

ENVIRONMENTAL INITIAL STUDY

INITIAL STUDY CHECKLIST References and Documentation

Les Schwab

Site Development Permit Application SDP-2019-00027

General Plan Amendment GPA-2019-00024

Rezoning Application RZ-2019-00026

Parcel Map Application PM-2019-00025

Prepared by:

CITY OF REDDING

Development Services Department

Planning Division

777 Cypress Avenue

Redding, California 96001

March 15, 2019

CITY OF REDDING ENVIRONMENTAL CHECKLIST FORM

1. **Project Title:** Les Schwab
2. **Lead agency name and address:**

CITY OF REDDING
Development Services Department
Planning Division
777 Cypress Avenue
Redding, CA 96001
3. **Contact Person and Phone Number:** Zach Bonnin, Associate Planner, (530) 245-4551
4. **Project Location:** 4601 Churn Creek Road
5. **Applicant's Name and Address:**
SFP-E, LLC Attn; Rona Dhruv
PO BOX 5350
Bend, OR 97708
Representative's Name and Address:
Galloway and Company, Inc. Attn; Terra Mortensen
7591 N. Ingram Ave. Ste. 101
Fresno, CA 93711
6. **General Plan Designation:** "Limited Office"
7. **Zoning:** "LO" Limited Office
8. **Description of Project:** California Gold Development is requesting approval of Site Development Permit, a General Plan Amendment, Rezoning and a Parcel Map to allow construction of a 9,249-square-foot Les Schwab tire retail store on property currently zoned for office uses. The subject property located at 4601 Churn Creek Road is currently 2.08 acres but as a result of the parcel map the property would result in two approximately 1-acre parcels. The Les Schwab facility would be located on the northern most of the two parcels and is adjacent to Arizona Street. The site is currently zoned "LO" Limited Office District with a General Plan designation of "Limited Office." The project proposes to amend both to be consistent with the Shopping Center (SC) zone district to the south.
9. **Surrounding Land Uses and Setting:** Land uses in the area include the adjacent approved shopping center to the south called the Churn Creek Marketplace, single family residences are located adjacent to the site, east and across Arizona Street to the north. Churn Creek Road and Interstate 5 are located to the west of the site. A few dozen live oak trees and grey pines, in varying sizes, are scattered throughout the site, along with typical understory of Manzanita brush, Buckbrush and Poison oak.
10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**

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 or Potentially Significant Unless Mitigation Incorporated" as indicated by the checklist on the following pages.

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

DETERMINATION: (To be completed by the Lead Agency)

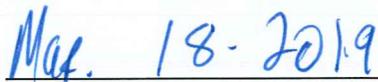
On the basis of the initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- X** 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 of NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Copies of the Initial Study and related materials and documentation may be obtained at the Planning Division of the Development Services Department, 777 Cypress Avenue, Redding, CA 96001. Contact Zach Bonnin at (530) 245-4551.



 Zach Bonnin, Associate Planner
 Development Services Department



 Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

This section analyzes the potential environmental impacts associated with the proposed project. The issue areas evaluated in this Initial Study include:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- 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/Circulation
- Utilities and Service Systems

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the State *CEQA Guidelines* and used by the City of Redding in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and to identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- **No Impact.** The development will not have any measurable environmental impact on the environment.
- **Less Than Significant Impact.** The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.
- **Potentially Significant Impact Unless Mitigation Incorporated.** The development will have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.
- **Potentially Significant Impact.** The development will have impacts which are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.

Prior environmental evaluations applicable to all or part of the project site:

- *City of Redding General Plan, 2000*
- *City of Redding General Plan Final Environmental Impact Report, 2000, SCH #1998072103*

List of attachments/references:

- Attachment A – Location map
- Attachment B – Site Plan (reduction)
- Attachment C – Enplan Biological/Wetland Screening
- Attachment D – Enplan Tree Survey Report
- Attachment E – j.c.Brennan & Associates – Noise Study

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

Discussion:

- a) The project must comply with the height standards of the City's Zoning Ordinance. The project would be consistent in height with buildings on adjacent properties and would not obstruct any documented scenic vistas. The proposed project would not represent a significant change to the overall scenic quality of the area.
- b) The project site is not located adjacent to a state-designated scenic highway.
- c) The site is currently wooded and has vegetation as a result of years of neglect. It was previously part of larger ranch parcels, and grazed with cattle and other ranch animals. As development has occurred surrounding this site with Interstate 5, residential development and the shopping center the vegetation on the site has grown back in a unmanaged form, with various invasive species. The site retains a grove of live oaks mixed with grey pines, the loss of this vegetation will have an impact on the visual character of the site but the significance in not substantial and will not preclude development of the site.
- d) The project would generate light that is customary for development and comply with the Zoning Ordinance light standards. There would not be an adverse effect on day or nighttime views in the area.

Documentation:

City of Redding General Plan, Natural Resources Element, 2000
City of Redding Zoning Ordinance, Chapter 18.40.090

Mitigation:

None necessary.

II. AGRICULTURE RESOURCES: <i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural, Land Evaluation and Site Assessment Mode (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-				X

II. AGRICULTURE RESOURCES: <i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural, Land Evaluation and Site Assessment Mode (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
agricultural use?				

Discussion:

- a) The proposed project site has been historically used for general agricultural purposes, but it does not possess soils that are prime for agricultural production. The site is not located within an area of Prime Farmland as identified by the California Department of Conservation's Important Farmland Series Mapping and Monitoring Program.
- b) The proposed project site is not under a current Williamson Act contract. Therefore, project implementation would not result in conflicts with existing agricultural zoning.
- c) See discussions II.a and II.b, above.

Documentation:

City of Redding General Plan, Natural Resources Element, 2000
City of Redding General Plan Background Report, Chapter 9.4: Agricultural Lands
 California Department of Conservation's Farmland Mapping and Monitoring Program
 United States Department of Agriculture, Soil Conservation Service and Forest Service, Soil Survey of Shasta County Area.

Mitigation:

None necessary.

III. AIR QUALITY: <i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X

Discussion:

- a-c) Shasta County, including the far northern Sacramento Valley, currently exceeds the state's ambient standards for ozone (smog) and particulates (fine, airborne particles). Consequently, these pollutants are the focus of local air quality policy, especially when related to land use and transportation planning. Even with application of measures to reduce emissions for individual projects, cumulative impacts are unavoidable when ozone and/or particulate emissions are involved. For example, the primary source of emissions contributing to ozone is from vehicles. Any project that generates vehicle trips has the potential of contributing incrementally to the problem. The Environmental Impact Report for the *General Plan* acknowledged this dilemma; and as a result, Findings and a Statement of Overriding Considerations were adopted by the City Council for impacts to air quality resulting from growth supported under the *General Plan*.

The City Air Quality Element of the *General Plan* establishes emission-reduction goals of 20 to 25 percent, depending on the projected level of unmitigated emissions for a project. Mitigation thresholds are established for the important regional/local pollutants, including: Reactive Organic Gases (ROG) and Oxides of Nitrogen (NOx), which are ozone precursors, and Inhalable Particulate Matter, 10 Micron (PM₁₀). The mitigation thresholds for these pollutants are tiered at two levels as follows:

Level "A"	Level "B"
25 pounds per day of NOx	137 pounds per day of NOx
25 pounds per day of ROG	137 pounds per day of ROG
80 pounds per day of PM ₁₀	137 pounds per day of PM ₁₀

If a project has unmitigated emissions less than the Level "A" threshold, then it is viewed as a minor project (from an air quality perspective) and only application of Standard Mitigation Measures (SMMs) is required to try to achieve at least a 20 percent reduction in emissions, or the best reduction feasible otherwise. Land uses that generate unmitigated emissions above Level "A" require application of appropriate Best Available Mitigation Measures (BAMMs), in addition to the SMMs, in order to achieve a net emission reduction of 20 percent or more. If, after applying SMMs and BAMMs, a use still exceeds the Level "B" threshold, then a minimum of 25 percent of the unmitigated emissions exceeding 137 pounds per day must be offset by reducing emissions from existing sources of pollution; otherwise, an Environmental Impact Report is required.

Under policy of the Air Quality Element, a project has the potential to impact air quality primarily in two ways: (1) the project would generate vehicle trip emissions (with NOx, ROG, and PM₁₀) that contribute cumulatively to local and regional air quality conditions; and (2) fugitive dust (particulate/PM₁₀) emissions are possible during construction activities. As a relatively small tire retail, the project does not have the potential to generate significant emission concentrations of other pollutants subject to state and federal ambient air quality standards. Additionally, the project is not a size or significance that would warrant Level "B" conditions, therefore standard conditions will be applied and reduce potential air quality impacts to a level that is less than significant.

Application of SMMs are required in order to strive toward the *General Plan* policy of a net-reduction objective of 20 percent to address small-scale cumulative effects. SMMs applicable to this project address primarily short-term impacts related to construction. For the most part, these requirements are standard development regulations in the City promulgated in the City Grading Ordinance and Uniform Building Code. Application of special mitigation to achieve a level of less than significant is not necessary since actions for compliance are already included in existing uniformly applied regulations and construction standards. The following City standard regulations applied during grading and construction activities to control dust and PM₁₀ emissions apply to the project.

1. Nontoxic soil stabilizers shall be applied according to manufacturer's specification to all inactive construction areas (previously graded areas inactive for ten days or more).
2. All grading operations shall be suspended when winds (as instantaneous gusts) exceed 20 miles per hour.
3. Temporary traffic control shall be provided as appropriate during all phases of construction to improve traffic flow (e.g., flag person).
4. Construction activities that could affect traffic flow shall be scheduled in off-peak hours.
5. Active construction areas, haul roads, etc., shall be watered at least twice daily or more as needed to limit dust.
6. Exposed stockpiles of soil and other backfill material shall either be covered, watered, or have soil binders added to inhibit dust and wind erosion.
7. All truck hauling solid and other loose material shall be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the trailer) in accordance with the requirements of CVC Section 23114. This provision is enforced by local law enforcement agencies.
8. All public roadways used by the project contractor shall be maintained free from dust, dirt, and debris caused by construction activities. Streets shall be swept at the end of the day if visible soil materials are carried onto adjacent public paved roads. Wheel washers shall be used where vehicles enter and exit unpaved roads onto paved roads, or trucks and any equipment shall be washed off leaving the site with each trip.
9. Alternatives to open burning of cleared vegetative material on the project site shall be used unless otherwise deemed infeasible by the City Planning Division. Suitable alternatives include, but are not limited to, on-site chipping and mulching and/or hauling to a biomass fuel site.

d) Potential impacts to neighboring homes (sensitive receptors) from fugitive dust caused during construction are mitigated by

application of the SMMs discussed above.

- e) The project does not involve land use that could generate objectionable odors affecting substantial number of people.

Documentation:

Shasta County APCD Air Quality Maintenance Plan and Implementing Measures
 City of Redding General Plan, Air Quality Element
 City of Redding General Plan Final Environmental Impact Report, 2000, SCH #1998072103, Chapter 8.6, Air Quality, CEQA Findings of Fact and Statement of Overriding Considerations for the City of Redding General Plan Final Environmental Impact Report, as adopted by the Redding City Council on October 3, 2000, by Resolution 2000-166
 City of Redding General Plan Background Report, Chapter 9.7, Natural Resources and Air Quality

Mitigation:

None necessary.

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

Discussion:

a-e) Enplan has prepared a variety of Biological Reports and Wetland Surveys that have indicated that the site design will avoid impacts to any identified features. Enplan screened the site for plant or animal species of concern on the site or in the area. The development of the project will have a Less Than Significant Impact on wildlife habitat if the mitigation measures are incorporated into the project.

The project would not have any substantial adverse effect on any candidate, sensitive, or special status species, riparian habitat or

other identified sensitive natural community, or Federally protected wetlands. There are no wetlands, riparian vegetation or any endangered species that are proposed to be disturbed with the development of the project. There would thus be no conflict with Federal or State programs concerning biological resources, nor any conflict with local policies or ordinances. There are no approved habitat conservation plans in the area.

There are few dozen oak trees, varying in sizes, scattered within the project site. Most of the trees are proposed to be removed onsite that may have an impact to migratory birds and potentially roosting bats. Therefore mitigation will be necessary to remove trees outside of the nesting season for migratory birds and roosting season for bats. Trees along the frontage of Churn Creek Road were recently removed to allow the undergrounding of utilities for the larger shopping center recently approved to the south, in addition a few trees were removed to allow construction of a zone wall to protect residences from the impacts from the shopping center. The wall was extended to the north along the property line, vegetation was removed to accommodate the installation of the wall.

- f) No habitat conservation plans or other similar plans have been adopted for the project site or project area. No impact would occur in this regard.

Documentation:

- Enplan Biological/Wetland Survey Dated December 7, 2018,
- Enplan Tree Survey December 10, 2018
- California Department of Fish and Wildlife: Natural Diversity Data Base
- City of Redding General Plan, Natural Resources Element, 2000
- City of Redding Municipal Code, Chapter 18.45, Tree Management Ordinance
- City of Redding General Plan Environmental Impact Report, 2000, SCH #1998072103

Mitigation:

Mitigation 1. Disturbance of nesting raptors and roosting bats shall be avoided through proper timing of heavy construction activities. If construction must occur during the prime nesting/roosting season, between March 1 and August 31, a nesting and roosting survey shall be conducted by a qualified wildlife biologist prior to the start of construction to determine the presence/absence of nesting raptors and roosting bats. If active nests and/or roosts are observed and impacts to raptors and/or bats are likely, then construction in the area of the nests and/or roosts shall be delayed until young birds and/or young bats are fully fledged or appropriate spatial and temporary buffers are established in consultation with the Department of Fish and Wildlife.

