mailboxes/ driveway			
Source of Peak Noise: Local traffic; Highway 99 traffic			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
61.0	47.5	80.7	101.7

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Larson Davis	LxT SE	0005120	6/27/2017	
	Microphone	Larson Davis	377B02	174464	5/19/2017	
	Preamp	Larson Davis	PRMLxT1L	042852	6/1/2017	
	Calibrator	Larson Davis	CAL200	14105	6/13/2017	

Weather Data			
Est.	Duration: 10 minutes		Sky: partly cloudy
	Note: dBA Offset = 0.17		Sensor Height (ft): 5 ft
	Wind Ave Speed (mph)	Temperature (degrees Fahrenheit)	Barometer Pressure (inHg)
	S 12 mph	66 F	29.9 inHg

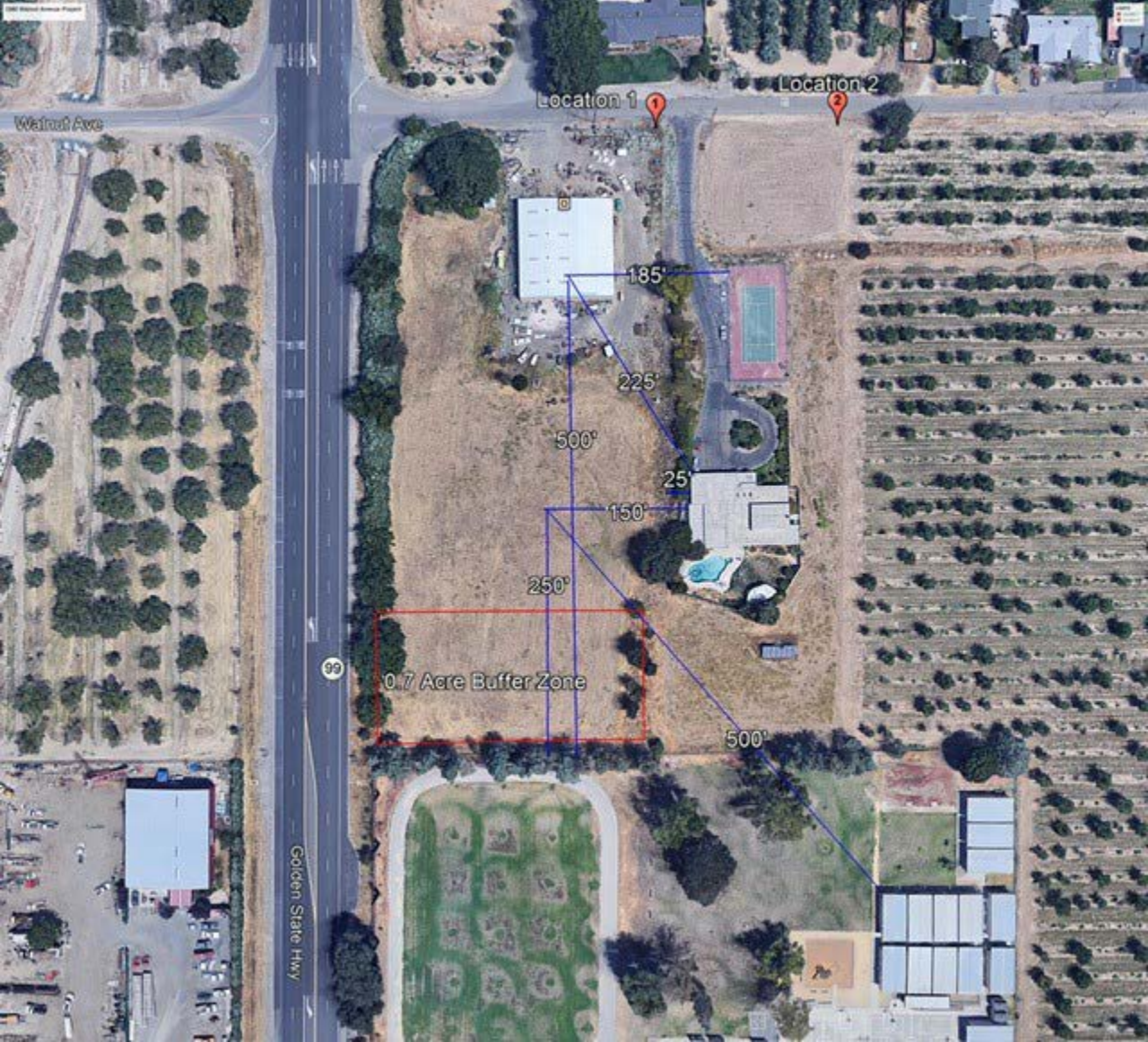
Photo of Measurement Location

Site Number: 2			
Recorded By: Lindsay Taylor			
Job Number: 2017-253			
Date: 11/2/2017			
Time: 2:06 p.m.			
Location: Along Walnut Avenue; northeast corner of vacant lot			
Source of Peak Noise: Local traffic; Highway 99 traffic			
Noise Data			
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)
55.3	47.2	76.3	102.4

Equipment						
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note
Sound	Sound Level Meter	Larson Davis	LxT SE	0005120	6/27/2017	
	Microphone	Larson Davis	377B02	174464	5/19/2017	
	Preamp	Larson Davis	PRMLxT1L	042852	6/1/2017	
	Calibrator	Larson Davis	CAL200	14105	6/13/2017	

Weather Data			
Est.	Duration: 10 minutes		Sky: partly cloudy
	Note: dBA Offset = 0.17		Sensor Height (ft): 5 ft
	Wind Ave Speed (mph)	Temperature (degrees Fahrenheit)	Barometer Pressure (inHg)
	S 12 mph	66 F	29.9 inHg

Photo of Measurement Location


Location 1
Location 2
Walnut Ave
185'
225'
500'
25'
150'
250'
0.7 Acre Buffer Zone
500'
99
Golden State Hwy

Summary

File Name on Meter	LxT_Data.026
File Name on PC	SLM_0005120_LxT_Data_026.00.ldbin
Serial Number	0005120
Model	SoundExpert® LxT
Firmware Version	2.301
User	Lindsay Taylor
Location	Site 1
Job Description	1280 Walnut Avenue Project
Note	

Measurement

Description	
Start	2017-11-02 13:55:02
Stop	2017-11-02 14:05:02
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-11-02 13:52:49
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Fast
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	122.5 dB

	A	**C**	**Z**
Under Range Peak	78.8	75.8	**80.8** dB
Under Range Limit	**25.4**	25.4	30.4 dB
Noise Floor	16.1	16.3	21.3 dB

Results

LAeq	61.0 dB
LAE	88.8 dB

EA	84.384	µPa²h	
LZpeak (max)	2017-11-02 14:04:35	101.7	dB
LAFmax	2017-11-02 14:02:46	80.7	dB
LAFmin	2017-11-02 14:01:32	47.5	dB
SEA	-99.9	dB	

LAF > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAF > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**
	61.0	61.0	-99.9	61.0	61.0	-99.9

LCeq	70.4	dB
LAeq	61.0	dB
LCeq - LAeq	9.4	dB
LAleq	63.4	dB
LAeq	61.0	dB
LAleq - LAeq	2.3	dB

