



**CEQA EXEMPTION / NEPA CATEGORICAL EXCLUSION  
DETERMINATION FORM (rev. 04/2021)**

**Project Information**

**Project Name (if applicable):** PLA-49 Safety Barrier Project

**DIST-CO-RTE:** 03-PLA-49

**PM/PM:** R8.7/R10.6

**EA:** 03-4H600

**Federal-Aid Project Number:** 0319000004

**Project Description**

The California Department of Transportation (Caltrans) proposes to conduct a geotechnical investigation to evaluate subsurface conditions for an upcoming project on State Route (SR) 49 in Placer County. The scope of work will consist of performing eight non-invasive geophysical Seismic Refraction Tomography (SRT) surveys. The Geotechnical Services field investigation work should determine the potential rippability and strength of the soil/rock material located within the project limits. Geotechnical information obtained from the investigation will be incorporated into a Geotechnical Design Report.

**Caltrans CEQA Determination** (Check one)

- Not Applicable** – Caltrans is not the CEQA Lead Agency
- Not Applicable** – Caltrans has prepared an IS or EIR under CEQA

Based on an examination of this proposal and supporting information, the project is:

- Exempt by Statute.** (PRC 21080[b]; 14 CCR 15260 et seq.)
- Categorically Exempt. Class 6.** (PRC 21084; 14 CCR 15300 et seq.)
  - No exceptions apply that would bar the use of a categorical exemption (PRC 21084 and 14 CCR 15300.2). See the [SER Chapter 34](#) for exceptions.
- Covered by the Common Sense Exemption.** This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (14 CCR 15061[b][3].)

**Senior Environmental Planner or Environmental Branch Chief**

Kelly McNally

*Kelly McNally*

5/20/21

Print Name

Signature

Date

**Project Manager**

Sam Vandell

*Sam Vandell*

05/20/2021

Print Name

Signature

Date



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Caltrans NEPA Determination (Check one)

[X] Not Applicable

Caltrans has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). See SER Chapter 30 for unusual circumstances. As such, the project is categorically excluded from the requirements to prepare an EA or EIS under NEPA and is included under the following:

[ ] 23 USC 326: Caltrans has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to 23 USC 326 and the Memorandum of Understanding dated April 18, 2019, executed between FHWA and Caltrans. Caltrans has determined that the project is a Categorical Exclusion under:

- [ ] 23 CFR 771.117(c): activity (c)(Enter activity number)
[ ] 23 CFR 771.117(d): activity (d)(Enter activity number)
[ ] Activity Enter activity number listed in Appendix A of the MOU between FHWA and Caltrans

[ ] 23 USC 327: Based on an examination of this proposal and supporting information, Caltrans has determined that the project is a Categorical Exclusion under 23 USC 327. The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans.

Senior Environmental Planner or Environmental Branch Chief

N/A Print Name, N/A Signature, N/A Date

Project Manager/ DLA Engineer

N/A Print Name, N/A Signature, N/A Date

Date of Categorical Exclusion Checklist completion (if applicable): N/A

Date of Environmental Commitment Record or equivalent: N/A

Briefly list environmental commitments on continuation sheet if needed (i.e., not necessary if included on an attached ECR). Reference additional information, as appropriate (e.g., additional studies and design conditions).



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### Continuation sheet:

Data for SRT are acquired using staked geophones. The geophones are inserted into the ground at specific intervals and connected through a cable to a battery-powered data collector. For the SRT method, the geophones record very small vibrations generated by an energy source. Away from the immediate location of the SRT source, the vibrations are imperceptible and are only detectable by the data collecting seismograph. A more detailed description of the effects of the SRT method source is provided below.

### Footprint and Area of Related Ground Disturbance

24 or more geophones (small 2" square sensors mounted on a ½" x 3" spike) and electrode extensions are placed at the ground surface. The geophones and electrodes are removed after work is completed. The SRT geophone spikes maintain secure ground contact and leave no lasting impression in the ground surface. Ground and vegetation disturbance is isolated to foot-traffic areas and locations where the sources are employed. The extent of the SRT method source disturbance at the ground surface increases with source strength. An effort is made to conceal disturbed brush and tamp down disturbed soil to return it to its original condition. Additional discussion of SRT method source effects is provided below. Minor brush cutting is occasionally required for access and is minimized wherever possible. Effort is made to restore visual impacts at the end of the survey.

### SRT Source Effects

The SRT method proposes to use a sledgehammer and striker plate, or the down-hole seisgun. The number of source locations (called "shots") required typical ranges from 5 to 20. For either source, away from the primary zone where sources are employed (greater than 10 feet away) vibratory ground strain is purely elastic and is on the order of one part in a million. The vibration is imperceptible beyond the immediate vicinity of the shot and lasts much less than one second. No discernable lasting effects on flora or fauna have ever been observed during Caltrans seismic operations. A more detailed description of each source is provided below.

### Hammer and Striker Plate

The hammer and striker plate source consist of a 12- to 16-lb sledgehammer struck against a metal or HDPE plate placed on the ground. This creates the least ground disturbance (a dent or divot in ground in the shape of the plate), but the greatest noise of the two methods. The noise from the hammer striking the plate is about 107 dB within 10 feet of the source, so hearing protection is normally required by the operator. However, sound pressure fall-off with distance from the source is significant and drops below 85 dB (OSHA action level) within 60-70 feet of the source and reaches background within 120- 140 feet. More information on the SRT source sound pressure fall-off with distance can be found in the attached Caltrans "Seismic Refraction Striker



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Plate (Source) Noise Survey”.

### Down-Hole Seisgun

The down-hole seisgun is a compact source that uses an industrial cartridge fired in a minimum 1.5-foot deep water-filled hole. The hole is created by manually driving a 2½-inch diameter gad bar into the ground, or by using a hand auger. Seisgun activity may leave an area of disturbed earth up to 2 feet in diameter. This area is tamped down to return it to its original condition. There are no appreciable effects outside that diameter. With well-prepared shot holes, the highest anticipated noise generated consists of a muffled “thump” of approximately 80 dB. Typically, the shots are barely audible.