V. CULTURAL RESOURCES: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X

Discussion

- a-d) Based upon archaeological reports prepared by Enplan, 2018, records searches, and information contained in the *General Plan* EIR pertinent to the vicinity of the subject property, it has been determined that the project site is not in an area of archaeological or cultural sensitivity. No impacts in this area are anticipated.

Enplan Cultural Resources Inventory The cultural resource survey did not identify any potential issues onsite. Consulting with the local tribes was completed and documented in the report.

The project was emailed to the Native American Heritage Commission (NAHC) requesting a Sacred Lands Search, November 8, 2018. A response was received with a list of the tribal members to contact on November 14, 2018. Letters were then sent to the appropriate tribes. See the attached correspondence.

Documentation:

- Enplan Cultural Resources Inventory December 2018*
- City of Redding General Plan Background Report, 1998*
- City of Redding General Plan Final Environmental Impact Report, 2000, SCH #1998072103*

Mitigation:

None necessary.

VI. GEOLOGY AND SOILS: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> 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 Publications 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides? 				X
b) Result in substantial soil erosion or the loss of topsoil?				X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) 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 waste water?				X

Discussion:

a, c, d) There are no Alquist-Priolo earthquake faults designated in the Redding area of Shasta County. There are no other documented earthquake faults in the immediate vicinity that pose a significant risk. The potentially active Battle Creek fault is located approximately 17 miles south of the proposed project. The closest known active fault is the Hat Creek fault, located approximately 48 miles northeast of the site. There are no other documented earthquake faults in the vicinity that pose a significant risk. The impact of earthquakes on the project site depend on several factors including the particular fault, fault location, distance from the project site, and magnitude of the earthquake. Each of these factors can help determine the degree of shaking that could occur in the project area. The proposed project site is located in an area designated in the Health and Safety Element of the *General Plan* as having a low ground-shaking potential. Future structures proposed on the project site are required by State law and City ordinance to be constructed in accordance with the Uniform Building Code (UBC) and to adhere

to all modern earthquake construction standards, including those relating to soil characteristics. The project site is not located on or near any documented landslide hazard areas, and there is no evidence of ground slippage or subsidence occurring naturally on the site. The type of soils and underlying geology is identified as having no potential for liquefaction. No portion of the site falls within the 100-year floodplain of the Sacramento River or any creek.

- b) The project site contains two primary soil classifications: RbA, Red Bluff loam, 0 to 3 percent slopes and NeC, Newtown gravelly loam, 8 to 15 percent slopes. These classifications are characterized by 0 to 3 percent and 8 to 15 percent slopes, respectively, and are well drained and have moderately slow permeability with a zero to moderate erosion potential.

The project is subject to certain erosion-control requirements mandated by existing City and State regulations. These requirements include:

- ◆ *City of Redding Grading Ordinance.* This ordinance requires the application of “Best Management Practices” (BMPs) in accordance with the City Erosion and Sediment Control Standards Design Manual (Redding Municipal Code Section 16.12.060, Subsections C, D, E). In practice, specific erosion-control measures are determined upon review of the final project improvement plans and are tailored to project-specific grading impacts.
- ◆ *California Regional Water Quality Board “Construction Activity Storm Water Permit.”* This permit somewhat overlaps the City’s Grading Ordinance provision by applying state standards for erosion-control measures during construction of the project.
- ◆ *California Regional Water Quality Control Board “Project Storm Water Pollution Prevention Plan (SWPPP).”* This plan emphasizes stormwater best management practices and is required as part of the Construction Activity Storm Water Permit. The objectives of the SWPPP are to identify the sources of sediment and other pollutants that affect the quality of stormwater discharges and to describe and ensure the implementation of practices to reduce sediment and other pollutants in stormwater discharges.

Actions for compliance with these regulations are addressed under standard conditions of approval, which are uniformly applied to all land development projects. Since the project is subject to uniformly applied ordinances and policies and the overall risk of erosion is low, potential impacts related to soil erosion and sedimentation are less than significant.

- e) The proposed project does not involve the use of septic tanks or alternative wastewater disposal. No impact has been identified.

Documentation:

- City of Redding Health and Safety Element, figures 4-1 (Ground Shaking Potential) and 4.2 (Liquefaction Potential)*
- City of Redding General Plan Final Environmental Impact Report*
- City of Redding General Plan Background Report, 1998*
- City of Redding Grading Ordinance, RMC Chapter 16.12*
- City of Redding Standard Specifications, Grading Practices*
- City of Redding Standard Development Conditions for Discretionary Approvals (subdivisions, use permits, site development permits, etc.)*
- Soil Survey of Shasta County Area, United States Department of Agriculture, Soil Conservation Service and Forest Service, August 1974*
- Division of Mines and Geology Special Publication 42*
- State Regional Water Quality Control Board, Central Valley Region, Regulations related to Construction Activity Storm Water Permits and Storm Water Pollution Prevention Plans*

Mitigation:

None necessary.

VII. GREENHOUSE GAS EMISSIONS: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				X
b) Conflict with an applicable plan, policy or regulation adopted for the				X

VII. GREENHOUSE GAS EMISSIONS: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
purpose of reducing the emissions of greenhouse gases?				

Discussion:

a) In 2005, the Governor of California signed Executive Order S-3-05, establishing that it is the State of California’s goal to reduce statewide greenhouse gas (GHG) emission levels. Subsequently, in 2006, the California State Legislature adopted Assembly Bill AS 32, the California Global Warming Solutions Act. In part, AB 32 requires the California Air Resources Board to develop and adopt regulations to achieve a reduction in the State’s GHG emissions to year 1990 levels by year 2020.

California Senate Bill SB97 established that an individual project’s effect on GHG emission levels and global warming must be assessed under CEQA. SB97 further directed that the State Office of Planning and Research (OPR) develop guidelines for the assessment of a project’s GHG emissions. Those guidelines for GHG emissions were subsequently included as amendments to the CEQA Guidelines. The guidelines did not establish thresholds of significance and there are currently no state, regional, county, or city guidelines or thresholds with which to direct project-level CEQA review. As a result, the City of Redding has utilized the best available information to develop a threshold until a specific quantitative threshold is adopted by the state or regional air district.

As the Lead Agency, the City has opted to utilize a quantitative non-zero project-specific threshold using a methodology recommended by the California Air Pollution Officers (CAPCOA) and accepted by the California Air Resources Board. According to CAPCOA’s *Threshold 2.3, CARB Reporting Threshold*, 10,000 metric tons of carbon-dioxide equivalents per year (mtCO₂e/yr) is recommended as a quantitative non-zero threshold. According to the CAPCOA, this threshold would be equivalent to 550 dwelling units, 400,000 square feet of office use, 120,000 square feet of retail, or 70,000 square feet of supermarket use. This approach is estimated to capture over half the future residential and commercial development projects and is designed to support the goals of AB 32 and not hinder it.

The United States Environmental Protection Agency (EPA) identifies four primary constituents that are most representative of the GHG emissions. They are:

- **Carbon Dioxide (CO₂):** Emitted primarily through the burning of fossil fuels. Other sources include the burning of solid waste and wood and/or wood products and cement manufacturing.
- **Methane (CH₄):** Emissions occur during the production and transport of fuels, such as coal and natural gas. Additional emissions are generated by livestock and agricultural land uses, as well as the decomposition of solid waste.
- **Nitrous Oxide (N₂O):** The principal emitters include agricultural and industrial land uses and fossil fuel and waste combustion.
- **Fluorinated Gases:** These can be emitted during some industrial activities. Also, many of these gases are substitutes for ozone-depleting substances, such as CFC’s, which have been used historically as refrigerants. Collectively, these gases are often referred to as “high global-warming potential” gases.

The primary generators of GHG emissions in the United States are electricity generation and transportation. The EPA estimates that nearly 85 percent of the nation’s GHG emissions are comprised of carbon dioxide (CO₂). The majority of CO₂ is generated by petroleum consumption associated with transportation and coal consumption associated with electricity generation. The remaining emissions are predominately the result of natural-gas consumption associated with a variety of uses.

With regard to the project, the predominant associated GHG is CO₂ generated by motor-vehicle travel to and from the site. To a substantially lesser degree, the project will result in CH₄ emissions associated with use of electric power generated by the Redding Electric Utility (REU), though it should be noted that REU distributes power from a variety of sources, including hydroelectric, wind, and natural gas.

According to the California Air Pollution Control Officers Association’s (CAPCOA) publication, *CEQA and Climate Change*, published in January 2008, there is currently not a single computer model that is capable of estimating all of a project’s direct and indirect GHG emissions. However, the Urban Emissions Model (URBEMIS) is likely the most consistently used model to estimate a project’s direct GHG

emissions. URBEMIS is designed to model emissions associated with development of urban land uses. URBEMIS attempts to summarize criteria air pollutants and CO₂ emissions that would occur during operation of new development. URBEMIS was developed and is approved for statewide use by CARB. One of the shortfalls of URBEMIS is that the model does not contain emission factors for GHGs other than CO₂ except for methane (CH₄) from mobile sources, which is converted to CO₂. This may not be a major problem since CO₂ is the most important GHG from land development projects.

The emissions from the project are significantly below the City of Redding’s air quality thresholds, as well as GHG emissions thresholds put forth by CARB. Therefore, the project will not contribute significantly to GHG emissions in the air basin. No mitigation measures are proposed.

On a larger scale, the City of Redding’s General Plan acknowledges that land use decisions have an impact on climate and air quality. Land use decisions that result in low or very low density on the periphery of the community increase the amount of vehicle-miles traveled (VMT), which increases vehicle emissions. In response to this impact, the City’s *General Plan* includes a number of goals and policies in the Community Development and Design Element, Transportation Element, and Housing Element that promote a compact urban form and encourage infill development, advocate higher housing density, and ensure connectivity to citywide bikeways and pedestrian plans. The goal of these policies is to reduce VMT, which also reduces emissions and reduces a wide variety of air quality impacts. Since automobiles are considered a major source of GHG emission, each vehicle trip reduced also reduces GHG emissions.

¹ CPCA website, July 19, 2010

² California Office of the Attorney General, “The California Environmental Quality Act Addressing Global Warming Impacts at the Local Agency Level,” updated May 21, 2008.

Documentation:

City of Redding General Plan, 2000

Mitigation:

None necessary.

VIII. <u>HAZARDS AND HAZARDOUS MATERIALS</u> : <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury, or death				X

VIII. <u>HAZARDS AND HAZARDOUS MATERIALS</u> : <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
involving wildland fires, including where wildlands are adjacent to urbanized areas, or where residences are intermixed with wildlands?				

Discussion:

- a, b, c, d) The project as a retail tire store does not present a significant risk related to hazardous materials or emissions. There is no documented hazardous material sites located on or near the project.
- e, f) The project is located outside the established approach/departure clear zones for Redding Municipal Airport. The project's land use of a retail tire store would not conflict with operations of the Airport or present a safety hazard to people residing or working in the area. There are no private airstrips in the project vicinity.
- g) The project does not involve a use or activity that could interfere with emergency-response or emergency-evacuation plans for the area.
- h) The project site does not have a wildland fire-hazard potential. The site has been disturbed in the past and is surrounded primarily by developed residential and commercial lots.

Documentation:

City of Redding General Plan, Health and Safety Element, 2000

Mitigation:

None necessary.

IX. <u>HYDROLOGY AND WATER QUALITY</u> : <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?				X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a new deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?				X

IX. HYDROLOGY AND WATER QUALITY: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
g) Place housing within 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

Discussion:

- a) Since the project would be served by City sanitary sewer service, the project would not involve any permitted discharges of waste material into ground or surface waters.
- b) The project would utilize City water service for domestic uses and fire protection. The proposed project would not impact groundwater supplies.
- c, f) The project is subject to standard requirements defined under Section 3, *Geology and Soils*, above. The final improvement plans for the project must also incorporate specific design measures intended to limit pollutant discharges in stormwater from urban improvements as established under the State’s National Pollutant Elimination System (NPDES) general permit, which the City is now obligated to follow in accordance with State Water Quality Control Order No. 2003-0005-DWQ. Feasible Best Management Practices (BMPs) would be incorporated in the final design of the project’s storm-drain system, as approved by the City Engineer, based on the BMPs listed in the latest edition of the California Storm Water Quality Association Storm Water Best Management Practices Handbook.
- d, e) City of Redding Policy 1806 requires that all development include stormwater detention facilities designed to maintain existing predevelopment rates of runoff during a 10-, 25-, and 100-year storm event with a 6-hour duration. The project application includes a preliminary stormwater hydrology analysis prepared by Galloway. This analysis has been reviewed by the City’s hydrologist and the study contains the elements necessary to know that the design is feasible. Compliance with this requirement must be fully demonstrated prior to issuance of any permits.
- g, h, i) The property is not located within any agency or otherwise-documented flood-hazard boundary.
- j) The threat of a tsunami wave is not applicable to inland, central valley communities such as Redding. Seiches could potentially be generated in either Shasta or Whiskeytown Lakes during an earthquake. However, neither lake has been identified in the Health and Safety Element of the General Plan as having any risk to the City under such circumstances. There is no documented threat of mudflows affecting the project site.