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	61.0		70.4			
LF(max)	80.7	2017/11/02 14:02:46				
LF(min)	47.5	2017/11/02 14:01:32				
LPeak(max)					101.7	2017/11/02 14:04:35

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	21.0	
OBA Overload Duration	83.6	s

Statistics

LAF5.00	64.2	dB
LAF10.00	62.2	dB
LAF33.30	59.0	dB
LAF50.00	57.3	dB
LAF66.60	55.7	dB
LAF90.00	52.4	dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0
PRMLxT1L	2017-11-02 13:52:42	-28.8	53.5	50.8	49.4
PRMLxT1L	2017-10-11 10:26:19	-28.6	59.8	50.8	62.2
PRMLxT1L	2017-09-29 11:52:59	-28.7	52.4	48.9	50.1
PRMLxT1L	2017-09-29 11:52:01	-28.7	48.0	51.0	50.8
PRMLxT1L	2017-09-29 11:51:28	-28.7	57.8	55.0	61.0
PRMLxT1L	2017-09-15 11:50:28	-28.8	31.4	40.6	34.7
PRMLxT1L	2017-09-05 10:49:41	-28.6	41.6	45.6	34.2
PRMLxT1L	2017-08-25 19:05:29	-28.7	40.6	54.8	53.2
PRMLxT1L	2017-08-10 11:53:08	-28.5	40.6	59.3	72.0
PRMLxT1L	2017-07-19 09:20:22	-28.6	43.7	45.9	52.5
PRMLxT1L	2017-06-27 09:59:53	-28.5	48.4	55.0	51.1

Summary

File Name on Meter	LxT_Data.027
File Name on PC	SLM_0005120_LxT_Data_027.00.ldbin
Serial Number	0005120
Model	SoundExpert® LxT
Firmware Version	2.301
User	Lindsay Taylor
Location	Site 2
Job Description	1280 Walnut Avenue Project
Note	

Measurement

Description	
Start	2017-11-02 14:06:22
Stop	2017-11-02 14:16:22
Duration	00:10:00.0
Run Time	00:10:00.0
Pause	00:00:00.0
Pre Calibration	2017-11-02 13:52:42
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Fast
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Freq. Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	122.5 dB

	A	**C**	**Z**
Under Range Peak	78.8	75.8	**80.8** dB
Under Range Limit	**25.4**	25.4	30.4 dB
Noise Floor	16.1	16.3	21.3 dB

Results

LAeq	55.3 dB
LAE	83.1 dB

EA	22.712	µPa²h	
LZpeak (max)	2017-11-02 14:12:21	102.4	dB
LAFmax	2017-11-02 14:12:44	76.3	dB
LAFmin	2017-11-02 14:14:25	47.2	dB
SEA	-99.9	dB	

LAF > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LAF > 115.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LZpeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-22:00**	**LNight 22:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-22:00**
	55.3	55.3	-99.9	55.3	55.3	-99.9

LCeq	65.4	dB
LAeq	55.3	dB
LCeq - LAeq	10.1	dB
LAleq	57.1	dB
LAeq	55.3	dB
LAleq - LAeq	1.7	dB

	A		**C**		**Z**	
	dB	**Time Stamp**	**dB**	**Time Stamp**	**dB**	**Time Stamp**
Leq	55.3		65.4			
LF(max)	76.3	2017/11/02 14:12:44				
LF(min)	47.2	2017/11/02 14:14:25				
LPeak(max)					102.4	2017/11/02 14:12:21

# Overloads	0	
Overload Duration	0.0	s
# OBA Overloads	12.0	
OBA Overload Duration	52.4	s

Statistics

LAF5.00	57.1	dB
LAF10.00	56.2	dB
LAF33.30	54.5	dB
LAF50.00	53.7	dB
LAF66.60	52.9	dB
LAF90.00	50.7	dB

Calibration History

Preamp	Date	dB re. 1V/Pa	6.3	8.0	10.0
PRMLxT1L	2017-11-02 13:52:42	-28.8	53.5	50.8	49.4
PRMLxT1L	2017-10-11 10:26:19	-28.6	59.8	50.8	62.2
PRMLxT1L	2017-09-29 11:52:59	-28.7	52.4	48.9	50.1
PRMLxT1L	2017-09-29 11:52:01	-28.7	48.0	51.0	50.8
PRMLxT1L	2017-09-29 11:51:28	-28.7	57.8	55.0	61.0
PRMLxT1L	2017-09-15 11:50:28	-28.8	31.4	40.6	34.7
PRMLxT1L	2017-09-05 10:49:41	-28.6	41.6	45.6	34.2
PRMLxT1L	2017-08-25 19:05:29	-28.7	40.6	54.8	53.2
PRMLxT1L	2017-08-10 11:53:08	-28.5	40.6	59.3	72.0
PRMLxT1L	2017-07-19 09:20:22	-28.6	43.7	45.9	52.5
PRMLxT1L	2017-06-27 09:59:53	-28.5	48.4	55.0	51.1

Attachment B – Noise Modeling Output Files

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 1A
Project Name: HSD Trucking - 1280 Walnut Avenue Project

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: ECORP Consulting (2017)
Community Noise Descriptor: L_{dn}: x CNEL:

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition				Design		Vehicle Mix		Distance from Centerline of Roadway						Traffic Volumes		
Roadway, Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	**Ldn at 100 Feet**	Distance to Contour 70 Ldn	65 Ldn	60 Ldn	55 Ldn	Calc Dist	Day	Eve	Night
State Route 99																
Between Barry and Walnut	4	0	21,000	65	0.5	1.8%	0.7%	**67.9**	72	155	335	722	100	16,317	2,667	2,016

TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Existing Plus Project Conditions

Project Number: 1B
Project Name: HSD Trucking - 1280 Walnut Avenue Project

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: ECORP Consulting (2017)
Community Noise Descriptor: L_{dn}: x CNEL:

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

				Design		Vehicle Mix		Distance from Centerline of Roadway					
Analysis Condition		Median	ADT	Speed	Alpha	Medium	Heavy	**Ldn at**	Distance to Contour				Calc
Roadway, Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	**100 Feet**	70 Ldn	65 Ldn	60 Ldn	55 Ldn	Dist
State Route 99													
Between Barry and Walnut	4	0	21,100	65	0.5	1.8%	0.8%	**67.9**	73	157	339	729	100

TRAFFIC NOISE LEVELS

Project Number: 2A
Project Name: HSD Trucking - 1280 Walnut Avenue Project

Background Information

Model Description:	FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s):	ECORP Consulting (2017)
Source of Traffic Volumes:	On-site Circulation - KD Anderson 2019
Community Noise Descriptor:	L_{dn}: x CNEL:

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	22.30%	0.00%
Medium-Duty Trucks	87.43%	12.57%	0.00%
Heavy-Duty Trucks	89.10%	10.90%	0.00%

Traffic Noise Levels

Analysis Condition Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor[1]	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	**Peak Hour dB(A) L_{eq}**
Project Site												
Onsite Circulation	Project	1	0	15	15	3	25	0	0	10.0%	90.0%	**54.7**

[1] Distance is from the proposed Project driveway at southeast corner of the existing shop building to the residential property line east of the Project site.
Noise levels are based on 15 heavy duty trips on-site over 1 hour, 100% of which are medium-duty and heavy-duty trucks.
Peak hour traffic volumes derived from the Traffic Assessment prepared for the Project (KD Anderson 2019)

KD Anderson & Associates, Inc.
Transportation Engineers

October 1, 2019

Mr. Dennis Nelson
Dennis C. Nelson Company
950 Tharp Road, Suite 501
Yuba City, CA 95993

RE: REVISED TRAFFIC ASSESSMENT FOR HSD TRUCKING PROJECT, SUTTER COUNTY, CALIFORNIA

Dear Mr. Nelson:

Thank you for contacting our firm regarding the HSD Trucking project in Sutter County. As we understand the proposed project is a plan to create regular parking and improved access for a small trucking operation located near the SR 99 / Walnut Avenue intersection. The site is currently used for this purpose but the project will result in a use permit under Sutter County guidelines.

