Niles Canyon Safety Improvement Projects
Frequently Asked Questions

1. **Why does Caltrans feel it is necessary to build these projects?**

   Safety is the California Department of Transportation's number one priority. Caltrans operates and maintains state highways to provide for the movement of people and goods safely and efficiently. The improvements that Caltrans proposes are intended to provide benefits to various modes of transportation, such as cars, buses, trucks, bicyclists, and pedestrians. For the 10 years between 1999 and 2008, a total of 436 total accidents on State Route 84 (SR-84) in Niles Canyon occurred. This project is designed to improve safety by widening shoulders, adding shoulder rumble strips, and increasing visibility. The widened shoulders will provide for vehicle recovery zones, increased law enforcement patrolling areas, disabled vehicles refuge, and emergency responder access. Together, all the improvements will reduce run-off the road and hit obstacle accidents, head-on collisions, and sideswipe opposite direction accidents.

2. **Couldn't this money be used for other projects?**

   Funding was identified based on the accident history and need for safety improvements on Route 84 in Niles Canyon. The Niles 1 and 2 projects in particular, were identified under the Caltrans monitoring program for cross-centerline accidents on 2 and 3 lane undivided highways. This monitoring program identifies highway segments with a concentration of head-on type fatal accidents. In addition, Niles Canyon has a history of roadway departure type crashes such as head-on, sideswipe opposite direction, run-off-road, hit object, and over embankment types of accidents that are associated with serious injury and fatality crashes. The improvements are intended to greatly reduce these types of accidents. The Niles 3 project is based on the same need for safety improvements as well as the bridge reaching the end of its service life.

   Additional state routes that have received these types of safety improvement include: Sonoma State Route 116; Napa State Route 121; Santa Clara State Route 152; Solano State Route 12; Contra Costa State Route 4 near Discovery Bay; and Alameda State Route 84 Pigeon Pass.

3. **Does your current accident data support this project?**

   Yes, our data supports this project. For the 10-year period from 1999 to 2008, there were a total of 436 accidents on State Route 84 in Niles Canyon resulting in a total of 13 persons killed and 342 persons injured. This highway was identified in the Caltrans 2 and 3-lane Monitoring Program for head-on fatal accidents. The accident rate slightly decreased in 2009 with 20 total reported collisions and 18 persons injured. Among those accidents there were: 5% head-on; 25% hit object;

and 20% run-off-road. However, even with the decrease in accidents, the rate of accidents is still high. This project is designed with wider shoulders and shoulder rumble strips to further reduce these accidents.

4. Why do we need wider shoulders?

This improvement was identified in the Caltrans monitoring process for cross-centerline accidents on two-and three-lane undivided highways. This monitoring program identifies highway segment with a concentration of head-on type fatal accidents. In addition, this roadway has a history of high roadway departure crashes such as head-on, sideswipe opposite direction, run-off-road, hit object, and over embankment types of accidents. Shoulder widening is an effective safety countermeasure due to increase recovery area, improve sight distance and curves, thus reduce the number and minimize severity of the crashes.

In addition, a good, usable shoulder with adequate width would maximize law enforcement's ability to safely provide traffic enforcement and allow them to perform effective emergency responses, enforce speed limit, and cite drivers with erratic driving behaviors such as speeding, driving under influence, or other violations, while providing officer and motorist safety and without interfering with the flow of traffic.

5. Will the project result in increased speeds and make the road less safe?

The existing roadway is a rural mountainous undivided two-lane road with multiple geometric constraints of sight distance, grades, superelevation, horizontal and vertical alignments with current speed limit of 45 mph. The shoulder widening for the most part does not straighten out curves. The existing roadway curvature will remain the same, which we anticipate will somewhat limit speeds. The speed limit will remain at 45 mph. However, the speed of motorist may increase slightly with increased driver comfort. The shoulder rumble strip will help vehicles stay within the traffic lane, and also remind motorist of the speed limit. In addition, wider shoulders will make it easier to enforce speed limits. This combination should help to keep speeds to a reasonable level. Experience on other similar state routes and national transportation studies have shown that wider shoulders reduce the cross centerline and run-off-road accidents and improve the safety of the roadway. In combination with centerline rumble strips, shoulder rumble strips, and improved sight distance, the roadway will be a safer overall facility.