Documentation:

- Preliminary Hydrology Report, Galloway – December 2018*
- City of Redding General Plan Background Report, Chapter 10, Health and Safety Element, 1998*
- Federal Emergency Management Agency Floodplain regulations, FIRM map 06089C1545G, dated March 17, 2011
- City of Redding Storm Drain Master Plan, Montgomery-Watson Engineers 1993

Mitigation:

None necessary.

X. LAND USE AND PLANNING: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Discussion:

- a) The project does not have the potential to physically divide an established community.
- b) The project is approximately 2.08 acres in size. The Les Schwab tire store is located on the portion of the project site that is currently zoned for office uses, and has a General Plan designation of "Limited Office." A retail tire store facility is not a permitted land use within the existing "LO" Limited Office Zoning district and the "Limited Office" General Plan designation. Therefore the applicant is proposing a rezoning to "SC" Shopping Center and a general plan amendment to "Shopping Center." The proposed retail tire facility constitutes a change to a more intense land use not allowed under the current zoning designation which would not allow development. The retail tire store facility would not divide an established community. The proposed zoning and general plan amendment would allow the proposed use, therefore the proposed project is compatible with the applicable policies and regulations of the City General Plan and Zoning Ordinance and is not in conflict with any other Plan adopted by a jurisdictional agency for the purpose of avoiding or mitigating an environmental effect.
- c) There is no habitat conservation or natural community conservation plans that are applicable to the site.

Documentation:

City of Redding General Plan, Community Development Element, 2000
City of Redding General Plan Environmental Impact Report, 2000, SCH #1998072103
City of Redding General Plan, Natural Resources Element, 2000

Mitigation:

None necessary.

XI. MINERAL RESOURCES: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local General Plan, specific plan or other land use plan?				X

Discussion:

- a, b) The project site is not identified in the General Plan as having any known mineral-resource value or as being located within any "Critical Mineral Resource Overlay" area.

Documentation:

City of Redding General Plan, Natural Resources Element, 2000

Mitigation:

None necessary.

XII. NOISE: <i>Would the project result in:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?		X		
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Discussion:

- a, b, c) The most significant noise source at the Les Schwab Tire Center, is the operation of air impact wrenches. Other noises such as generators and tools will occur during working hours. This noise source could cause a significant impact to sensitive noise receptors. The study concluded that during operation the cumulative noise level would be 49 dBA Leq, which is below the 55 dBA Leq required by the City of Redding. The existing 8' sound wall constructed on the east property helps to reduce this impact. The operating hours of the Les Schwab are within the daytime noise requirements for the City of Redding so there is little need to consider nighttime noise impacts. In order to further mitigate this potential impact the applicant shall extend the 8' sound wall to connect with the proposed building. The design of the building will also help to mitigate sound by facing the bay doors away from the sensitive receptors.
- d) During the construction of the proposed project, there will be a temporary increase in noise in the project vicinity above existing ambient noise levels. The most noticeable construction noise will be related to grading, utility excavation, and land-clearing activity. The City's Grading Ordinance (RMC Chapter 16.12.120.H) limits grading-permit-authorized activities to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday. No operations are allowed on Sunday. Since heavy construction work associated with the project is limited in scope and by existing regulation, the anticipated noise impact to neighboring residents is considered less than significant.
- e, f) The proposed project site is not located within any of the noise contours of Redding Municipal Airport and is located approximately four miles northwest of the Airport. There are no private airstrips in the vicinity of the project site.

Documentation:

Environmental Noise Assessment, j.c.Brennan & Associates Dec. 5, 2018
City of Redding General Plan, Noise Element, 2000

City of Redding Grading Ordinance Redding Municipal Code, Section 16.12.120
City of Redding General Plan, Transportation Element, 2000
City of Redding Zoning Ordinance Redding Municipal Code, Section 18.40.100
City of Redding Municipal Airport Area Plan

Mitigation:

The existing 8' tall zone wall at the western edge of the property shall be extended west along Arizona Street and be connected into the building as to help create a satisfactory noise buffer from the use and the adjacent residences.

XIII. POPULATION AND HOUSING: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Discussion:

a, b, c) The project or change in zoning would not effect the construction of new homes as planned and anticipated by the Redding *General Plan*. As previously noted, the project is similar in character to that in the surrounding area. The project would not induce unplanned population growth and does not propose the extension of any new roads or utilities not anticipated by the *General Plan*. The project does not displace substantial numbers of people or substantial numbers of existing housing. The project will be providing housing.

Documentation:

City of Redding General Plan, Housing Element, 2014

Mitigation:

None necessary.

XIV. PUBLIC SERVICES: <i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered 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:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
Fire Protection?				X
Police Protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

Discussion:

Fire and Police Protection:

The City would provide police and fire protection to the project from existing facilities and under existing service levels. The size of the project would not mandate the need for additional police or fire facilities.

The project is subject to Chapter 16.20 of the Redding Municipal Code, which requires new development to pay a citywide fire

facilities-impact fee calculated to mitigate a project's fair share of cumulative impacts to the City's fire-protection infrastructure based upon improvements necessary to accommodate new development under the City's *General Plan*.

Schools:

The project is a commercial development and would not contribute to the total student enrollment therefore would not have any impact.

Parks:

The project will not cause a physical deterioration of an existing park facility or cause an adverse physical impact associated with a new park facility.

Other public facilities:

See discussion under Item XVII (Utilities and Service Systems) below.

Documentation:

City of Redding General Plan, Public Facilities Element, 2000

Mitigation:

None necessary.

XV. RECREATION:	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Discussion:

- a) There would not be any potentially significant impacts to recreation associated with the project.
- b) The project does not propose any recreational facilities or require construction or expansion of facilities. There would be no adverse physical impact associated with the project.

Documentation:

City of Redding General Plan, Natural Resources Element, 2000
City of Redding General Plan; Recreation Element, 2000
City of Redding General Plan, Public Facilities Element, 2000

Mitigation:

None necessary.

XVI. TRANSPORTATION/TRAFFIC: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact

XVI. TRANSPORTATION/TRAFFIC: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?				X
b) Exceed, either individually or cumulatively, a level of service standard established by the County congestion management agency for designated roads or highway?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?				X

Discussion:

- a, b, d) The project has minimal daily trips and after review by City staff would not have a significant impact on traffic.
- c) The project site is located outside the Approach Zones for both the Redding Municipal Airport and Benton Airpark; therefore, there is no potential to interfere with airport operations. No impacts are anticipated in this regard.
- e) Access to the site is provided by way of Churn Creek Road. The Redding Fire Marshal has deemed this to be adequate access for fire protection.
- e) Adequate emergency access will be provided with development of the site.
- f) In 1998, the City of Redding prepared, and the City Council adopted, a Bikeway Plan in compliance with the California Bicycle Transportation Act and in order to be eligible for funding for bikeway improvements.
- g) The Redding Area Bus Authority (RABA) currently operates a fixed route bus service in the vicinity of the proposed project.

Documentation:

- City of Redding General Plan, Transportation Element, 2000*
- City of Redding General Plan Environmental Impact Report, 2000, SCH #1998072103*
- City of Redding Parks, Trails, and Open Space Master Plan, 2002*
- City of Redding Traffic Impact Fee Program*
- City of Redding Bikeway Action Plan 2010–2015*
- Redding Area Bus Authority Interactive System Map*

Mitigation:

None necessary.

XVII. UTILITIES AND SERVICE SYSTEMS: <i>Would the project:</i>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project which serves or may serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with Federal, State, and local statutes and regulations related to solid waste?				X

Discussion:

- a) Wastewater generated from the project would be discharged into the City sanitary sewer system. This type and intensity of land use activity does not generate wastewater demands that would exceed treatment requirements of the Regional Water Quality Control Board.
- b) The proposed development does not generate the need for the construction of new water or wastewater-treatment facilities.
- c) Project-related stormwater-management improvements consist of construction of collection and conveyance systems in accordance with City construction standards and City Policy 1806 pertaining to stormwater detention (also see IX, *Hydrology and Water Quality*, d and e).

The project is subject to Chapter 16.20 of the Redding Municipal Code, which requires new development to pay a storm-drainage impact fee calculated to mitigate a project's fair share of cumulative impacts to the City's storm-drain infrastructure based upon improvements necessary to accommodate new development under the City's *General Plan*.

- d) Potable water is available from the City to serve the project with adequate pressure and flows for fire suppression. The demands of the project can be accommodated within the City's existing water resources.
- e) The project will utilize the City's sanitary sewer system to dispose of wastewater. Adequate sewer capacity is available in the City's existing system.
- f, g) The City provides solid waste disposal (curbside pick-up) service, which the two homes proposed would utilize. The existing trash enclosure constructed with the existing self-storage facility is adequate to serve the needs of the proposed expansion and therefore would not require an additional enclosure. The City regulates and operates programs that promote the proper disposal of toxic and

hazardous materials from households, including those created by the project.

b, d, e) The project is subject to Chapter 16.20 of the Redding Municipal Code, which requires new development to pay water- and sewer-impact fees calculated to mitigate a project's fair share of cumulative impacts to the City's water and sewer distribution, collection, and treatment infrastructure based upon improvements necessary to accommodate new development under the City's *General Plan*.

Documentation:

City of Redding General Plan, Public Facilities Elements, 2000
City of Redding Water and Sewer Atlas

Mitigation:

None necessary.

XVIII. <u>MANDATORY FINDINGS OF SIGNIFICANCE:</u>	Potentially Significant Impact	Less-Than-Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below the 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?				X
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)?				X
c) Does the project have potential environmental effects which may cause substantial adverse effects on human beings, either directly or indirectly?				X

Discussion:

Based on the analysis undertaken as part of this Initial Study, the following findings can be made:

- a) The project does not have the potential to degrade the quality of the environment, reduce or degrade wildlife habitat, or eliminate examples of history or prehistory.
- b) As discussed in Item III, the project will contribute to region wide cumulative air quality impacts. However, under policy of the *General Plan*, application of Standard Mitigation Measures (SMMs) will eliminate the potential for air quality impacts from this project.
- c) As discussed herein, the project does not have characteristics which could cause substantial adverse effects on human beings, either directly or indirectly.

Documentation:

Mitigation:

None necessary.

ENPLAN

632-01
December 7, 2018

Rona Dhruv
SFP-E, LLC
20900 Cooley Road
Bend, OR 97708

SUBJECT: Biological/Wetland Screening for the Redding, CA, Les Schwab Tire Center

This is to confirm that ENPLAN has conducted a biological and wetland screening for a ± 2.07 -acre site in the City of Redding, Shasta County, identified as Shasta County Assessor's Parcel 068-750-011. The site is bounded by Churn Creek Road to the west, Arizona Street to the north and Hillmonte Drive/Douglas Lane to the south. The study area consists of the subject parcel and abutting portions of rights-of-way along Churn Creek Road, Arizona Street, and Hillmonte Drive/Douglas Lane. As shown in Figure 1, the site is located in the U.S. Geological Survey's Enterprise 7.5-minute quadrangle. The site is situated at ± 523 feet in elevation. The topography is relatively flat throughout the entirety of the site. An aerial photograph of the site is shown in Figure 2.

The proposed project entails the construction of a Les Schwab Tire Center in the northern half of the parcel. The Tire Center will include a 6-bay, single-story building measuring approximately 9,249 square feet. Additionally, a total of 29 parking spaces will be constructed, including two Americans with Disabilities Act (ADA)-compliant spaces. Thirty-foot-wide driveways will extend from Churn Creek Road and from Hillmonte Drive. Although landscaping will be provided as required by City of Redding code, no tree retention is possible given the size of the parcel and intensity of use.