Caltrans and Sutter County have reviewed the project, and while a full traffic impact analysis is not required, there are a few questions that have been addressed by this focused traffic assessment, including:

1. What is the amount of additional truck traffic associated with the project, when does that traffic occur and what types of trucks will be involved (i.e., STAA?)
2. How much traffic will the project add to intersections on SR 99, including consideration of the SR 99 / Oswald Road intersection?
3. What is the long term traffic volume forecast for the SR 99 / Oswald Road intersection, and what is the project's share of the future new traffic anticipated at that intersection?
4. How does the project comply with General Plan Policy M 2.5?

Existing Conditions

Project Site. The HSD Trucking site is located on the southeast corner of the intersection of SR 99 / Walnut Avenue. The site has gated access to Walnut Avenue roughly midway along its Walnut Avenue frontage about 200 feet from the stop bar on the street's westbound approach to the SR 99 intersection. A similar truck operation has access to Walnut Avenue opposite the HSD Trucking driveway. The paved section on Walnut Avenue is relativly narrow in this area (i.e., 18± feet), and while the area between roadway and property line has been graveled, no specific access improvements have been made to accommodate the turning requirements of trucks. Today a small shop building allows trucks to be serviced. The existing site itself is graveled, and designated parking spaces are not striped.

SR 99 / Walnut Avenue Intersection. State Route 99 (SR 99) is a four-lane conventional highway in the area of Walnut Avenue. The highway has two travel lanes in each direction, and long northbound and southbound left turn lanes are provided (i.e., 450 to 490 foot lanes). While formal right turn lanes are not provided, the standard 8-foot paved shoulder has been widened to about 20 feet at the intersection, and turn radii accommodating trucks have been provided. Street lights exist on all four corners of the intersection.

Walnut Avenue is designated a rural road in the Sutter County General Plan. The road is about 18 to 20 feet wide and is not designated for trucks permitted under the *Surface Transportation Authorization Act (STAA).*

Truck Traffic on SR 99 Corridor. Today SR 99 carries an *Annual Average Daily Traffic (AADT)* volume of 21,200 vehicles per day in the area of the Walnut Avenue intersection north of Oswald Road. http://www.dot.ca.gov/trafficops/census/volumes2017/Route99.html Caltrans data indicates that trucks of various sizes comprise 10.2% of the daily traffic volume in this area, or roughly 2,160 trucks trips per day.

Project Impacts

Project Description. The project will install onsite and offsite improvements. The existing driveway location will be paved (45 feet) and applicable approach radii will be included at Walnut Avenue. A new Walnut Avenue access gate will be installed at the east end of the parcel roughly 290 feet from the intersection stop bar. This is to be the primary truck entrance and exit, and materials included in the project application note the path of truck travel entering and exiting via this gate to SR 99. Thus, site truck access will be improved, and project trucks are less likely to interfere with the flow of traffic on Walnut Avenue. New A.C. pavement will be installed on-site in the area of the truck service building, and designated automobile parking will be striped. Roughly 1¼ acres will be devoted to truck / trailer parking.

HSD Trucking has been in operation, and with the project the planned business operations will not exceed those that have already been occurring. A total of fifteen (15) trucks will be based at the site. Previously some parking by others has occurred, and the number of trucks parked at the site has occasionally exceeded that number. Sutter County is expected to condition the project to a maximum of fifteen trucks.

The trucks associated with the HSD Trucking business are primarily used with agricultural harvests. Drivers arrive in the morning and either park or are dropped off. Trucks are dispatched and return in the evening, and drivers leave at that time. Little traffic is generated in typical peak commute hours.

Trip Generation. The amount of traffic accompanying the project can be described in terms of its "trip generation". A truck or automobile leaving the site generates one trip and a second trip is created when a truck or automobile returns. The number of trips that will result from the project is dependent on the number of trucks / trailers that will be allowed to park at the site. Assuming 15 trucks then roughly 30 to 60 driver commute trips could be anticipated, depending on the share of drivers that is "drop-off". About 30 truck trips occur if all trucks are dispatched were dispatched. Some non-driver employee trips will also occur, and the probable total site daily trip generation is expected to be roughly 100 trips. This estimate does not, however, represents additional traffic on the local street system since the business is already in operation.

The site is not proposed for STAA trucks.

Project trips make use of Walnut Avenue and are primarily focused on SR 99 to the north and south. Assuming project truck trips are split north or south of the site, the 15 daily truck trips in each direction associated with this use would represent 0.7% of the existing 2,160 total truck trips on SR 99. This contribution is too small to have an appreciable impact on regional truck circulation.

Traffic Contribution to SR 99 / Oswald Road intersection

A comprehensive traffic study is underway to assess traffic issues at the SR 99 / Oswald Road intersection. The study is guided by an agreement between Caltrans and Sutter County, but traffic volume data is not yet available.

In the meantime, the amount of traffic passing through the SR 99 / Oswald Road intersection can be suggested from daily traffic volume data contained in the Sutter County General Plan EIR. Based on the roadway segment volumes presented in GP DEIR Table 6.13-13 the total approach volume on the legs of the intersection totaled roughly 20,000 vehicles per day (vpd) when the GP was prepared in 2009. The DEIR indicated that this volume would rise to 29,400 vpd with buildout of Sutter County.

As a comparison the project's 100 daily trips will likely be divided north and south of the Walnut Avenue intersection on SR 99. Assuming half goes south, then 50 of the 29,400 forecast trips might be associated with this project, or less than 0.3% of the total existing at the time and less than 0.2% of the total at buildout. As a share of the traffic volume growth anticipated by the GP, the projects 50 trips would be 0.5% of the 9,400 vpd difference between 2009 and buildout volumes.

General Plan Policy M 2.5

This policy is noted below.

Policy M 2.5 Level of Service on County Roads. *Develop and manage the County roadway segments and intersections to maintain LOS D or better during peak hour, and LOS C or better as all other times. Adjust for seasonality. These standards shall apply to all County road segments and intersections unless otherwise addressed in adopted specific or community plans*.

To address this policy current peak hour traffic volumes were obtained for Walnut Avenue / SR 99 intersection. These volumes were used to suggest current operating Level of Service and to suggest the effect of the proposed project's traffic on Level of Service.

