

4.9 NOISE

Introduction

This section addresses noise impacts associated with the project. Information in this section is based primarily on the following report: *Broadway-Brommer Bicycle/Pedestrian Path Connection Environmental Impact Report/Environmental Assessment*, prepared for the City of Santa Cruz in conjunction with the Federal Highway Administration and California Department of Transportation by Brady/LSA, November 1999.

Environmental Setting

Surrounding Land Uses and Noise Sources in Project Area. The project site is surrounded by housing, the Upper Santa Cruz Small Craft Harbor (referred to as the “Upper Harbor”), Frederick Street Park near the southern end of the site, and the Santa Cruz Bible Church at 440 Frederick Street (near Broadway) west of the site. The housing and the church are considered “sensitive receptors” for noise (i.e., land uses that are unusually sensitive to noise due to the types of activities they typically host).

As an existing open space area, most of the site is very quiet, especially near the center of the site. Noise sources in the general vicinity include activity in the Upper Harbor to the south and traffic on Seventh Avenue to the east and on Soquel Avenue and Capitola Road to the north. Generally, noise from the Upper Harbor is the only audible noise and would occur for visitors using the southern portion of Arana Gulch.

Existing Noise Levels. Noise measurements conducted in 1990 showed that the noise level within the Upper Harbor, the Arana Gulch site, and Frederick Street Park was 55 decibels (dB), and that noise reached a maximum of 60 dB at nearby streets (Frederick Street and Soquel Avenue) (Brady/LSA, 1999).

Noise Standards. In accordance with California Government Code Section 65302(f), which mandates that cities and counties adopt noise elements as part of their general plans, the City of Santa Cruz General Plan establishes acceptable noise levels for different types of land uses. The guidelines rank noise levels as “normally acceptable,” “conditionally acceptable,” “normally unacceptable,” and “clearly unacceptable” for various land use types.

According to the City Noise Element, for recreational areas such as golf courses, riding stables, and water recreation, noise levels of 50 to 70 Ldn¹ are normally acceptable, while levels of 70 to 80 Ldn are normally unacceptable and 80 to 85 Ldn are clearly unacceptable (City of Santa Cruz, 1992). For single-family residential areas, 50 to 60 Ldn is normally acceptable, 55 to 70 Ldn is conditionally acceptable, 70 to 75 Ldn is normally unacceptable, and 75 to 85 Ldn is clearly unacceptable. For churches and schools, 50 to 70 Ldn is normally acceptable, 60 to 70 Ldn is con-

¹ Ldn describes average/day/night noise and includes an adjustment for nighttime noise, which is normally perceived to be louder because of the quieter nighttime condition.

ditionally acceptable, 70 to 80 Ldn is normally unacceptable, and 80 to 85 Ldn is clearly unacceptable (City of Santa Cruz, 1992).

Impacts and Mitigation Measures

Significance Criteria. For the purposes of this Draft EIR, development of the project site would present a significant noise impact if the project would:

- Expose people to or generate noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies;
- Expose people to or generate excessive ground-borne vibration or ground-borne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- Expose people living or working in the project area to excessive noise levels if the project is located within an area covered by an airport land use plan, or where such plan has not been adopted, within two miles of a public airport or public use airport; or
- Expose people living or working in the project area to excessive noise levels if the project is located in the vicinity of a private airstrip.

Less-Than-Significant Impacts. The noise increases associated with the on-site increased visitor usage are not likely to be large enough to be noticeable to surrounding residents or other “sensitive receptors.”² The project therefore would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. No excessive ground-borne vibration or ground-borne noise levels would occur. No pile driving is anticipated for the project (Sharp, 2005). No significant impact has been identified, and no mitigation measures are necessary.

The project site is not located within two miles of a public airport or private airstrip, and therefore the project would not expose people to airport noise. The project site is not located within an area covered by an airport land use plan. The nearest airport is the Watsonville Municipal Airport, located over 10 miles southeast of the project site. No significant impact has been identified, and no mitigation measures are necessary.

Potentially Significant Impacts. The project would have the following potentially significant impacts.