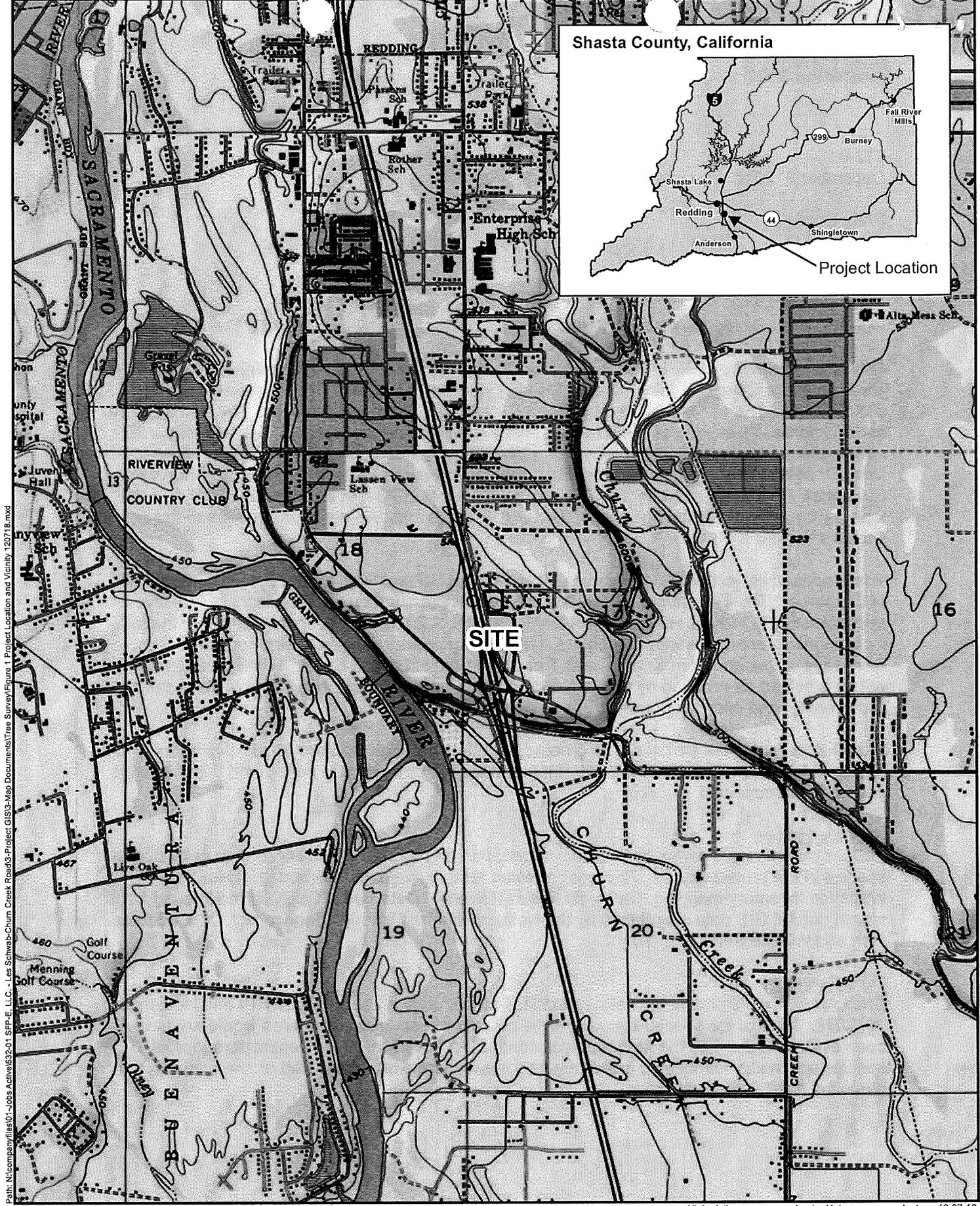
A 0.99-acre remainder parcel will be created. Although no development plans have been prepared for this portion of the site, for the purposes of this report it is anticipated that the future use will be commercial.

Records Review

Various records were reviewed to obtain information on reported occurrences of special-status species in the project vicinity. Records reviewed for this evaluation consisted of National Wetlands Inventory mapping, California Natural Diversity Data Base (CNDDDB) records, and critical habitat GIS data maintained by the National Marine Fisheries Service and United States Fish and Wildlife Service.

Field Surveys

ENPLAN biologists conducted field evaluations of the study area on October 18 and November 20, 2018. Most of the special-status species potentially occurring in the area would not have been evident at the time the fieldwork was conducted. However, the potential presence of species not readily identifiable during the field evaluations was determined on the basis of observed habitat characteristics.



Path: N:\companyfiles\01-Jobs Active\632-01 SFP-E, LLC - Les Schwab-Churn Creek Road\GIS-Map Documents\Tree Survey\Figure 1 Project Location and Vicinity 120718.mxd

Shasta County, California

Project Location



Figure 1
Project Location and Vicinity

All depictions are approximate. Not a survey product. 12.07.18



Path: N:\companyfiles\01-Jobs Active\632-01 SFP-E, LLC - Les Schwab-Churn Creek Road\3-Project GIS\3-Map Documents\BSR\Figure 2 Study Site 120718.mxd



Arizona Street

Churn Creek Road

All depictions are approximate. Not a survey product. 12.07.18



Figure 2
Study Site

ENPLAN

Plant Communities/Wildlife Habitats

The CNDDDB records identified three unique natural communities within five miles of the project area: Great Valley Cottonwood Riparian Forest, approximately 0.5 miles southwest and 3.0 miles northwest of the project area; Great Valley Valley Oak Riparian Forest, approximately 1.0 mile southwest and 1.8 miles northwest of the project area; and Great Valley Willow Scrub, approximately 1.9 miles south of the project area.

The field evaluation showed that the project site supports a remnant interior live oak woodland community. Interior live oak is the dominant tree species and forms a dense canopy over much of the project site. A few individuals of other oak species are also present, including blue oak and oracle oak. Several gray pines overtop the oak canopy. The shrub layer consists almost solely of poison oak. Herbaceous species are sparse under the oak canopy; species present include Pacific sanicle, pipevine, and hedgehog dogtail. In openings on the edges of the oak woodland, particularly on the south and west sides of the study area, a dense herbaceous layer is present, with common species including yellow star-thistle, wavy-leaved soap plant, Italian thistle, field hedge-parsley, wild lettuce, and various introduced annual grasses.

Based on the California Natural Community List prepared by the California Department of Fish and Wildlife, the onsite community is within the Interior Live Oak Woodland Alliance and best fits the *Quercus wislizeni* – *Quercus douglasii* – *Pinus sabiniana* / (grass) Association (71.080.01). Neither the association nor the alliance is considered sensitive by CDFW; no unique natural communities or wildlife habitats are present in the study area.

Although the wildlife value of the onsite oak woodland has been greatly compromised by habitat fragmentation and surrounding development, the site still has potential to be utilized by a number of animals, including western gray squirrels, raccoons, striped skunks, opossums, acorn woodpeckers, titmice, scrub jays, western fence lizards, and other species.

Wetlands and Other Waters

Review of National Wetlands Inventory mapping showed that the nearest mapped water is a freshwater emergent wetland classified as PEM1Ax (Palustrine, Emergent, Persistent Temporary Flooded, Excavated). This feature is located over 500 feet to the northeast of the project site.

Field review confirmed that no wetlands, streams, ditches, or other waters subject to the jurisdiction of the Army Corps of Engineers or the California Department of Fish and Wildlife are present on the site.

Special-Status Species

Special-Status Plant Species

The following special-status plant species are reported to occur within a five-mile radius of the study area: legenere, maverick clover, Red Bluff dwarf rush, silky cryptantha, and slender Orcutt grass. The CNDDDB records search also identified the two non-status species within the search radius: dubious pea and Henderson's bent grass.

Red Bluff dwarf rush, legenere, and slender Orcutt grass are annual herbs that occur in or near vernal pools and swales, typically on thin soils overlying a hard pan. No vernal pools, swales, or similar habitats occur in the study area; therefore, Red Bluff dwarf rush, legenere, and slender Orcutt grass would not be present. Silky cryptantha is an annual herb that generally occurs along low-gradient intermittent streams with broad floodplains, usually on the valley floor, where it is found on gravelly or cobbly substrates. No streams occur on the project site; therefore, silky

cryptantha would not be present. Maverick clover is an annual herb that occurs in shallow vernal depressions on volcanic flats, on the banks of intermittent or perennial streams flowing through open rocky grasslands, or in transitional habitats with scattered chaparral and conifers at higher elevations. Maverick clover has no potential to occur on the project site

A checklist of vascular plant species observed on the project site is provided in Appendix B.

Special-Status Animal Species

The following special-status animal species are known to occur within a five-mile radius of the study area: bald eagle, bank swallow, Chinook salmon (Central Valley spring-run Evolutionarily Significant Unit and Sacramento River winter-run Evolutionarily Significant Unit), foothill yellow-legged frog, steelhead (Central Valley Distinct Population Segment), tricolored blackbird, valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, western pond turtle, and western spadefoot. The CNDDDB records search also identified the following non-status animal species within the search radius: California linderiella, great egret, osprey, Shasta chaparral, and western pearlshell.

Spring-run Chinook salmon, winter-run Chinook salmon, Central Valley steelhead, and foothill yellow-legged frog require clear, cold-water streams with a cobble bottom for reproduction. No streams occur in the study area; therefore, Chinook salmon spring-run, Chinook salmon winter-run, Central Valley steelhead, and foothill yellow-legged frog would not be present. Bald eagles nest in large, old-growth trees or snags in mixed stands near open bodies of water. Although Churn Creek and the Sacramento River are approximately 0.6 miles east and 0.35 miles west of the study area, respectively, no eagles or eagle nests were observed on the site; the bald eagle is highly unlikely to nest on the site. Bank swallows nest on vertical banks or cliffs near bodies of water. No banks or cliffs are present in the study area; therefore, bank swallows would not nest on the site. Tricolored blackbirds generally nest in dense cattails or tules near open water. No open water, cattails, or tules occur in the study area; therefore, tricolored blackbirds would not nest on the site. Vernal pool fairy shrimp and vernal pool tadpole shrimp occur in vernal pools. No vernal pools occur in or within 250 feet of the study area; therefore, vernal pool tadpole shrimp and vernal pool fairy shrimp would not be directly or indirectly affected by site development. Valley elderberry longhorn beetles occur only where elderberry shrubs (*Sambucus* spp.) are present. No elderberries occur in the study area; therefore, the valley elderberry longhorn beetle would not be present. The western pond turtle occurs in permanent or nearly permanent bodies of water. There are no permanent or nearly permanent bodies of water in or near the study area; therefore, the western pond turtle would not be present. Western spadefoots occur aboveground almost exclusively in and around temporary breeding pools that persist for a minimum of three weeks. No temporary breeding pools are present in the study area; therefore, western spadefoots would not be present.

In summary, no special-status wildlife species were observed during the wildlife survey nor are any expected to be present.

Designated Critical Habitats

The U.S. Fish and Wildlife Service has formally designated "critical habitat" for several of the federally listed species occurring in the records search area, including slender Orcutt grass, vernal pool tadpole shrimp, vernal pool fairy shrimp, and valley elderberry longhorn beetle. Designated critical vernal pool habitat for slender Orcutt grass is located approximately 1.5 miles to the east-southeast and 2 miles to the west-northwest of the study area; the nearest designated critical habitat for vernal pool tadpole shrimp and vernal pool fairy shrimp is over 3.5 miles east-southeast of the study area. The nearest designated critical habitat for the valley

elderberry longhorn beetle is in Sacramento County. No formally designated critical habitat for federally listed species managed by the U.S. Fish and Wildlife Service is present in or adjacent to the study area.

The National Marine Fisheries Service identifies critical habitat for the following federally listed fish species in the Enterprise, California, 7.5-minute quadrangle: Central Valley spring-run Chinook salmon, Sacramento River winter-run Chinook salmon, Central Valley steelhead, and green sturgeon (southern Distinct Population Segment). The National Marine Fisheries Service also identifies essential fish habitat for the Chinook salmon in the quadrangle. However, due to the absence of rivers and streams in the study area, no critical habitat or essential fish habitat is present in the study area. Although downstream habitats could be indirectly affected if pollutants carried in storm water runoff from the site were to enter Churn Creek or the Sacramento River, implementation of Best Management Practices for erosion control and spill prevention will avoid the potential for adverse indirect effects to special-status aquatic species and their habitats.

Nesting Migratory Birds

Although no bird nests were observed in the study area, migratory birds have a moderate potential to nest in the study area in future nesting seasons. The federal Migratory Bird Treaty Act requires that nesting birds not be adversely affected. To ensure compliance with the Act, construction and vegetation clearing should occur before February 1 or after August 31 to avoid impacts on nesting migratory birds. If construction and vegetation clearing must occur during the nesting season, a nesting survey should be conducted by a qualified biologist to identify active nests in and adjacent to the work area. The survey should be conducted no more than one week prior to construction or vegetation removal. If nesting birds are present, the City should consult with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service regarding appropriate action to comply with the Migratory Bird Treaty Act and California Fish and Game Code.

Conclusions and Recommendations

In summary, we find that the onsite interior live oak woodland community is not considered sensitive and does not possess high values for wildlife, and the site has a negligible potential to support special-status plant or wildlife species. Site development would not contribute to the loss of formally designated critical habitat or essential fish habitat, but could potentially indirectly affect sensitive aquatic species in Churn Creek and the Sacramento River if pollutants were to be carried into the waterways with storm water runoff. Site development could also potentially disturb nesting migratory birds in and/or adjacent to the study area.

Implementation of the following measures would avoid or minimize impacts to sensitive biological resources that could be affected by project implementation.

Implement Best Management Practices for Erosion Control and Spill Prevention. Best Management Practices for soil stabilization, sediment control, and spill prevention shall be implemented throughout the duration of the project to ensure that sediment/pollutant transport into nearby waterways is minimized, which would in turn minimize the potential for adverse impacts to fish and the aquatic ecosystem. These Best Management Practices shall be specified in the storm water pollution prevention plan to be prepared for the project. Soil stabilization measures would include covering disturbed areas with mulch, temporary seeding, use of soil binders, or installation of soil blankets. Sediment control measures would include the use of silt fencing, straw wattles, fiber rolls, and sandbag barriers. Spill prevention measures would include the proper storage and handling of chemicals and

hazardous wastes, refueling equipment at designated areas, conducting periodic inspections of equipment to ensure that equipment is in proper working order, and having a contingency plan in place to respond immediately to spills. Other erosion control and spill prevention measures required by the City of Redding shall also be implemented.

Avoid Disturbing Nesting Birds. In order to avoid impacts to nesting migratory birds and/or raptors protected under the federal Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5, including their nests and eggs, one of the following shall be implemented:

- a. Vegetation removal and other ground-disturbing activities associated with construction shall occur between September 1 and January 31 when birds are not nesting; or*
- b. If vegetation removal or ground-disturbing activities occur during the nesting season, a preconstruction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area. The survey shall take into account acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds. The results of the survey shall be submitted to the California Department of Fish and Wildlife upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the preconstruction survey, the site shall be resurveyed.*

If active nests are found, the City of Redding shall consult with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service regarding appropriate action to comply with the Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

Please contact me if you have any questions regarding our findings or recommendations.