The General Plan EIR identifies applicable Level of Service Thresholds for Sutter County roadways of various classifications in Table 6.14-6. That reference notes that two-lane rural roads are expected to carry up to 10,600 vehicles per day (vpd) at LOS C, assuming that 10% of the daily volume occurs in the peak traffic hour.

A.m. and p.m. peak hour intersection turning movement counts were made at the SR 99 / Walnut Avenue intersection on April 23, 2019. These counts indicated that Walnut Avenue carried 78 vehicles per hour (vph) in the a.m. peak hour and 24 vph in the p.m. peak hour. Assuming 10% of the daily traffic at that time the daily volume on Walnut Avenue east of SR 99 would be roughly 240 to 780 vehicles per day. This volume falls far below the GP EIR's LOS C threshold of 10,600 vpd.

KDA

As noted above, HSD Trucking may generate 100 vehicle trips per day. Because HSD Trucking is already in operation its traffic would be included in existing traffic counts. However even with the addition of this traffic to current background volumes on Walnut Avenue the result would still be a total that falls far below the LOS C threshold.

A similar assessment was conducted for the SR 99 / Walnut Avenue intersection. Using the methods contained in the Highway Capacity Manual, 6th Edition (HCM) the intersection operates today with side street delays on the westbound approach that are indicative of LOS C in the a.m. peak hour and LOS D in the p.m. peak hour. These conditions satisfy the General Plan policy.

Thank you again for contacting our firm. Please fee free to call me if you have any questions.

Sincerely Yours,

KD Anderson & Associates, Inc.