During construction, the speed limit will be lowered to 35 mph in some locations.

6. How do you propose to reduce accidents when most of them are caused by DUI?

The past ten year accident history (1999-2008) shows an average of 13% of accidents are related to DUI, which is not significant compared to other similar types of roadway. However, the proposed project to improve shoulder width and install median/shoulder rumble strips will even help to reduce the risk of DUI related accidents by providing an alerting mechanism to drivers and a potential recovery area for drivers to regain control on roadway. The widened shoulder would allow law enforcement to perform enforcement more consistently and safely.

7. What traffic calming measures are you considering?

The following can serve as traffic calming measures:

Install speed feedback signs at various locations
Install median and shoulder rumble strips to alert and keep traffic on the travel lane
Flashing beacons with warning signs
Promote enforcement by providing wider shoulders

8. Is there anything we can do to keep traffic flowing at the east end of the Canyon near Sunol?

There have been studies done to improve the operations of the intersections at Main Street and Sunol/Pleasanton Road/Water Temple. Alameda County Public Works proposed a roundabout; however, that proposal was rejected by motorists. We are currently studying an option to signalize these intersections.

9. What are the long range traffic volume projections for Niles Canyon?

The current average daily traffic count is currently 14,000. The anticipated average daily traffic count in the year 2030 is 22,000. This project will not change the highway's capacity nor affect this projection.

10. How can we ban trucks?

Caltrans operates and maintains State highways to provide for the movement of people and goods safely and efficiently. The improvements that Caltrans proposed are intended to provide benefits to various modes of transportation, such as cars, buses, trucks, bicyclists, and pedestrians. For the 10-year accident history (1999-2008), out of a total of 436 total accidents on State Route 84 in Niles Canyon, trucks with three or more axles were involved in 27 accidents, or 6.2% of the total accidents. Over 80% of truck related accidents is related to "pick-up trucks" or "panel trucks" which will not be banned under the truck ban rules.

There is, however, a process for a local agency to pursue a truck ban on state routes in accordance with California Vehicle Code (CVC) Sections 21101, 35701-

35702 and their related sections. The process begins with the Local Agency preparing a Draft Truck Restriction Ordinance or Resolution and an Initial Study. The initial study provides the information necessary to justify the proposed restriction, including the proposed restriction type, location, existing conditions, alternatives, maintenance and safety considerations on the alternative route(s), along with available input by Caltrans, local agencies, and California Highway Patrol staff, the trucking industry, affected industries, and citizen groups, and conditions that may involve further CEQA compliance. Following a Public Review and Comment Period, the local agency considers, and if determined to proceed with the proposed restriction, shall prepare a final truck restriction report to forward to Caltrans. This final report includes any comment revisions, and the draft restriction ordinance or resolution. If approved, Caltrans Director issues a written approval of the draft ordinance of resolution for the truck restriction. Upon passing of a Final Truck Restriction Ordinance or Resolution, the Local Agency, erects restriction signs, and restriction is enforced.

The "Truck Restriction Procedures on State Highways" handout is available on our website at http://www.dot.ca.gov/dist4/nilescanyon/.

Currently, State Route 84 in Niles Canyon has a truck restriction on transportation of hazardous materials/waste due to adjacent drinking water source. The segment is also subject to an advisory 32 for kingpin-to-rear-axle distance.

11. Is it possible for you to relinquish the highway to the city or county?

Because of its regional function, Caltrans is not planning to relinquish State Route 84 at this time. However, if the jurisdictions along the corridor request relinquishment, Caltrans will consider. Any relinquishment will require legislative action and approval from the California Transportation Commission.