Sincerely,



Donald Burk
Environmental Services Manager

- encl. Figure 1. Vicinity Map
Figure 2. Aerial Photograph
Appendix A. Representative Photographs
Appendix B. Checklist of Vascular Plant Species Observed

Appendix A

Representative Photographs



Interior live oak canopy overtopped by gray pine, view to southeast



Annual grassland in foreground; interior live oak forest with poison oak understory behind

Appendix B

Checklist of Vascular Plant Species Observed

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Shasta County APN 068-750-011

November 20, 2018

Agavaceae

Chlorogalum pomeridianum var. *pomeridianum*

Anacardiaceae

Toxicodendron diversilobum

Apiaceae

Sanicula crassicaulis

Torilis arvensis

Apocynaceae

Vinca major

Aristolochiaceae

Aristolochia californica

Asteraceae

Carduus pycnocephalus

Centaurea solstitialis

Erigeron canadensis

Lactuca serriola

Tragopogon sp.

Boraginaceae

Heliotropium europaeum

Brassicaceae

Hirschfeldia incana

Raphanus raphanistrum

Caprifoliaceae

Lonicera interrupta

Fabaceae

Trifolium hirtum

Vicia villosa

Fagaceae

Quercus douglasii

Quercus x morehus

Quercus wislizeni

Hypericaceae

Hypericum perforatum

Pinaceae

Pinus sabiniana

Century-plant Family

Wavy-leaved soap plant

Sumac Family

Poison-oak

Carrot Family

Pacific sanicle

Field hedge-parsley

Dogbane Family

Greater periwinkle

Birthwort Family

Pipevine

Sunflower Family

Italian thistle

Yellow star thistle

Canadian horseweed

Prickly lettuce

Goat's beard

Borage Family

European pulsey

Mustard Family

Shortpod mustard

Jointed charlock

Honeysuckle Family

Chaparral honeysuckle

Legume Family

Rose clover

Winter vetch

Oak Family

Blue oak

Oracle oak

Interior live oak

St. John's-wort Family

Klamath weed

Pine Family

Grey pine

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Shasta County APN 068-750-011

Plantaginaceae

Keckiella sp.
Kickxia elatine
Plantago lanceolata

Poaceae

Avena sp.
Bromus diandrus
Bromus hordeaceus
Cynosurus echinatus
Dactylis glomerata
Elymus glaucus
Festuca perennis
Gastridium phleoides

Polygonaceae

Rumex crispus

Rosaceae

Prunus cerasifera

Rubiaceae

Galium sp.

Simaroubaceae

Ailanthus altissima

Plantain Family

Keckiella
Sharp-leaved fluellin
English plantain

Grass Family

Wild oats
Ripgut grass
Soft chess
Hedgehog dogtail
Orchard grass
Blue wild rye
Annual ryegrass
Nit grass

Buckwheat Family

Curly dock

Rose Family

Cherry plum

Madder Family

Bedstraw

Quassia Family

Tree of heaven

632-01
December 10, 2018

Rona Dhruv
SFP-E, LLC
20900 Cooley Road
Bend, OR 97708

SUBJECT: Tree Survey Report for the Redding, CA, Les Schwab Tire Center

Per your request, ENPLAN conducted a tree survey for a ±2.07-acre site in the City of Redding, Shasta County, identified as Shasta County Assessor's Parcel 068-750-011. The site is bounded by Churn Creek Road to the west, Arizona Street to the north and Hillmonte Drive/Douglas Lane to the south. The study area consists of the subject parcel and abutting portions of rights-of-way along Churn Creek Road, Arizona Street, and Hillmonte Drive/Douglas Lane. As shown in Figure 1, the site is located in the U.S. Geological Survey's Enterprise 7.5-minute quadrangle. The site is situated at ±523 feet in elevation. The topography is relatively flat throughout the entirety of the site. An aerial photograph of the site is shown in Figure 2.

The purpose of the tree survey was to identify trees ≥6-inch diameter at breast height (dbh) on the site and determine if any of the trees or tree groupings warrant preservation based on criteria established by the City of Redding.

City of Redding Tree Protection Ordinances

The Redding Municipal Code provides tree protection through the Streets and Sidewalks Ordinance, Chapter 13.40 – Trees and Shrubs, and through Zoning Ordinance, Chapter 18.45 – Tree Management. As described in Chapter 13.40.010, trees that are considered unique, outstanding specimens of desirable species, have historic interest, or are of distinct form will be identified and preserved in a Landmark and Heritage Tree Plan developed by the community services advisory commission. We are not aware of any landmark or heritage trees on the subject site, however, this should be confirmed with City staff.

The City of Redding Zoning Ordinance, Chapter 18.45.030, states that “no tree, regardless of species, that exceeds 6 inches dbh on any developed or undeveloped/vacant property in the city shall be destroyed, killed, or removed unless a tree removal permit is first obtained...” An application for a “Discretionary Permit”, as described in Chapter 18.45.070, will also be considered as “an application for tree removal in those instances where trees will be affected by the development.”

To secure a Discretionary Permit, “candidate trees and “candidate tree groupings”, as defined under Chapter 18.61, must be identified on the site. These trees are classified as a single healthy tree or group of healthy trees warranting consideration for preservation by virtue of its value to the community, the immediate neighborhood, or the natural environment in recognition of the existence of one or more of the following attributes:

- It is an outstanding specimen of its species in terms of aesthetic quality as determined by shape and branch structure.

- It is one of the largest or oldest trees in Redding that also has historical or neighborhood interest.
- It adds significantly to the environment of the City because of its location, distinct form, unique species, or other identifying characteristics.
- It is in a location which is connected to a larger natural woodland system, such as a permanent open-space area, and which is likely to be self-supporting over time.
- It serves a desirable function, such as buffering dissimilar land uses, or is a component of an overall landscape plan.

Section 18.45.060 states that prior to any work done on the site, "every tree designated for removal on the approved site plan that is outside the proposed right-of-way or easement areas shall be clearly marked in the field." Section 18.45.080 states that "a pre-construction meeting" be "held with the contractor and city staff to review any tree protection measures required."

Tree Survey Methodology

The following methodology was used for the tree survey:

- The site was inspected by a Certified Arborist who identified all trees ≥ 6 -inch diameter at breast height (dbh).
- All trees ≥ 6 -inch dbh were labeled with a numbered metal tree tag.
- Species, dbh, height, and health were determined and recorded for all trees ≥ 6 -inch dbh. Tree height, health, and dbh were visually assessed by the Certified Arborist. Health was rated on a scale of 1-5 (Poor-Best). Health factors included crown diameter; density; amount of foliage on lateral branches; trunk defects; epicormic branching; condition of old and new wood, etc.
- The location of each tree and each Candidate tree grouping was recorded with a GPS unit.

The survey was conducted on November 26 and 28, 2018, by Rico Montenegro, Certified Arborist #WE-6734A, with the assistance of an ENPLAN biologist.

Tree Survey Results

A total of 121 trees ≥ 6 -inch diameter at breast height were recorded on the site. Of these trees, 13 candidate trees were recorded along with two candidate tree groupings. Data recorded for each tree (species, dbh, height, and health), including candidate trees, is presented in Table 1. All surveyed trees are depicted in Figure 2. The locations of candidate trees and candidate tree groupings are depicted in Figure 3.

Candidate trees consist of six interior live oaks (*Quercus wislizeni*), three blue oaks (*Quercus douglasii*), and four gray pines (*Pinus sabiniana*) with 14-inch or greater dbh. All candidate trees are in good to excellent health (rating 4-5). The arborist did not consider the remaining trees as meeting the criteria necessary for candidate status due to smaller diameters and lower health ratings.

City of Redding Application Process

An application for a Discretionary Permit is considered an application for tree removal in those instances where trees will be affected by future development of the site. Further, where all

identified candidate trees cannot be preserved, the design of the development should address preservation of the most desirable and significant of the healthy candidate trees, particularly candidate tree groupings. However, at the City's discretion, the tree preservation requirements can be waived based on site characteristics and/or proposed plans for grading and infrastructure improvements.

Please call us if you have any questions regarding the results of our tree survey.

Sincerely,

A handwritten signature in black ink, appearing to read "Donald Burk". The signature is fluid and cursive, with the first name "Donald" and the last name "Burk" clearly distinguishable.

Donald Burk
Environmental Services Manager

- encl. Table 1. Surveyed Trees
- Figure 1. Vicinity Map
- Figure 2. Tree Survey Results
- Figure 3. Candidate Trees and Groupings

Table 1
Surveyed Trees
 (Candidate Trees are in Boldface)

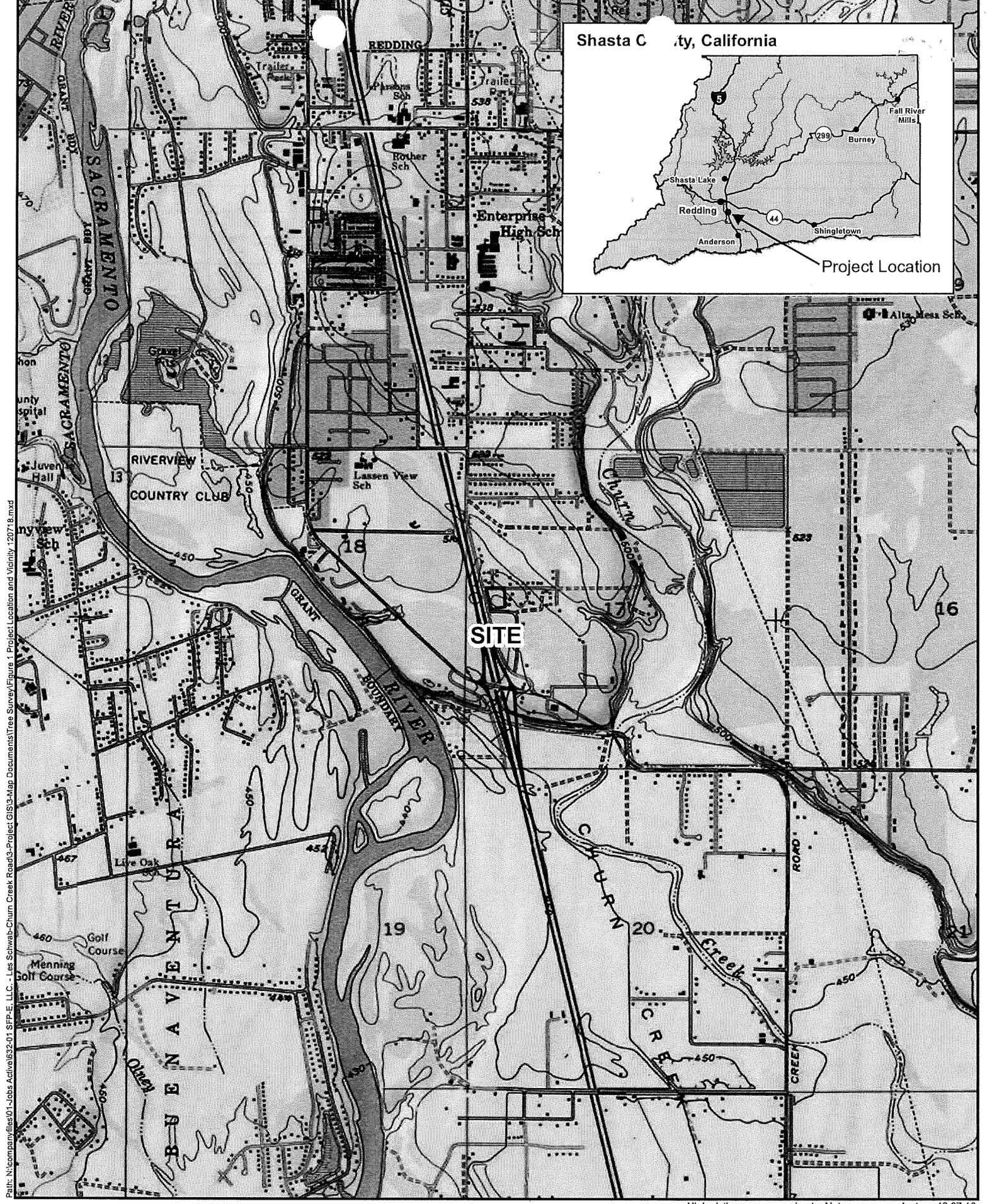
Tag Number	Species	Rating	Height (feet)	Diameter Breast Height (inches)	Candidate Tree? (Y/N)
1	Interior Live Oak	5	45	18	Y
2	Blue Oak	4	50	18	Y
3	Blue Oak	5	25	14	Y
4	Interior Live Oak	2	20	8	N
5	Interior Live Oak	3	50	16	N
6	Blue Oak	3	40	12	N
7	Gray Pine	4	60	20	Y
8	Blue Oak	4	40	10	N
9	Blue Oak	2	40	16	N
10	Gray Pine	5	70	22	Y
11	Interior Live Oak	4	50	18	N
12*	Interior Live Oak	4	50	16, 12	N
13	Blue Oak	2	30	6	N
14	Interior Live Oak	2	50	16	N
15*	Interior Live Oak	2	50	17, 17	N
16	Interior Live Oak	2	30	16	N
17	Interior Live Oak	1	45	14	N
18	Interior Live Oak	1	35	12	N
19	Interior Live Oak	4	45	16	N
20	Interior Live Oak	1	30	8	N
21	Interior Live Oak	2	45	8	N
22	Interior Live Oak	2	45	18	N
23*	Interior Live Oak	3	50	20, 20	N
24	Interior Live Oak	1	35	6	N
25	Interior Live Oak	2	35	12	N
26	Interior Live Oak	2	50	20	N
27	Interior Live Oak	2	45	16	N
28*	Interior Live Oak	2	45	8, 6	N
29*	Interior Live Oak	2	35	10, 10	N
30	Blue Oak	2	45	10	N
31	Interior Live Oak	3	60	26	N
32	Interior Live Oak	2	45	16	N
33	Interior Live Oak	4	55	18	N
34*	Interior Live Oak	1	30	16, 14	N
35	Interior Live Oak	1	35	20	N
36	Interior Live Oak	2	50	20	N