Kenneth D. Anderson, P.E.
President

Attachment: Traffic Count, Figures, LOS calculations

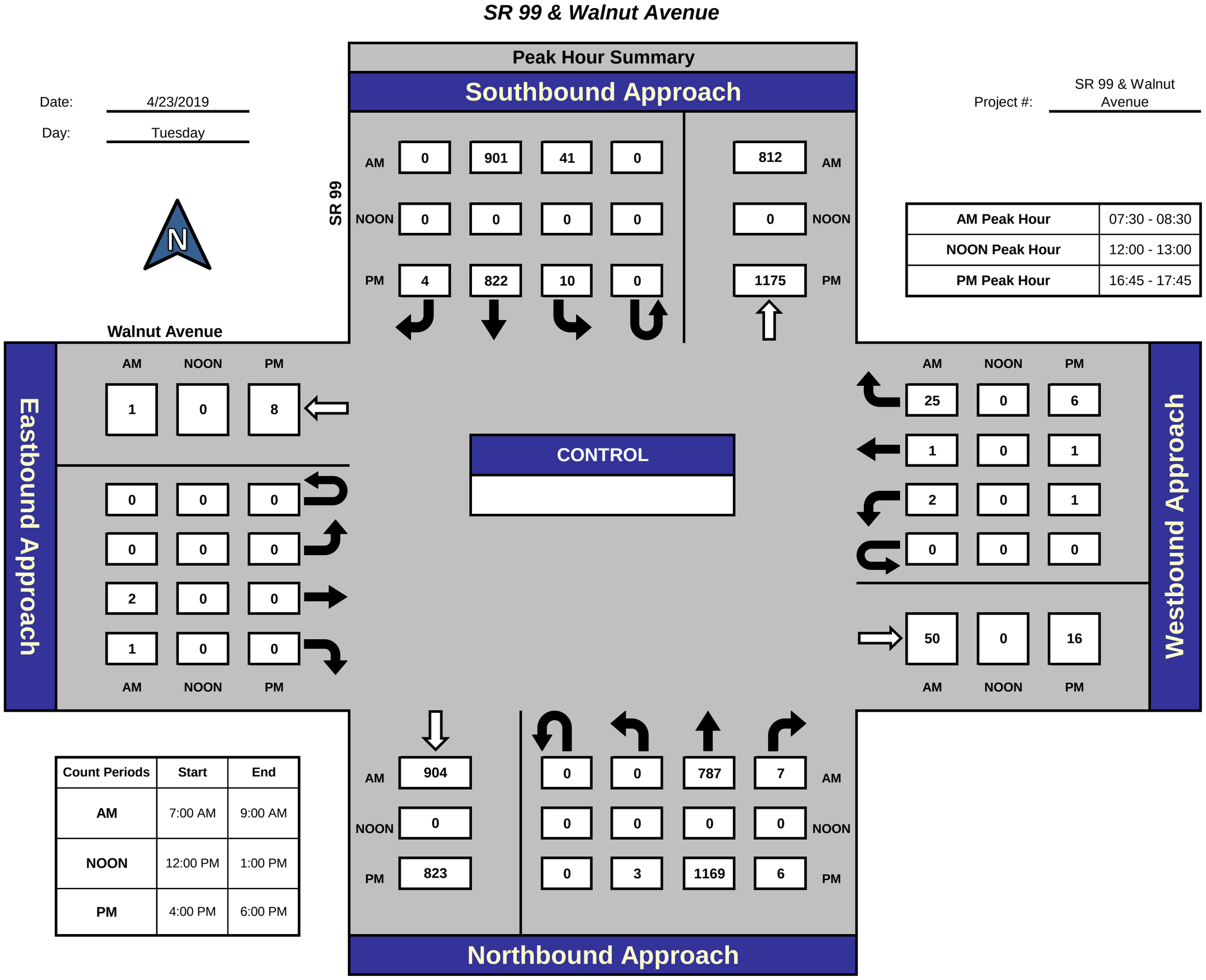
KDA

SR 99 & Walnut Avenue

Date: 4/23/2019

Day: Tuesday

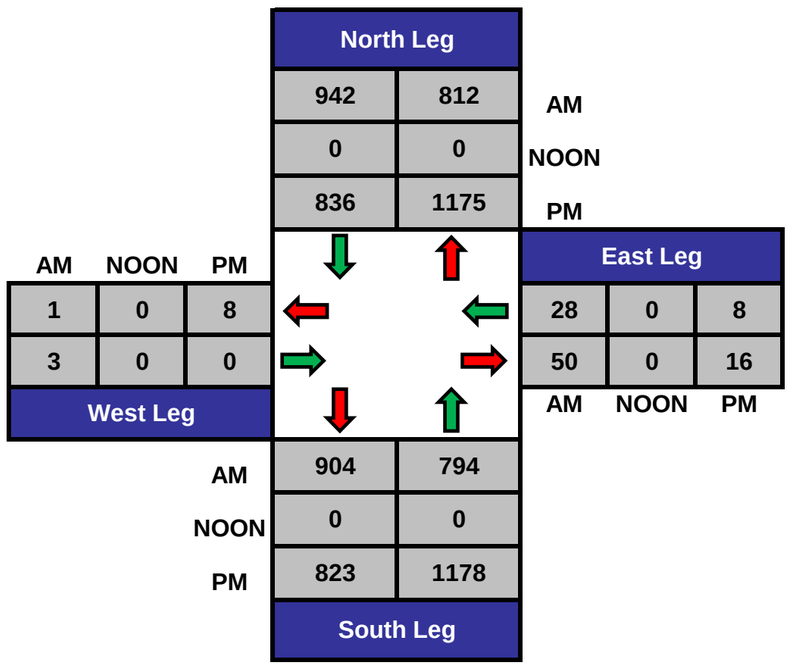
Project #: SR 99 & Walnut Avenue



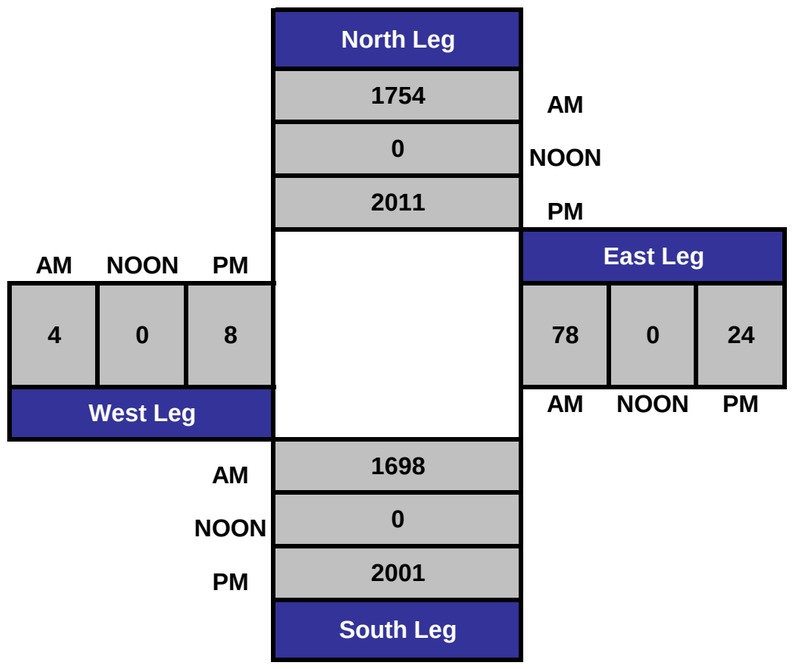
Peak Hour	
AM Peak Hour	07:30 - 08:30
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	16:45 - 17:45

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



KD ANDERSON & ASSOCIATES, INC.