12. What environmental process is Caltrans following for the three Niles Canyon projects?

Niles Canyon 1 Safety Improvement Project:

Type of environmental document - Initial Study with Proposed Negative Declaration and Environmental Assessment

- Newspaper advertisement published on June 5, 2005 in the Fremont Argus and June 12, 2005 in the Tri-valley herald offered the public an opportunity to request a public meeting.
- Circulated to the public for review and comment from July 12, 2005 to August 10, 2005. A Notice of Availability (NOA) was published with the State Clearinghouse on July 12, 2005.
- Alameda Creek Alliance requested a public meeting - Caltrans met with the Alliance directly to address their concerns. Changes were made to the

project including constructing a clear span bridge to remove a critical barrier and improve fish passage along Stonybrook Creek. As a result, the Alliance did not pursue a public meeting.

- Caltrans received 13 comment letters.
- A Negative Declaration (ND) was approved by Caltrans on June 16, 2006, and A Finding of No Significant Impact (FONSI) was approved by FHWA on June 30, 2006.

Niles Canyon 2 Safety Improvement Project:

Type of environmental document - Environmental Impact Report (EIR) and Environmental Assessment (EA)

- Environmental Impact Report - A Notice of Preparation was published with the State Clearinghouse on November 16, 2009.
- A Draft EIR/EA circulated to the public from June 6, 2010 to August 19, 2010 (45 calendar days). A Notice of Joint Document was published with the State Clearinghouse on July 6, 2010.
- Comment period was informally extended 45 days to October 7, 2010. Comment period is closed.
- Public meeting - July 27, 2010 in Sunol
- Additional meetings - September 21, 2010 Fremont City Council and October 12, 2010 Union City Council
- Caltrans received over 200 respondent letters/e-mails, which resulted in over 900 comments.
- Final EIR/EA scheduled for Fall 2011.

Niles Canyon 3 Alameda Creek Bridge Replacement Project:

Type of environmental document - Environmental Impact Report (EIR) and Environmental Assessment (EA)

- Environmental Impact Report - A Notice of Preparation was published with the State Clearinghouse on August 2, 2010.
- Draft EIR/EA is scheduled to be circulated to the public in August 2011.
- Public Meeting is planned for Fall 2011.
- Final EIR/EA is scheduled for Spring 2012.

13. Will you reopen the comment period on the Niles 2 project?

Caltrans has agreed to reopen the comment period.

14. Why did Caltrans not hold a public meeting in 2005 for the Niles 1 project?

Caltrans notified the public through newspaper advertisements in 2005 that they could request a public meeting for the proposed project. The only respondent to the offer was the Alameda Creek Alliance. In accordance with Caltrans' policy, Caltrans worked directly with the Alameda Creek Alliance to address their concerns. As a result of those discussions, substantial modifications were implemented that have resulted in reduced environmental impacts to the creek including constructing a 22 foot wide bridge over Stonybrook Creek in lieu of replacing the existing 6 foot by 10 foot culvert in kind. No further request for a public meeting was received; therefore, Caltrans did not hold a public meeting.

15. How many trees are being removed by the projects?

The trees are being removed because they are within the footprint of the safety improvement project. The Department is keeping tree removal to the absolute minimum necessary in order to construct the safety improvements needed. Mitigation tree planting will occur once the project concludes.

Ninety-eight trees were removed for the Niles Canyon 1 Safety Improvement project. Caltrans was able to trim some trees and avoid their removal. The Department will plant one, three, or five trees for every one tree that was removed during the Niles Canyon 1 Safety Improvement Project.

Currently, Caltrans has identified approximately 440 trees that would be removed in conjunction with the Niles 2 project. Caltrans will be performing mitigation planting for the trees removed.

The current estimate for trees to be removed for Niles 3 is approximately 130. This number is only an estimate and may change. Caltrans will be performing mitigation planting for the trees removed.

Caltrans will continue looking for ways to minimize tree removal for the Niles Canyon 2 and 3 projects as the project designs are refined.

16. Is it true that removing the trees that shade the creek will have negative impacts?

Removing trees that shade Alameda Creek has the potential to increase water temperature in some locations. The effect on the stream in total as it flows through Niles Canyon is considered insignificant. The California Department of Fish and Game and National Marine Fisheries Service did not express concern regarding elevated stream temperatures when the project was discussed with them.

In response to comments from the public and regulatory agencies the project has been modified to avoid and minimize removing trees.