Impact NOISE-1: Construction of the proposed project (bridge, retraining walls, trail improvements, etc.) would cause temporary noise that could disturb Arana Gulch visi-

² Generally speaking, a noise increase of 3 dBA or more is considered significant in areas where existing noise levels are “normally acceptable.”

tors, as well as residents of adjoining neighborhoods and people visiting the Upper Harbor. (PS)

Project construction would take place over a six- to ten-month period. Equipment used would consist of the following (Sharp, 2005):

- A small loader grader, ready-mix trucks, and concrete pumping trucks for building pavement on grade;
- An excavator for building retaining walls and bridge abutments;
- Drilling equipment for bridge abutments;
- Cranes to place stress ribbon cables and precast bridge segments; and
- Ready-mix and pump trucks for delivering concrete and grout for bridge abutments, bridge decks, and retaining walls.

Table 4.9-1 lists typical noise levels from commercial construction equipment. As shown in the table, noise levels at 50 feet can range from 76 to 91 dBA without controls, and are typically 75 dBA when noise-reducing procedures, machines, and features are used. These noise levels would be noticeable to Arana Gulch visitors, nearby residents, and possibly also to people visiting the adjoining Upper Harbor. The degree of disturbance for nearby residents would depend on the distance between the housing and the construction noise source.

In addition to construction noise from the site, traffic noise in the area may temporarily increase due to workers and equipment traveling to and from the site. The temporary increase in traffic is not expected to cause a significant noise impact, however, since the traffic would not represent a substantial percentage of current daily traffic volumes in the area (see Section 4.7, Traffic and Transportation).

Table 4.9-1: Typical Commercial Construction Equipment Noise Levels

Equipment	dBA at 50 Feet ^a Without Controls	dBA at 50 Feet ^b With Controls
Backhoe	85	75
Bulldozer	80	75
Graders	85	75
Front-End Loader	79	75
Dump Trucks	91	75
Concrete Pump	82	75
Flat-Bed Delivery Truck	91	75
Crane	83	75
Pumps	76	75

^a Estimates correspond to a distance of 50 feet from the noisiest piece of equipment and 200 feet from the other equipment associated with that phase.

^b Implementing controls may include selecting quieter procedures or machines and implementing noise-control features requiring no major redesign or extreme costs (e.g., improved mufflers, equipment redesign, use of silencers, shields, shrouds, ducts, and engine enclosures).

Source: U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, December 1971.

Mitigation Measure NOISE-1: The City shall carry out the following mitigation measures during construction activities:

- A sign visible at a distance of approximately 50 feet shall be posted at the construction site. The sign shall indicate the dates and duration of the construction activities, as well as provide a telephone number for residents to call with questions or complaints about the construction process.
- A “noise disturbance coordinator” shall be designated. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator would

determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would be required to implement reasonable measures such that the complaint is resolved. Notices shall be sent to residential units within 300 feet of the construction site and shall list the telephone number for the disturbance coordinator.

- *Construction shall be limited to the hours of 8:00 a.m. to 5:00 p.m., or shall comply with the City's Noise Ordinance, whichever is stricter.*
- *Construction shall not occur on Sundays or holidays.*
- *Stationary equipment shall be located as far as possible from noise sensitive land uses. If necessary, temporary plywood noise barriers shall be installed around fixed equipment. (LTS)*

Cumulative Impacts. Development projects elsewhere in the City of Santa Cruz and in the unincorporated area would likely create temporary and permanent increases in noise. Construction of development projects in the immediate vicinity of the Arana Gulch site (e.g., along Frederick Street) would temporarily create noise, but this noise would not combine with construction noise from Arana Gulch to create significant impacts beyond those described in Impact NOISE-1 above. Mitigation Measure NOISE-1 above would reduce the project's contribution to cumulative construction noise impacts to a less-than-significant level.

As discussed above, the Arana Gulch Master Plan would not result in any substantial permanent noise increases; therefore, the project would not combine with cumulative development to create significant cumulative impacts in these areas.

References

- Brady/LSA, 1999. *Broadway-Brommer Bicycle/Pedestrian Path Connection Environmental Impact Report/Environmental Assessment*, prepared for the City of Santa Cruz in conjunction with the Federal Highway Administration and California Department of Transportation, November.
- City of Santa Cruz, 1992. City of Santa Cruz General Plan and Local Coastal Program 1990-2005, adopted 1992 and amended October 25, 1994.
- Sharp, Thomas, Engineering Associate, City of Santa Cruz Public Works Department. E-mail communication with Amy Skewes-Cox, September 21, 2005.