(916) 660-1555

Sutter County
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

File Name : SR 99 & Walnut Avenue
Date : 4/23/2019

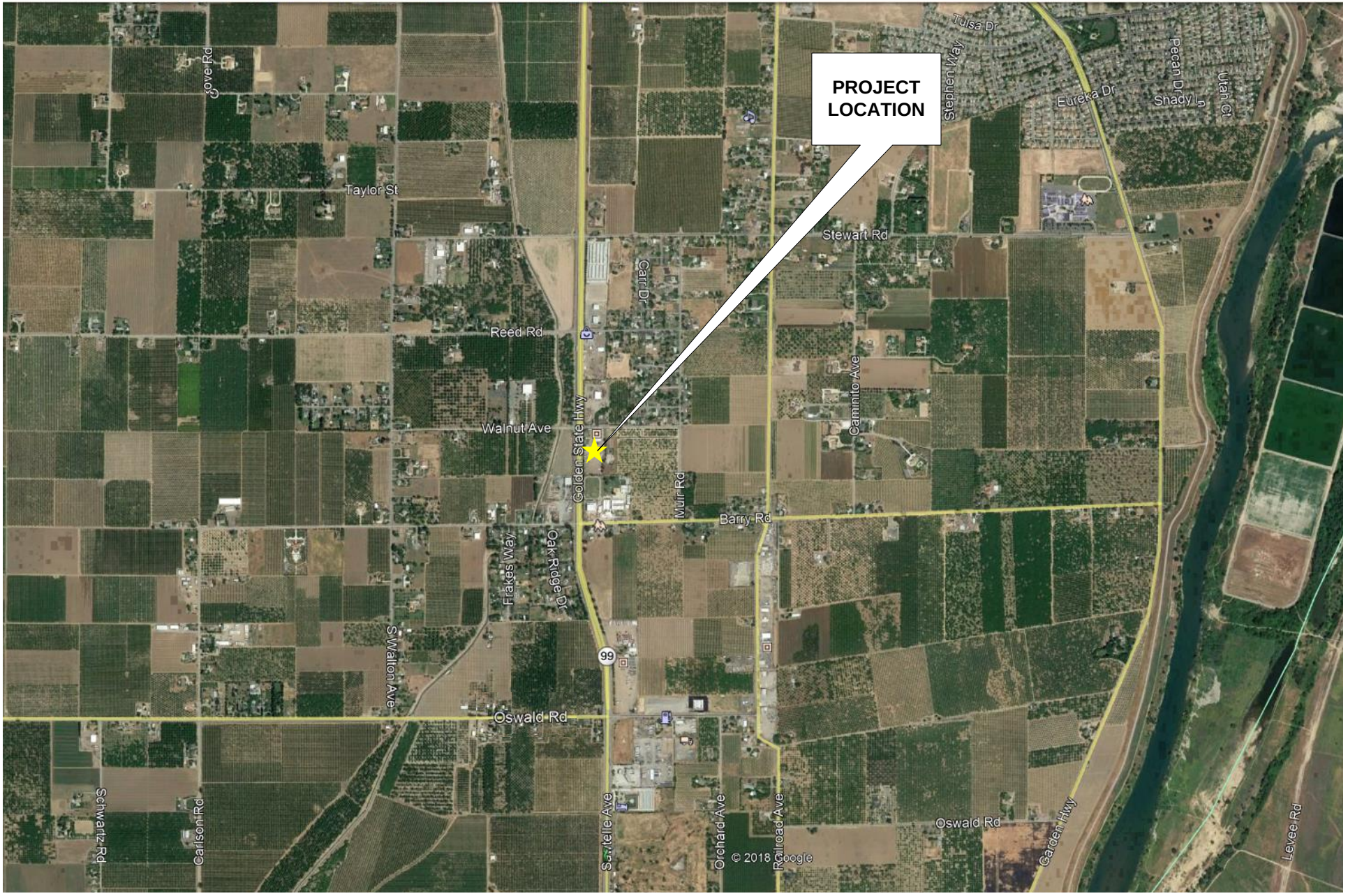
Unshifted Count = All Vehicles & Uturns

	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue 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	4	149	1	0	154	0	0	2	0	2	0	138	1	0	139	0	0	0	0	0	295	0
7:15	3	226	0	0	229	2	0	3	0	5	0	127	1	0	128	0	0	0	0	0	362	0
7:30	4	190	0	0	194	0	0	0	0	0	0	220	0	0	220	0	2	0	0	2	416	0
7:45	4	241	0	0	245	0	0	7	0	7	0	187	1	0	188	0	0	0	0	0	440	0
Total	15	806	1	0	822	2	0	12	0	14	0	672	3	0	675	0	2	0	0	2	1513	0
8:00	16	224	0	0	240	1	1	5	0	7	0	181	2	0	183	0	0	0	0	0	430	0
8:15	17	246	0	0	263	1	0	13	0	14	0	199	4	0	203	0	0	1	0	1	481	0
8:30	4	140	0	0	144	3	0	2	0	5	0	146	2	0	148	0	1	0	0	1	298	0
8:45	3	180	0	0	183	0	0	2	0	2	0	153	0	0	153	0	0	0	0	0	338	0
Total	40	790	0	0	830	5	1	22	0	28	0	679	8	0	687	0	1	1	0	2	1547	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	2	160	1	0	163	0	0	1	0	1	1	302	0	0	303	0	0	0	0	0	467	0
16:15	4	174	1	0	179	2	1	3	0	6	0	352	0	0	352	0	0	0	0	0	537	0
16:30	0	150	0	0	150	1	0	4	0	5	0	266	3	0	269	0	0	0	0	0	424	0
16:45	3	199	1	0	203	1	1	1	0	3	1	278	2	0	281	0	0	0	0	0	487	0
Total	9	683	3	0	695	4	2	9	0	15	2	1198	5	0	1205	0	0	0	0	0	1915	0
17:00	2	210	0	0	212	0	0	2	0	2	2	329	1	0	332	0	0	0	0	0	546	0
17:15	2	203	1	0	206	0	0	0	0	0	0	294	1	0	295	0	0	0	0	0	501	0
17:30	3	210	2	0	215	0	0	3	0	3	0	268	2	0	270	0	0	0	0	0	488	0
17:45	3	179	1	0	183	2	0	5	0	7	0	258	2	0	260	0	0	0	0	0	450	0
Total	10	802	4	0	816	2	0	10	0	12	2	1149	6	0	1157	0	0	0	0	0	1985	0
Grand Total	74	3081	8	0	3163	13	3	53	0	69	4	3698	22	0	3724	0	3	1	0	4	6960	0
Apprch %	2.3%	97.4%	0.3%	0.0%		18.8%	4.3%	76.8%	0.0%		0.1%	99.3%	0.6%	0.0%		0.0%	75.0%	25.0%	0.0%			
Total %	1.1%	44.3%	0.1%	0.0%	45.4%	0.2%	0.0%	0.8%	0.0%	1.0%	0.1%	53.1%	0.3%	0.0%	53.5%	0.0%	0.0%	0.0%	0.0%	0.1%	100.0%	

AM PEAK HOUR	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue 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	4	190	0	0	194	0	0	0	0	0	0	220	0	0	220	0	2	0	0	2	416
7:45	4	241	0	0	245	0	0	7	0	7	0	187	1	0	188	0	0	0	0	0	440
8:00	16	224	0	0	240	1	1	5	0	7	0	181	2	0	183	0	0	0	0	0	430
8:15	17	246	0	0	263	1	0	13	0	14	0	199	4	0	203	0	0	1	0	1	481
Total Volume	41	901	0	0	942	2	1	25	0	28	0	787	7	0	794	0	2	1	0	3	1767
% App Total	4.4%	95.6%	0.0%	0.0%		7.1%	3.6%	89.3%	0.0%		0.0%	99.1%	0.9%	0.0%		0.0%	66.7%	33.3%	0.0%		
PHF	.603	.916	.000	.000	.895	.500	.250	.481	.000	.500	.000	.894	.438	.000	.902	.000	.250	.250	.000	.375	.918

NOON PEAK	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue 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	SR 99 Southbound					Walnut Avenue Westbound					SR 99 Northbound					Walnut Avenue 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 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	3	199	1	0	203	1	1	1	0	3	1	278	2	0	281	0	0	0	0	0	487
17:00	2	210	0	0	212	0	0	2	0	2	2	329	1	0	332	0	0	0	0	0	546
17:15	2	203	1	0	206	0	0	0	0	0	0	294	1	0	295	0	0	0	0	0	501
17:30	3	210	2	0	215	0	0	3	0	3	0	268	2	0	270	0	0	0	0	0	488
Total Volume	10	822	4	0	836	1	1	6	0	8	3	1169	6	0	1178	0	0	0	0	0	2022
% App Total	1.2%	98.3%	0.5%	0.0%		12.5%	12.5%	75.0%	0.0%		0.3%	99.2%	0.5%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.833	.979	.500	.000	.972	.250	.250	.500	.000	.667	.375	.888	.750	.000	.887	.000	.000	.000	.000	.000	.926