17. How many and how long are the retaining walls for Niles Canyon 1 Safety Improvement Project?

There are five retaining walls totaling 2180 ft. (0.41 miles) for the Niles Canyon 1 project. Only one retaining wall at Palomares Road, about 100 ft. long, will be visible from the roadway. Other retaining walls when built may be visible from across the creek or from the railroad. The project proposes to use a random rock architectural finish treatment for all retaining walls for the project. The intent of the proposed architectural finish is to 1) visually integrate the roadway improvement into the natural environment; 2) mimic the scenic aesthetic of the existing random rock retaining walls along the creek side; and 3) create an aesthetic appearance that will be used throughout the corridor on subsequent projects to unify the appearance and enhance the scenic quality of the corridor. We also anticipate that vegetation will eventually grow back and conceal much of the retaining walls along the creek.

The Niles Canyon 1 project also has a rock bolt wall, approximately 100 feet in length that will be visible from the roadway. The canyon wall will be scaled back and wire mesh will be placed over the slope for rock fall protection. The natural rock slope beneath will be viewable, and overall this rock anchor system will be much less visually intrusive than a retaining wall.

The Niles Canyon 2 project has a total of 18 retaining walls totaling 8,015 ft (1.5 miles). Thirteen of these retaining walls are visible to the public. However, with the change to a rock anchor system, the amount of retaining wall that can be viewed from the roadway will be greatly reduced. The remaining retaining walls viewable from the roadway will be treated with a random rock architectural finish treatment similar to the Niles Canyon 1 project. Six retaining walls along State Route 84 are on the down slope side and are generally not visible from the roadway.

The retaining walls for the Niles Canyon 3 project are in preliminary design phase and so retaining walls designs have not been completed at this time.

18. What is Caltrans doing to reduce the visual impacts of the proposed retaining walls and the associated problems of graffiti?

As a result of the input we have received, Caltrans is considering the use of a rock anchor system in lieu of upslope carved and stained retaining walls (approx. 2,200 LF). This significantly reduces visual impacts and the areas available for graffiti. These areas will also be revegetated so that the new slopes will naturalize with the adjacent surroundings. The remaining upslope retaining walls (contiguous with the Niles Canyon Railway), where used, would be provided with a natural random rock finish with natural rock veneer, which will retain its original color following graffiti removal. A side-hill viaduct is being considered to replace a majority of

the creek side retaining walls (approx. 2,561 LF), which again would significantly reduce the areas available to graffiti. Concrete barriers would consist of integral coloring with heavy sandblast finish in lieu of surface stain to retain original color following graffiti removal.

All walls visible from the roadway, on all three projects, will be constructed using random rock surface treatment using natural rock veneer, in order to reduce visual impacts.

19. Will the proposed project(s) result in revocation of the Scenic Highway designation?

Caltrans is acutely aware of the importance of this scenic corridor and would not build a project that would in anyway jeopardize the scenic highway designation. We worked closely with Alameda County, the cities of Fremont and Union City, and the community to help designate State Route 84 through Niles Canyon as a State scenic highway in 2007. We also share your concern and the community's concern regarding the potential impact of the proposed safety improvement project on the scenic beauty of the canyon. Caltrans is committed to being a good steward of the Bay Area's natural resources and strives to balance this commitment with our priority to ensure safe highways for the motoring public, bicyclists and pedestrians.

As a result of previous public comments, Caltrans is proposing to substantially reduce the number of up-slope and down-slope retaining walls on the project and is utilizing a random rock surface treatment to minimize this visual impact.

20. You are planning to lower the road by one foot at Rosewarnes. This section of Niles Canyon floods during the winter. How will you mitigate this issue with a lower roadway?

The roadway at Rosewarnes will be lowered to bring the highway into compliance with height restriction standards for overheads and overcrossings.

Caltrans is aware of the flooding condition that occurs in this area. The proposed project will construct new roadway drainage facilities consistent with current highway drainage design standards. The more frequent (annual) flooding that occurs at the Rosewarnes area is due to the age and current condition of the existing roadway drainage facilities. The existing short rock parapet along the shoulder will be replaced with a three-foot high barrier. The height of the barrier should provide additional flood protection from Alameda Creek. For less frequent (higher) flood flows in Alameda Creek, the roadway will continue to flood. The depth of flooding will be increased by about one foot compared to existing conditions, and the limits of roadway flooding will be increased by about 60 feet.