Tag Number	Species	Rating	Height (feet)	Diameter Breast Height (inches)	Candidate Tree? (Y/N)
37	Interior Live Oak	1	25	10	N
38	Interior Live Oak	2	25	11	N
39	Interior Live Oak	1	25	10	N
40	Interior Live Oak	1	35	22	N
41	Interior Live Oak	2	50	20	N
42	Interior Live Oak	2	50	17	N
43	Interior Live Oak	1	25	16	N
44	Interior Live Oak	4	60	24	N
45	Gray Pine	5	70	24	Y
46	Interior Live Oak	3	45	14	N
47	Interior Live Oak	3	45	10	N
48	Interior Live Oak	3	45	13	N
49*	Interior Live Oak	3	50	12, 8, 4	N
50	Gray Pine	5	70	22	Y
51	Interior Live Oak	2	35	10	N
52*	Interior Live Oak	3	50	10, 10, 6	N
53	Interior Live Oak	2	45	10	N
54	Interior Live Oak	3	45	7	N
55	Interior Live Oak	2	45	8	N
56	Interior Live Oak	2	45	8	N
57	Interior Live Oak	2	45	7	N
58*	Interior Live Oak	3	50	14, 13, 10	N
59	Interior Live Oak	3	40	16	N
60	Interior Live Oak	2	35	13	N
61	Interior Live Oak	3	40	10	N
62	Interior Live Oak	2	50	18	N
63*	Interior Live Oak	3	50	10, 10	N
64*	Interior Live Oak	2	50	16, 13, 12, 12	N
65*	Interior Live Oak	3	50	11, 8	N
66*	Interior Live Oak	2	50	14, 14, 11	N
67*	Interior Live Oak	2	45	14, 12	N
68*	Interior Live Oak	2	50	14, 12	N
69*	Interior Live Oak	2	50	12, 10, 8	N
70*	Interior Live Oak	1	70	10, 8	N
71*	Interior Live Oak	2	50	12, 8	N
72*	Interior Live Oak	2	50	13, 13	N
73	Interior Live Oak	2	40	14	N
74*	Interior Live Oak	3	50	14, 14	N

Tag Number	Species	Rating	Height (feet)	Diameter Breast Height (inches)	Candidate Tree? (Y/N)
75*	Interior Live Oak	2	50	10, 8	N
76	Interior Live Oak	2	50	13	N
77	Interior Live Oak	2	50	13	N
78	Plum	4	35	8	N
79	Interior Live Oak	2	50	14	N
80	Interior Live Oak	2	50	14	N
81*	Interior Live Oak	2	50	16, 16, 12	N
82*	Interior Live Oak	2	50	19, 17, 17, 9	N
83	Interior Live Oak	1	40	14	N
84	Interior Live Oak	3	50	17	N
85*	Interior Live Oak	3	50	20, 16, 10, 10	N
86	Interior Live Oak	2	45	10	N
87*	Interior Live Oak	2	50	20, 20, 18	N
88*	Interior Live Oak	1	30	12, 10, 10	N
89	Blue Oak	1	55	16	N
90*	Interior Live Oak	2	55	22, 10, 8	N
91	Blue Oak	2	55	16	N
92	Interior Live Oak	1	20	10	N
93	Blue Oak	2	50	14	N
94	Blue Oak	1	45	10	N
95	Interior Live Oak	4	55	26	Y
96	Interior Live Oak	2	45	13	N
97	Interior Live Oak	2	35	12	N
98*	Interior Live Oak	2	50	12, 14	N
99*	Interior Live Oak	3	35	13, 13	N
100	Blue Oak	3	45	12	N
101	Blue Oak	4	50	16	N
102*	Interior Live Oak	2	50	14, 14	N
103	Interior Live Oak	2	45	14	N
104*	Blue Oak	2	45	13, 13, 8	N
105*	Interior Live Oak	5	50	20, 20	Y
106	Blue Oak	4	55	18	Y
107	Blue Oak	3	55	16	N
108	Interior Live Oak	2	25	14	N
109*	Interior Live Oak	3	35	8, 8	N
110	Blue Oak	3	45	13	N
111*	Interior Live Oak	5	55	20, 16, 13, 12	Y
112	Interior Live Oak	5	55	20	Y

Tag Number	Species	Rating	Height (feet)	Diameter Breast Height (inches)	Candidate Tree? (Y/N)
113	Interior Live Oak	3	40	12	N
114	Interior Live Oak	2	30	10	N
115	Interior Live Oak	2	40	12, 8	N
116	Interior Live Oak	2	35	10	N
117	Interior Live Oak	2	35	16	N
118	Interior Live Oak	3	55	18	N
119*	Interior Live Oak	4	55	18, 18, 18	Y
120	Interior Live Oak	1	20	6	N
121	Interior Live Oak	1	30	8	N

**Multi-trunked tree that splits below breast height*



Path: N:\comparities\01-Jobs Active\632-01 SFP-E, LLC - Les Schwab-Churn Creek Road\3-Project GIS\3-Map Documents\Tree Survey\Figure 1 Project Location and Vicinity_120718.mxd



Figure 1
Project Location and Vicinity

All depictions are approximate. Not a survey product. 12.07.18



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Study Area Boundary
△ Trees

Arizona Street

Churn Creek Road

0 50 Feet

Figure 2
Tree Survey Results

All depictions are approximate. Not a survey product. 12.07.18

ENPLAN



Path: N:\comparfiles\01-Jobs Active\632-01 SFP-E, LLC - Les Schwab-Churn Creek Road\3-Project GIS\3-Map Documents\Tree Survey\Fig 3 Candidate Trees 120718.mxd

	Study Area Boundary
	Candidate Tree Groupings
	Candidate Trees

Arizona Street

Churn Creek Road



 0 Feet 50

Figure 3
Candidate Trees and Groupings

All depictions are approximate. Not a survey product. 12.04.18

Les Schwab Tire Center Environmental Noise Assessment

City of Redding, California

December 5, 2018

Jcb Project # 2018-166

Prepared for:



Attn:

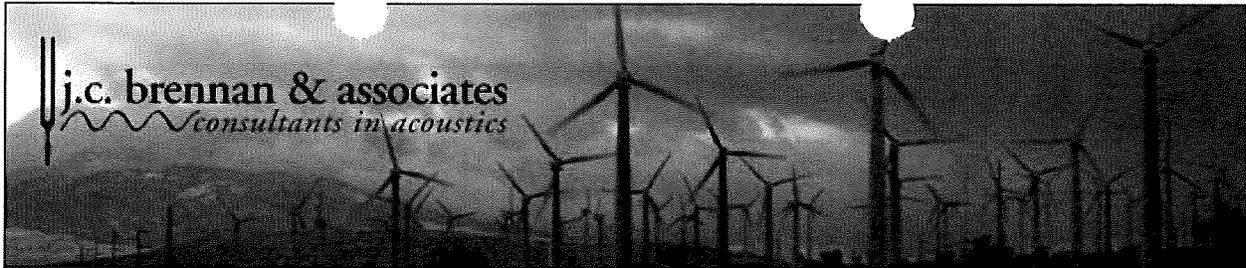
Ms. Terra Mortensen, PE
7591 Ingram Avenue, Suite 101
Fresno, CA 93711

Prepared by:

j.c. brennan & associates, Inc.

A handwritten signature in black ink, appearing to read "Jim Brennan". The signature is written in a cursive style with a long, sweeping underline.

Jim Brennan, INCE
President
Member, Institute of Noise Control Engineering (INCE)



1. INTRODUCTION

The proposed Les Schwab Tire Center will be located on the southeast corner of Churn Creek Road and Arizona Street, in Redding, California. The nearest noise-sensitive land uses include residential to the north and to the east.

Figure 1 shows the project area. Figure 2 shows the project site plan.

The project proposes a 6-bay tire store which provides tire sales and service, wheel, brake, shock and alignment work. The project does not propose a large truck bay or canopy, therefore, it is not intended to service large trucks. The project site is currently undeveloped.

The purpose of the noise analysis is to calculate the project-related noise levels at the nearest sensitive receptors to determine if the project would meet the exterior noise level limits established by the City of Redding.

2. CRITERIA FOR ACCEPTABLE NOISE EXPOSURE¹

City of Redding General Plan

The City of Redding General Plan Noise Element establishes goals, policies and criteria for determining land use compatibility with major noise sources within the community. The following provides the applicable goals, policies and criteria for evaluating the feasibility and potential noise impacts associated with the proposed project.

Goal N1 - *Protect residents from the harmful and annoying effects of exposure to excessive noise.*

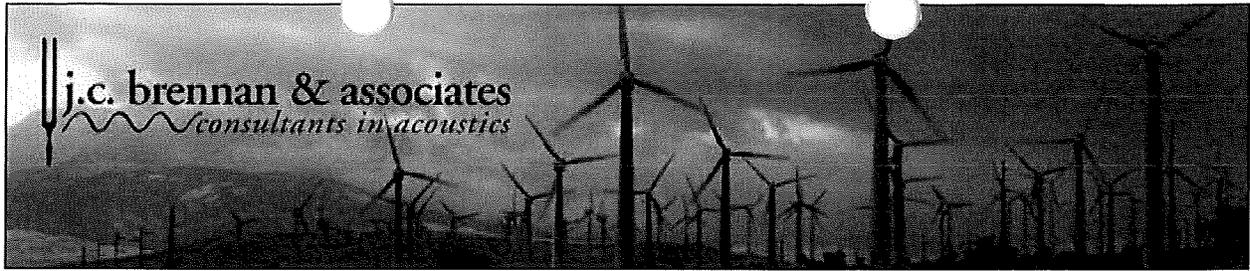
Policy N1C Require an acoustical analysis for new development in locations where exterior and/or interior noise levels will likely exceed the City's noise standards to determine appropriate mitigation measures.

Policy N1D Encourage the use of site planning and building materials/design as primary methods of noise attenuation.

Policy N1F Discourage use of noise barriers and walls constructed exclusively for noise attenuation purposes, where possible. In instances where noise barriers cannot be avoided, require the use of site planning and building material/design features in conjunction with barriers to mitigate visual impacts and reduce the size of barriers.

GOAL N2 – *Protect Residents from Exposure to Excessive Transportation-Related Noise*

¹ For an explanation of these terms, see Appendix A: "Acoustical Terminology"



Policy N2B Prevent development of new projects which contain noise-sensitive land uses in areas exposed to existing or projected levels of noise from transportation sources which exceed the levels specified in Table 5-4 (Table 1 of this report), unless the project design includes effective mitigation measures to reduce exterior noise and noise levels in interior spaces to the levels specified in that table.

Policy N2D Consider the significance of noise-level increases associated with roadway improvement projects needed to accommodate buildout of the General Plan. Since it may be impractical to reduce increased traffic noise to levels in Table 5-4 (Table 1 of this report), the following criteria may be used as a test of significance for roadway-improvement projects:

- ▶ *Where existing traffic noise levels are less than 60 dB L_{dn} in the outdoor-activity areas of noise-sensitive uses, roadway improvement projects which increase noise levels to 60 dB L_{dn} will not be considered significant.*
- ▶ *Where existing traffic noise levels range between 60 and 65 dB L_{dn} in the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels due to a roadway-improvement project will be considered significant.*
- ▶ *Where existing traffic noise levels are greater than 65 dB L_{dn} in the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase in noise levels due to a roadway- improvement project will be considered significant.*

Policy N2E Require acoustical analysis for noise-sensitive land uses proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 5-4 (Table 1 of this report) or the performance standards of Table 5-5 (Table 2 of this report) to determine mitigation for inclusion in the project design. Single-family dwellings on existing lots are excluded from this review.

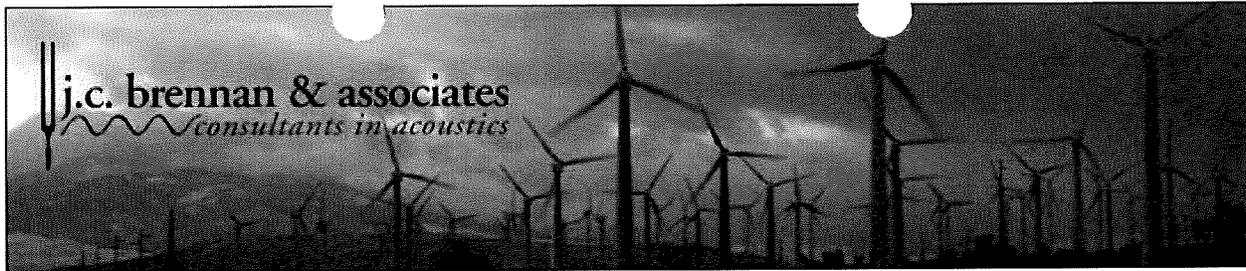


TABLE 1: (TABLE 5-4 OF THE CITY OF REDDING GENERAL PLAN NOISE ELEMENT) MAXIMUM ALLOWABLE NOISE EXPOSURE TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity Areas ¹ L _{dn} /CNEL, dB	Interior Spaces	
		L _{dn} /CNEL, dB	L _{eq} , dB ²
Residential	60 ³	45	--
Transient Lodging	60 ³	45	--
Hospitals, Nursing Homes	60 ³	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60 ³	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

¹ The exterior noise level standard shall be applied to the outdoor activity area of the receiving land use. Outdoor activity areas are normally located near or adjacent to the main structure and often occupied by porches, patios, balconies, etc.