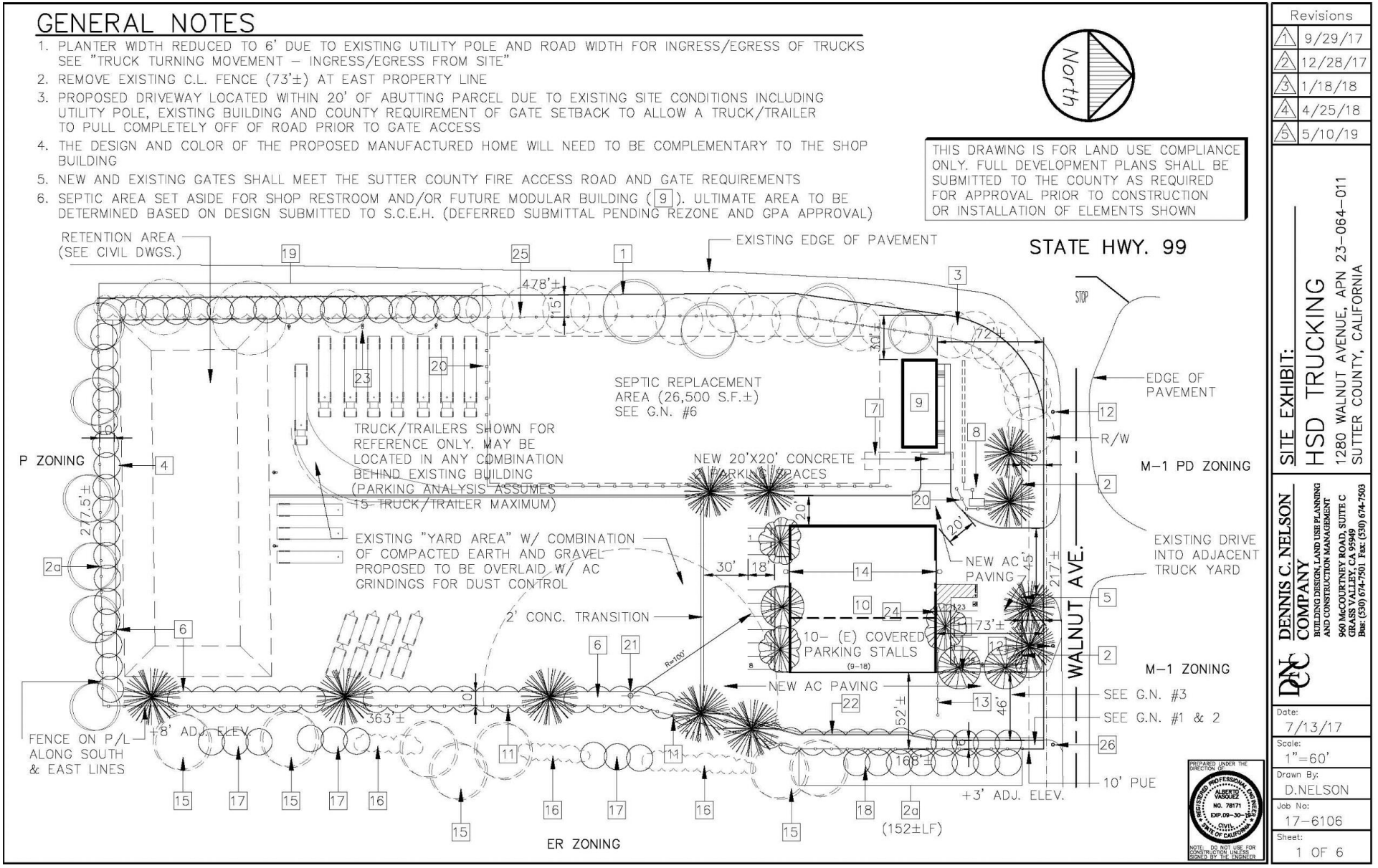


VICINITY MAP

KD Anderson & Associates, Inc.
Transportation Engineers

4712-002 RA 10/1/2019

figure 1

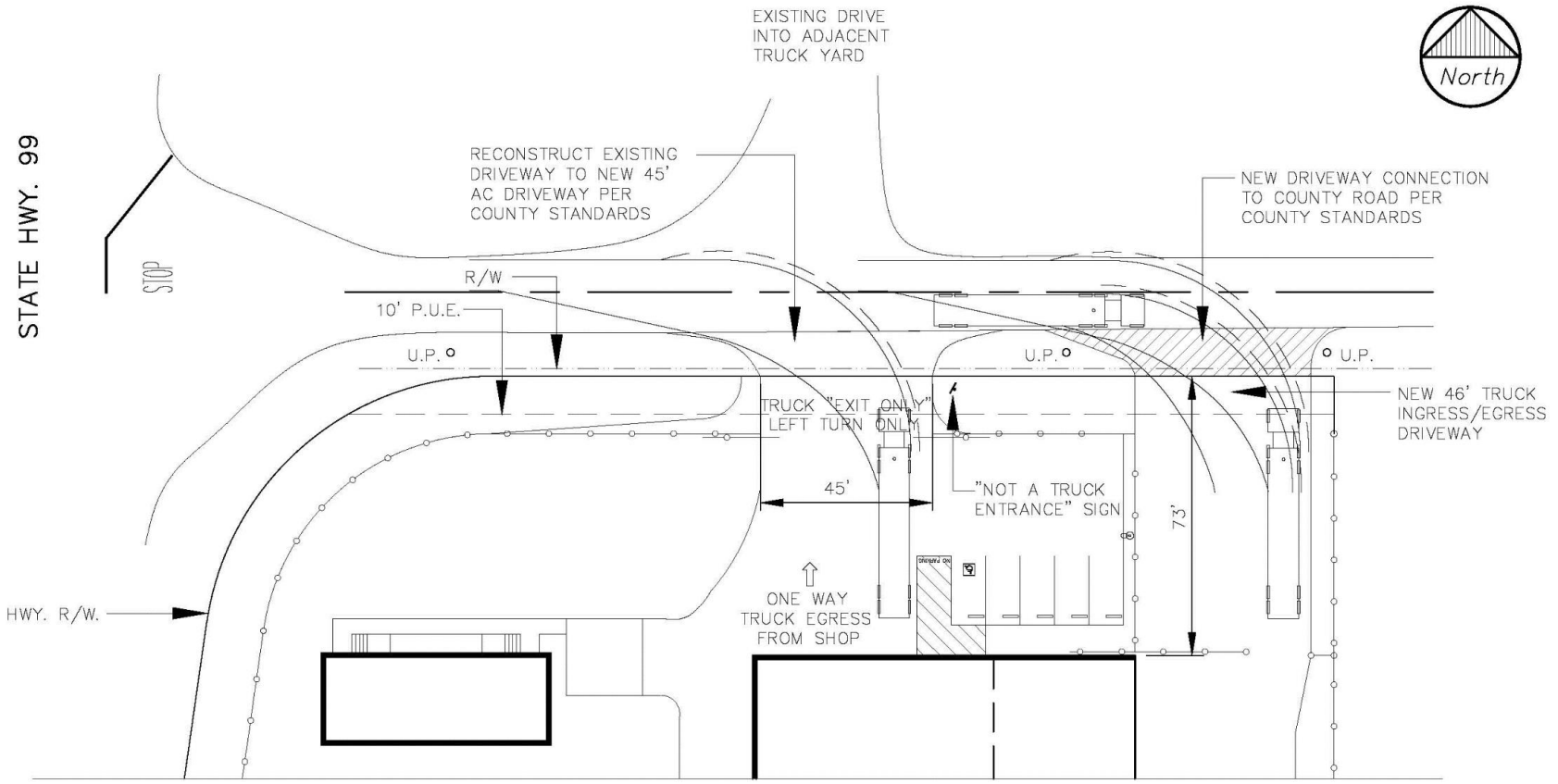


KD Anderson & Associates, Inc.
Transportation Engineers

4712-002 RA 10/1/2019

SITE PLAN

figure 2



TRUCK TURNING MOVEMENT – INGRESS/EGRESS FROM SITE

PREPARED UNDER THE DIRECTION OF: REGISTERED PROFESSIONAL ENGINEER ALBERTO VASQUEZ NO. 78171 EXP.09-30-19 CIVIL STATE OF CALIFORNIA
NOTE: DO NOT USE FOR CONSTRUCTION UNLESS SIGNED BY THE ENGINEER