21. What hydraulic impacts, if any, will the proposed improvements have on Alameda Creek?

During the design phase of the highway safety project an analysis was performed to determine the potential hydraulic impacts to Alameda Creek. The limits of the analysis extended from the United States Geological Service (USGS) Alameda Creek gage station, No. 11179000, located about 500 meters downstream of the Rosewarnes (Dresser) Underpass, to upstream of the Farwell Underpass. Computations were performed for existing and proposed project conditions. An additional analysis was performed to assess potential impacts to the project associated with the removal of the Niles Dam Diversion Weir by the San Francisco Public Utility Commission (SFPUC). The hydraulic analysis was performed using the United States Army Corp of Engineers (USACE) HEC-RAS River Analysis computer program. This is the same methodology used to determine stage-discharge relationships and stream velocities in the report, "Channel Geomorphology Study Sunol and Niles Dam Removal" prepared by Weiss Associates for the SFPUC. Peak discharges for Alameda Creek presented in the Weiss report were used in the hydraulic analysis for the highway safety project. The Weiss report peak values are slightly greater than corresponding values stated in USACE and FEMA published studies. The hydraulic analysis was performed for the 2-yr, 10-yr, 25-yr, and 100-yr peak discharges. The USGS gage station was used as the downstream boundary control for the HEC-RAS analysis.

The results of the analysis for the 2-year peak discharge indicate that flood boundaries and flow velocities are not measurably different under existing and proposed project conditions.

For the 10-year peak discharge, the results also showed minimal changes to flood boundaries and flow velocities. The maximum velocity change was about 1 ft/s and was isolated to the section at the Rosewarnes Pier which is to be enveloped by the highway widening. There was also a slight reduction in flow depth through the Rosewarnes segment of the project. Any changes to calculated flow depths and channel velocities at the Rosewarnes Bridge diminished well before reaching the Niles Diversion Dam located about 700 meters upstream. In the vicinity of Stonybrook Creek and the Farwell Bridge, there was a slight increase in flow depths and a corresponding decrease in channel velocities. These changes were minor and not considered significant.

For the 25-year peak discharge, the highway is overtopped in many locations under existing and proposed conditions. Changes to the Creek flood stage in the vicinity of the Rosewarnes Bridge were less than 1 foot. Flow velocity changed by just over 1 fps. Similar to the 10-year peak flood condition, existing and project flood conditions converged before the Niles Diversion Dam. In the creek segment including Stonybrook Creek and Farwell Bridge, the flood depth increased a maximum of less than 1 foot, and channel velocity increase was just

over 1 fps. These maximum changes occurred downstream of the Stonybrook Creek confluence. Changes at the Farwell Bridge were negligible.

For the 100-year peak flood flow, all but a short section of the highway is inundated under existing and proposed conditions. The maximum flood depth would be about 11 feet for project conditions and 10 feet for existing conditions. The maximum depth occurs at the Rosewarnes Bridge. The increased depth is mostly due to the profile change of the roadway in this area. The maximum velocity change is about 1 fps.

For all analyzed flood events, the existing and project flood stages are well below the railroad ballast and tracks. Calculated changes in stream velocities do not appear sufficient to cause instability of existing railroad embankments. As a precautionary measure, rock rip rap is proposed around the existing Rosewarnes bridge pier located in Alameda Creek.

22. What is the work schedule for Niles Canyon 1? Is it planned to continue after the seasonal work restrictions pass?

The tree removal/tree cutting operation was completed on March 5, 2011. The contractor also installed temporary erosion control measures on the slopes at the north end of the project on March 5, 2011. The contractor mobilized and started replacing the already placed temporary erosion control measures with erosion control blanket and fiber rolls on March 23, 2011. Weather permitting, the contractor will begin temporary striping and installing temporary K-rails the beginning of June, and proceed with other construction activities on or after June 15 after the seasonal work restrictions have been lifted.