² As determined for a typical worst-case hour during periods of use.

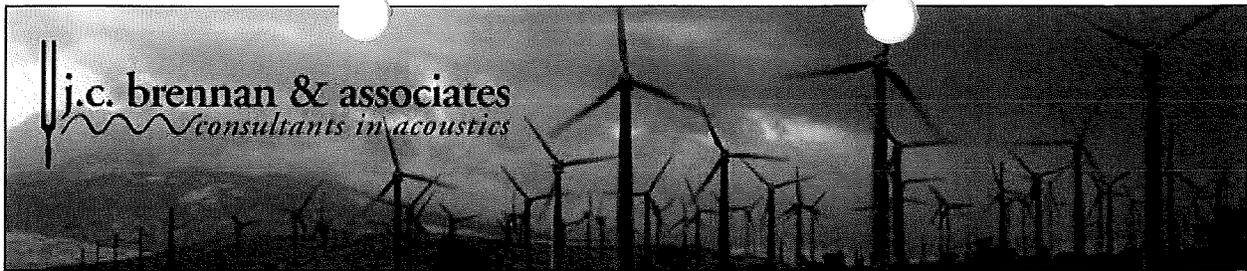
³ Where it is not possible to reduce noise in outdoor activity areas to 60 dB L L_{dn}/CNEL or less, using a practical application of the best-available noise reduction measures, higher noise levels may be allowed provided that practical exterior noise-level reduction measures have been implemented and that interior noise levels are in compliance with this table.

Non-Transportation Noise Sources

Goal N3 – Protect the Economic Base of the City of Redding by preventing incompatible land uses from encroaching upon existing or planned noise producing uses. Prevent the introduction of new fixed noise sources in noise-sensitive areas.

Policy N3B - Mitigate noise created by new proposed non-transportation sources consistent with the noise-level standards of Table 5-5 (Table 2 of this report) as measured immediately within the property line of lands designated for noise-sensitive land uses. Noise level standards for non-noise-sensitive uses will generally be 10 dB higher before mitigation is required.

Policy N3C - Require acoustical analysis of new nonresidential land uses and the expansion of existing nonresidential land uses if likely to produce noise levels



exceeding the performance standards of Table 5-5 within the property line of existing or planned noise sensitive uses.

Policy N3H – Require the installation of noise-buffering or reduction mechanisms, where appropriate, for major fixed noise sources throughout the City prior to the approval, amendment, and/or issuance of conditional use permits for these facilities.

TABLE 2: (TABLE 5-5 OF THE REDDING GENERAL PLAN NOISE ELEMENT) EXTERIOR HOURLY NOISE LEVEL STANDARDS FOR STATIONARY NOISE SOURCES CITY OF REDDING GENERAL PLAN

Noise Level Descriptor	Maximum Acceptable Noise Level																							
	Daytime (7 am - 10 pm)	Nighttime (10 pm - 7 am)																						
Hourly L_{eq} , dBA	55	45																						
<p>Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises (e.g., humming sounds, outdoor speaker systems). These noise level standards do not apply for residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). The City can impose noise-level standards which are more restrictive than those specified above based upon determination of existing low ambient noise levels.</p> <p>Industrial, light industrial, commercial, and public-service facilities which have the potential for producing objectionable noise levels at nearby noise-sensitive uses are dispersed throughout the City. Fixed noise sources which are typically of concern include, but are not limited to, the following:</p> <table border="0"> <tr> <td>HVAC Systems</td> <td>Cooling Towers/Evaporative Condensers</td> </tr> <tr> <td>Pump Stations</td> <td>Lift Stations</td> </tr> <tr> <td>Emergency Generators</td> <td>Boilers</td> </tr> <tr> <td>Steam Valves</td> <td>Steam Turbines</td> </tr> <tr> <td>Generators</td> <td>Fans</td> </tr> <tr> <td>Air Compressors</td> <td>Heavy Equipment</td> </tr> <tr> <td>Conveyor Systems</td> <td>Transformers</td> </tr> <tr> <td>Pile Drivers</td> <td>Grinders</td> </tr> <tr> <td>Drill Rigs</td> <td>Gas or Diesel Motors</td> </tr> <tr> <td>Welders</td> <td>Cutting Equipment</td> </tr> <tr> <td>Outdoor Speakers</td> <td>Blowers</td> </tr> </table> <p>The types of uses which may typically produce the noise sources described above include, but are not limited to: industrial facilities, including lumber mills, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, and athletic fields.</p> <p>Source: City of Redding General Plan Noise Element, Table 5-5.</p>			HVAC Systems	Cooling Towers/Evaporative Condensers	Pump Stations	Lift Stations	Emergency Generators	Boilers	Steam Valves	Steam Turbines	Generators	Fans	Air Compressors	Heavy Equipment	Conveyor Systems	Transformers	Pile Drivers	Grinders	Drill Rigs	Gas or Diesel Motors	Welders	Cutting Equipment	Outdoor Speakers	Blowers
HVAC Systems	Cooling Towers/Evaporative Condensers																							
Pump Stations	Lift Stations																							
Emergency Generators	Boilers																							
Steam Valves	Steam Turbines																							
Generators	Fans																							
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Conveyor Systems	Transformers																							
Pile Drivers	Grinders																							
Drill Rigs	Gas or Diesel Motors																							
Welders	Cutting Equipment																							
Outdoor Speakers	Blowers																							



Wyatt Ln

Arizona St

Project Site

Douglas Ln

Churn Creek Rd

Legend

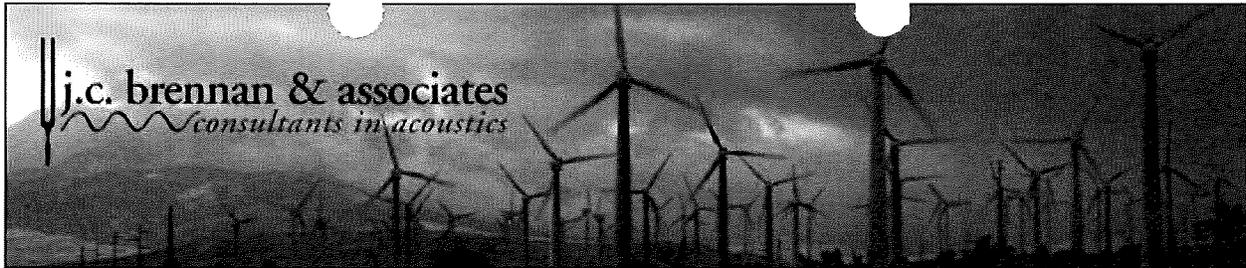
 : 24-Hour Noise Monitoring Site

 : Short Term Monitoring Site

Les Schwab Redding

j.c. brennan & associates
consultants in acoustics

Rev. 1/11/15



3. SETTING

The existing noise environment at the proposed project site is defined primarily by traffic on Churn Creek Road and I-5. j.c. brennan & associates, Inc. conducted two sets of short-term ambient noise level measurements, and continuous 24-hour noise level measurements at 1 location. The noise measurements were conducted on November 13-14, 2018. See Figure 1 for the locations of the noise measurement.

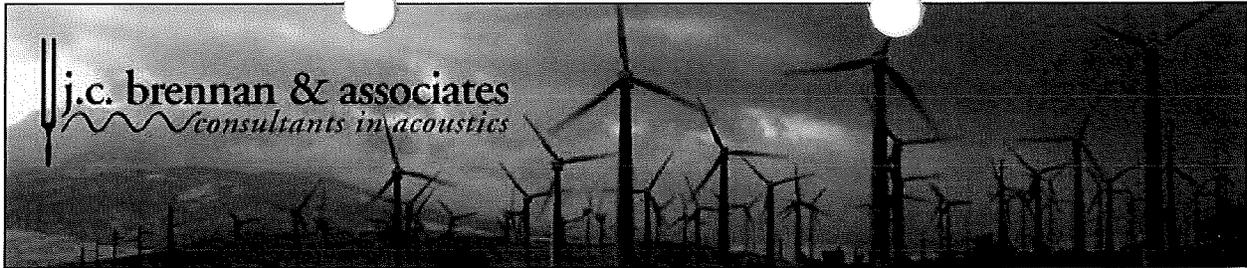
The noise level measurements were conducted to determine typical background average (L_{eq}), median (L_{50}) and maximum (L_{max}) noise levels on the project site, in the vicinity of the adjacent residential uses when the Les Schwab Tire Center would be operating. Instrumentation consisted of a Larson Davis Laboratories (LDL) Model 820 and 824 precision integrating sound level meters, which was calibrated in the field before and after use with an LDL Model CAL200 acoustical calibrator. Appendix B provides a complete summary of the ambient noise monitoring at each site.

Table 3 shows the results of the ambient noise level measurements.

**Table 3
Existing Ambient Noise Monitoring Results**

Site	Location	Date	Average Measured Hourly Noise Levels, dBA						
			L_{dn}	Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm – 7:00 am)		
				L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
A	East side of the site	11/13-14/2018	62.6	58.6	57.8	68.3	55.6	53.9	65.2
1	Southwest corner of the Site	11/13/2018	NA	60.3	59.9	64.3	At 12:30 p.m.		
2	Northeast corner of the Site	11/13/2018	NA	61.7	61.2	68.9	At 1:20 p.m.		

Source: j.c. brennan & associates, Inc. – 2018



4. IMPACTS

The primary noise sources associated with the Les Schwab Tire Center includes parking lot noise, air impact wrenches for car wheels, and tire breakers. Noise impacts associated with each of these noise sources were evaluated, and were compared to the noise level standards contained within the General Plan Noise Element.

Parking Lot Noise Impacts

Parking lot noise typically includes periods of conversation, doors slamming, engines starting and stopping and vehicle passage. j.c. brennan & associates, Inc. file data for parking lot activities was used to model the parking lot noise environment for the project site. An average sound exposure level (SEL) of 71 dB at a distance of 50 feet was used to represent parking lot arrivals and departures. A peak hour project trip generation was obtained from the traffic study prepared for a similar Les Schwab in Fresno, California by Peters Engineering Group, dated July 6, 2017. The trip generation analysis indicated that the peak hour would result in a total of 29 vehicle trips. Based upon this trip generation rate, the peak hour L_{eq} value for the parking lot around the Les Schwab can be calculated as follows:

$$L_{eq} = SEL + 10 \log Neq - 35.6, \text{ dB where:}$$

SEL is the mean SEL of the event, Neq is the sum of the number of hourly events, and 35.6 is 10 times the logarithm of the number of seconds in an hour. Based upon the above formula, the hourly L_{eq} for parking lot activity would be 50 dB L_{eq} at 50 feet.

Air Impact Wrench Noise Impacts

The most significant noise source at the Les Schwab Tire Center is the operation of air impact wrenches. Occasional other noise sources included tire breakers, employees with raised voices, car doors closing, and equipment or tools falling on the floor. Based upon noise level measurements of air impact wrenches at the Les Schwab Tire Center in Yuba City, the ½" air wrenches which are used in the "quick change" bays typically produce a sound level of approximately 61 dB L_{eq} and 73 dB SEL (per on/off action) at a distance of 100 feet from the entrance of the tire change bays. This includes other noise sources, such as tire breakers, car doors slamming, people talking, and equipment falling on the floor. However, the primary noise source is the air impact wrenches. The average duration of use is 15 seconds per wheel. In addition, each wheel involves two actions (on/off).

To determine the typical peak hour operations which may occur at the proposed Les Schwab, the Les Schwab main office provided data on peak hour and daily operations for 5 stores in the Sacramento and Bay areas. Based upon the data provided by the Les Schwab main office, peak hour operations for a store with between 6 and 8 bays is 12 to 16 vehicles per hour. Table 4 summarizes the air wrench data used in this analysis.