Revisions

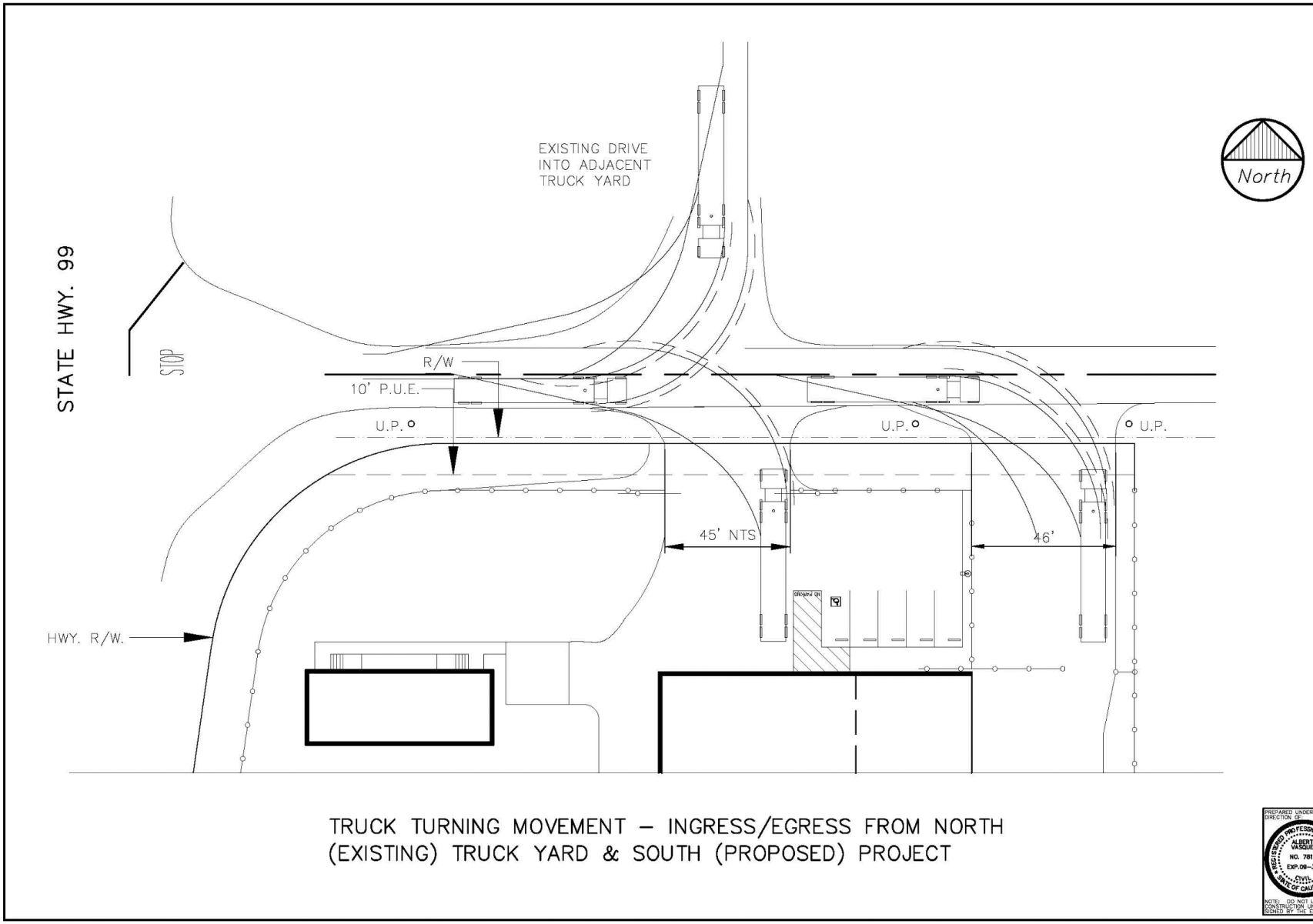
1	9/29/17
3	1/18/18
4	4/25/18
5	5/10/19

SITE EXHIBIT:
HSD TRUCKING
1280 WALNUT AVENUE, APN 23-064-011
SUTTER COUNTY, CALIFORNIA

DENNIS C. NELSON COMPANY
BUILDING DESIGN, LAND USE PLANNING AND CONSTRUCTION MANAGEMENT
960 McCOURTNEY ROAD, SUITE C
GRASS VALLEY, CA 95949
Bus: (530) 674-7501 Fax: (530) 674-7503

Date: 7/13/17
Scale: 1"=30'
Drawn By: D.NELSON
Job No: 17-6106
Sheet: 5 OF 6

TRUCK TURNING MOVEMENT—INGRESS/EGRESS FROM SITE



TRUCK TURNING MOVEMENT – INGRESS/EGRESS FROM NORTH
(EXISTING) TRUCK YARD & SOUTH (PROPOSED) PROJECT

Revisions
1 9/29/17
3 1/18/18
4 4/25/18
5 5/10/19

SITE EXHIBIT:
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1280 WALNUT AVENUE, APN 23-064-011
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Sheet: 6 OF 6

PREPARED UNDER THE DIRECTION OF:
REGISTERED PROFESSIONAL ENGINEER
ALBERTO VASQUEZ
NO. 78171
EXP.09-30-19
CIVIL
STATE OF CALIFORNIA
NOTE: DO NOT USE FOR CONSTRUCTION UNLESS SIGNED BY THE ENGINEER

TRUCK TURNING MOVEMENT—
INGRESS/EGRESS FROM NORTH (EXISTING) TRUCK YARD
AND SOUTH (PROPOSED) PROJECT

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2	1	2	1	25	0	787	7	41	901	0
Future Vol, veh/h	0	2	1	2	1	25	0	787	7	41	901	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	400	-	-	400	-	-
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	0	2	1	2	1	27	0	855	8	45	979	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1497	1932	490	1440	1928	432	979	0	0	863	0	0
Stage 1	1069	1069	-	859	859	-	-	-	-	-	-	-
Stage 2	428	863	-	581	1069	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.7	7.1	7.7	6.7	7.1	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.7	5.7	-	6.7	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.7	-	6.7	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.6	4.1	3.4	3.6	4.1	3.4	2.3	-	-	2.3	-	-
Pot Cap-1 Maneuver	78	60	503	87	60	550	654	-	-	726	-	-
Stage 1	223	279	-	301	353	-	-	-	-	-	-	-
Stage 2	554	352	-	447	279	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	70	56	503	80	56	550	654	-	-	726	-	-
Mov Cap-2 Maneuver	70	56	-	80	56	-	-	-	-	-	-	-
Stage 1	223	262	-	301	353	-	-	-	-	-	-	-
Stage 2	525	352	-	415	262	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	51.9	17.6	0	0.4
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	654	-	-	80	317	726	-	-
HCM Lane V/C Ratio	-	-	-	0.041	0.096	0.061	-	-
HCM Control Delay (s)	0	-	-	51.9	17.6	10.3	-	-
HCM Lane LOS	A	-	-	F	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.2	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	1	1	6	3	1169	6	10	822	4
Future Vol, veh/h	0	0	0	1	1	6	3	1169	6	10	822	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	400	-	-	400	-	-
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, %	10	10	10	10	10	10	10	10	10	10	10	10
Mvmt Flow	0	0	0	1	1	7	3	1271	7	11	893	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1559	2201	449	1750	2200	639	897	0	0	1278	0	0
Stage 1	917	917	-	1281	1281	-	-	-	-	-	-	-
Stage 2	642	1284	-	469	919	-	-	-	-	-	-	-
Critical Hdwy	7.7	6.7	7.1	7.7	6.7	7.1	4.3	-	-	4.3	-	-
Critical Hdwy Stg 1	6.7	5.7	-	6.7	5.7	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.7	5.7	-	6.7	5.7	-	-	-	-	-	-	-
Follow-up Hdwy	3.6	4.1	3.4	3.6	4.1	3.4	2.3	-	-	2.3	-	-
Pot Cap-1 Maneuver	70	40	536	50	40	400	704	-	-	498	-	-
Stage 1	277	331	-	163	220	-	-	-	-	-	-	-
Stage 2	410	219	-	523	331	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	66	39	536	49	39	400	704	-	-	498	-	-
Mov Cap-2 Maneuver	66	39	-	49	39	-	-	-	-	-	-	-
Stage 1	276	324	-	162	219	-	-	-	-	-	-	-
Stage 2	400	218	-	511	324	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	34.4	0	0.1
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	704	-	-	-	131	498	-	-
HCM Lane V/C Ratio	0.005	-	-	-	0.066	0.022	-	-
HCM Control Delay (s)	10.1	-	-	0	34.4	12.4	-	-
HCM Lane LOS	B	-	-	A	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0.1	-	-