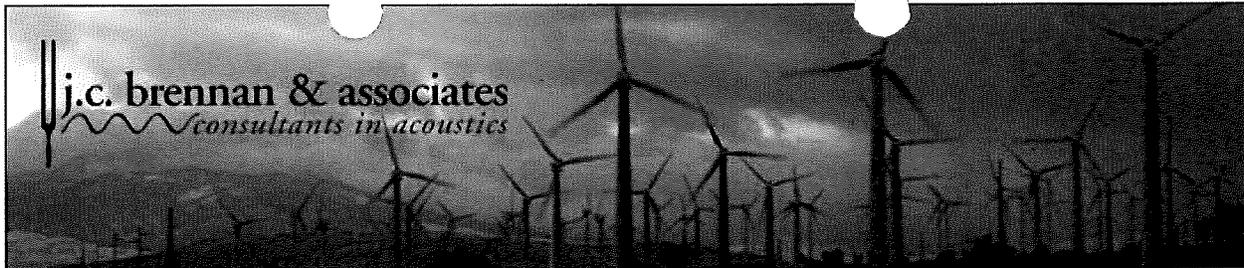


Table 4
Assumptions For Determining Peak Hour L_{eq} Due to ½" Air Wrenches

Location	# of Bays	Vehicles /Hr./Bay	Wheel Changes/ Vehicle	Total Wheel Changes on & off	Duration per Wheel	Sound Level Data	
						SEL at 100'	L_{max} at 75'
100 feet	6	2	4	(48 * 2) = 96	15 Sec.	73 dB	67 dB

Source: j.c. brennan & associates, Inc. 2015 & 2018

Assuming that the 6 bays will result in 12 vehicles per hour the hourly L_{eq} value for air wrench operations can be calculated as follows:

$$L_{eq} = 73 + 10 \cdot \log(96) - 35.6, \text{ dBA where:}$$

73 is the mean SEL of the event, 96 is the sum of the number of operations per hour, and 35.6 is 10 times the logarithm of the number of seconds in an hour. Based upon the calculation above, the hourly average noise level due to air impact wrench use is 57 dB L_{eq} , at a distance of 100 feet in front of the bays.

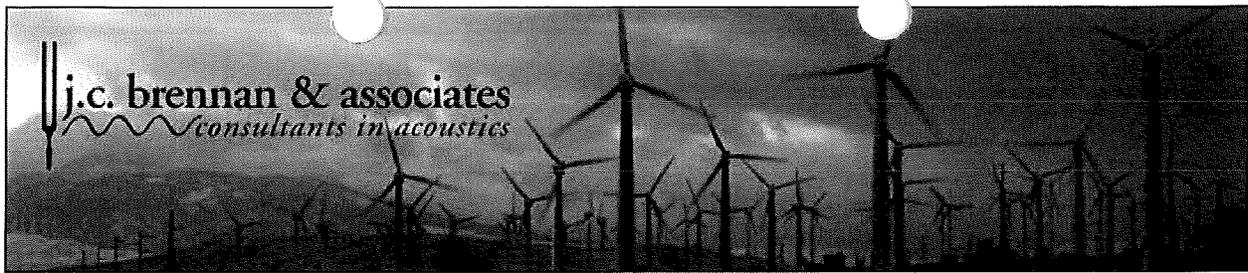
Tire Breaker Noise Impact Assumptions and Predictions

Tire breaker noise is due to the rapid release of air pressure through a number of small holes adjacent to the tire sidewall. Noise due to the tire breaker reaches a brief (<1 second) maximum noise level of 86 dB at 50 feet. The tire breaker is located in the center of the service bays. It is assumed that within the quick change bays, tire breakers will be used for ½ of each of the total operations described for air impact wrenches, due to the fact that the tire breaker is used only once. The total number of tire breakers would be 48 operations per hour. Therefore, it is assumed that the tire breakers will only be used for approximately 1 minute of every hour. Therefore, a conservative estimate of the hourly L_{eq} is 62 dB at 100 feet.

Analysis of All Service Bay Noise Levels

It was assumed that a typical hourly noise level of 64 dB L_{eq} results from all noise sources, at a distance of 100 feet. The predicted noise levels due to air wrenches, tire breakers and all other noise sources do not account for any shielding due to the building facades or directionality from noise sources located within bays. Based upon noise measurements conducted at the sides of the buildings for previous Les Schwab tire centers, the overall noise levels are reduced by a minimum of 15 dBA at the sides of the buildings, and a minimum of 30 dBA at the rear of the buildings.

The predicted noise levels at the nearest residences to the east and north are 49 dBA L_{eq} and 40 dBA L_{eq} , respectively. However, there is an 8-foot tall concrete block wall being constructed along the east property line. Table 5 shows the predicted overall noise levels at the nearest



residential uses. The predicted noise levels shown in Table 5 also account for the 8-foot tall block wall which is currently being constructed along the east property line.

**Table 5
Predicted Cumulative Noise Levels**

Cumulative Level @ Reference Distance of 100-feet	Cumulative Level @ Residences to the East	Cumulative Level @ Residences to the North
64 dBA Leq	49 dBA Leq	40 dBA Leq
Effects of 8-foot Barrier on East Property Line		
None	- 7 dBA (42 dBA)	None
Barrier Calculations are shown in Appendix C		

Traffic Noise Levels Due to the Project

Based upon the trip generation analysis prepared for the similar Les Schwab, by Peters Engineering, the total trip daily trip generation would be 269 vehicles per day. Assuming that all of those trips would occur on Churn Creek Road, j.c. brennan & associates, Inc. utilized the Federal Highway Administration (FHWA RD77-108) traffic noise prediction model. The total Ldn, at a distance of 75-feet from the roadway centerline would be 46 dBA Ldn. The predicted level associated with the Les Schwab is 16 dBA less than the measured background noise level, and would not contribute to the overall background noise levels.

5. CONCLUSIONS AND MITIGATION MEASURES

- Project-related on-site noise levels will comply with the City of Redding daytime stationary noise source standard of 55 dBA Leq, as shown in Table 2 of this report.
- Traffic noise levels associated with the project will not contribute to the overall background noise levels.
- The project will be restricted to the daytime hours between 7:00 a.m. and 10:00 p.m.

Appendix A

Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
L_(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L ₅₀ is the sound level exceeded 50% of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the <i>Maximum</i> level, which is the highest RMS level.
RT₆₀	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

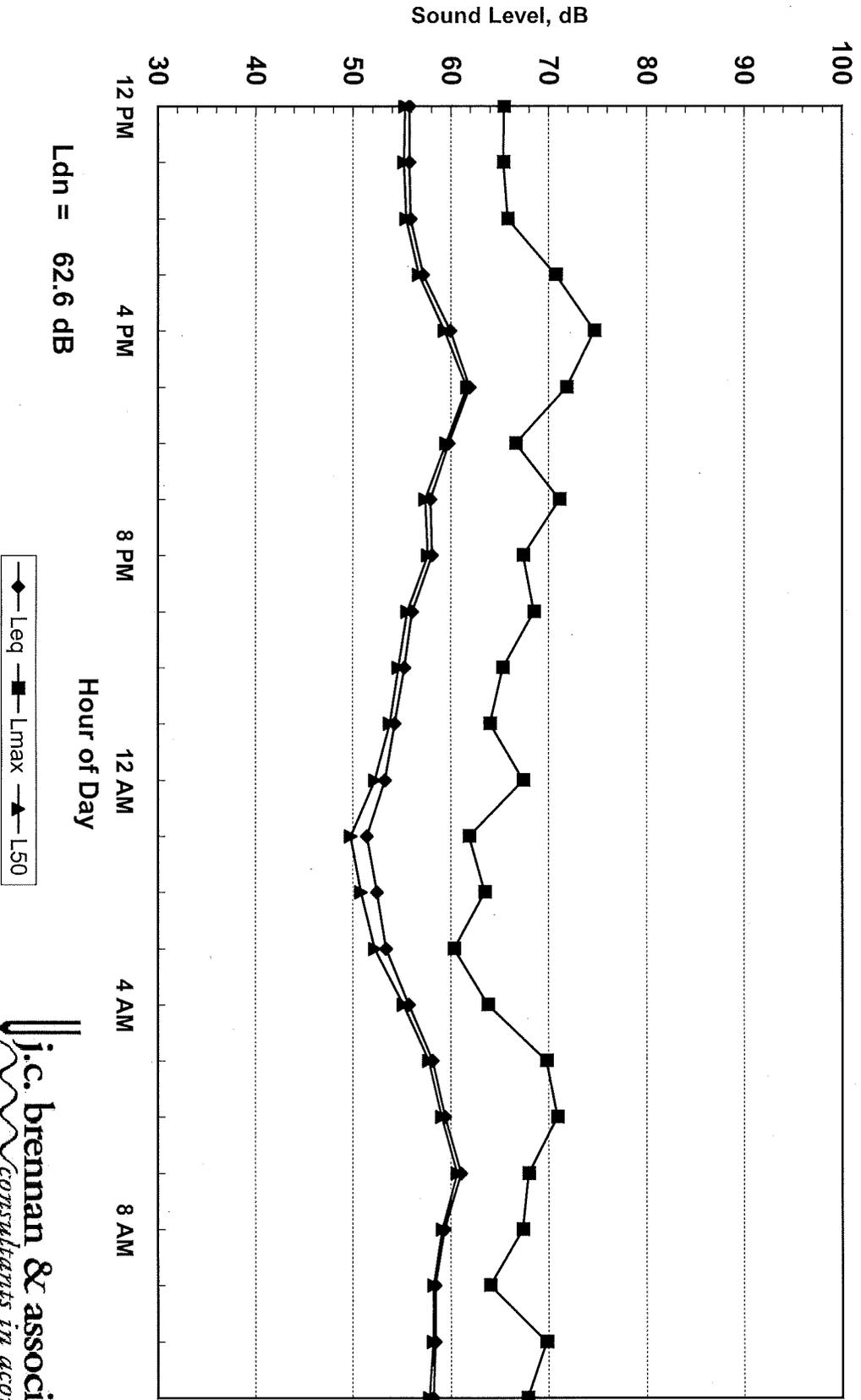
Appendix B
 2018-166 Les Schwab Redding
 24hr Continuous Noise Monitoring - Site A
 11/13/2018-11/14/2018

Hour	Leq	Lmax	L50	L90
12:00	56	65	55	53
13:00	56	65	55	53
14:00	56	66	55	53
15:00	57	71	57	54
16:00	60	75	59	57
17:00	62	72	62	59
18:00	60	67	60	57
19:00	58	71	57	55
20:00	58	67	58	55
21:00	56	69	56	53
22:00	55	65	55	51
23:00	54	64	54	50
0:00	53	67	52	47
1:00	51	62	50	45
2:00	52	63	51	45
3:00	53	60	52	47
4:00	56	64	55	51
5:00	58	70	58	54
6:00	59	71	59	57
7:00	61	68	61	59
8:00	59	67	59	57
9:00	58	64	58	56
10:00	58	70	58	56
11:00	58	68	58	55

	Statistical Summary					
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	61.9	55.7	58.6	59.4	51.4	55.6
Lmax (Maximum)	74.7	64.0	68.3	70.9	60.3	65.2
L50 (Median)	61.6	55.2	57.8	59.1	49.8	53.9
L90 (Background)	59.3	52.7	55.5	56.7	44.5	49.6

Computed Ldn, dB	62.6
% Daytime Energy	77%
% Nighttime Energy	23%

Appendix B
 2018-166 Les Schwab Redding
 24hr Continuous Noise Monitoring - Site A
 11/13/2018-11/14/2018



Appendix C
Barrier Insertion Loss Calculation

Project Information: Job Number: 2018-166
 Project Name: Les Schwab
 Location(s): East Property Line

Noise Level Data: Source Description: Bays
 Source Noise Level, dBA: 49
 Source Frequency (Hz): 1000
 Source Height (ft): 8

Site Geometry: Receiver Description: Nearest Backyard
 Source to Barrier Distance (C₁): 100
 Barrier to Receiver Distance (C₂): 25
 Pad/Ground Elevation at Receiver: 0
 Receiver Elevation¹: 5
 Base of Barrier Elevation: 0
 Starting Barrier Height 6

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
6	6	-5	44	Yes
7	7	-6	43	Yes
8	8	-7	42	Yes
9	9	-9	41	Yes
10	10	-10	39	Yes
11	11	-11	38	Yes
12	12	-12	37	Yes
13	13	-13	36	Yes
14	14	-14	35	Yes
15	15	-14	35	Yes
16	16	-15	34	Yes

Notes: 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

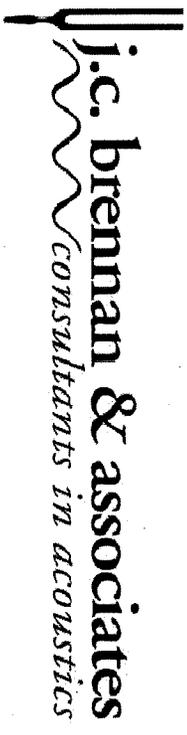
Appendix D

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

Data Input Sheet

Project #: 2018-166
 Description: Les Schwab Daily Trip Contribution
 Ldn/CNEL: Ldn
 Hard/Soft: Soft

Segment	Roadway Name	Location	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)
1	Churn Creek Road	At the project site	269	95		5	0.5	0.01	45	75	
2											
3											
4											
5											
6											
7											
8											
9											
10											
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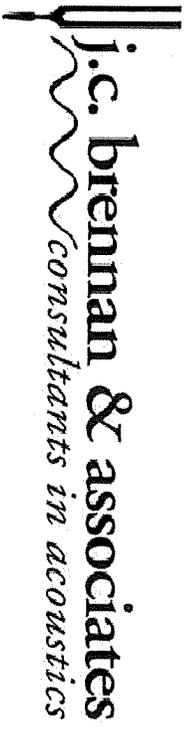
Appendix D

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

Predicted Levels

Project #: 2018-166
Description: Les Schwab Daily Trip Contribution
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Location	Autos	Medium Trucks	Heavy Trucks	Total
1	Churn Creek Road	At the project site	45.7	30.9	18.4	46



Appendix D

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

Noise Contour Output

Project #: 2018-166
Description: Les Schwab Daily Trip Contribution
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway Name	Location	----- Distances to Traffic Noise Contours -----				
			75	70	65	60	55
1	Churn Creek Road	At the project site	1	2	4	9	18