

# Chapter 15—Noise

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## 15.1 Introduction

This chapter addresses the existing noise environment, the potential noise impacts from Project construction and operation, and proposed mitigation measures. With implementation of the mitigation measures described in subsection 15.4, all noise-related impacts from Project construction and operation will be reduced to less-than-significant levels. Acoustical terms are defined in Appendix J, Glossary.

### 15.1.1 Methodology

Evaluation of potential noise impacts from the Project included reviewing relevant city noise standards, characterizing the existing noise environment, and projecting noise from constructing and operating substations and transmission lines. Noise-survey data contain averages of multiple measurements taken at various points along proposed transmission-line routes and are representative of noise levels along the length of the route. Noise measurements were also taken at the Martin Substation site.

## 15.2 Existing Conditions

### 15.2.1 Regulatory Background—Local Noise Policies

#### 15.2.1.1 San Mateo County

The Noise Element of the San Mateo County General Plan states the following policies and objectives:

- Strive toward an environment for all residents of San Mateo County which is free from unnecessary, annoying, and injurious noise.
- Reduce noise impacts through noise/land use compatibility and noise mitigation.
- Promote protection of noise -sensitive land uses and noise reduction in quiet areas and noise impact areas.
- Give priority to reducing noise at the source rather than at the receiver.
- Noise reduction along the path and at the receiver.

The most current version of the General Plan does not quantify noise levels for land-use types. However, many municipalities along the Project path do quantify those levels. Those regulations and plans are summarized below.

### 15.2.1.2 City of San Mateo

#### General Plan

Table N-1; Noise Sensitive Land Use Compatibility Guidelines for Community Noise Environments establishes normally acceptable sound levels or sensitive receptors (e.g., residential, schools, libraries, and hospitals, at 50-59 dBA- $L_{dn}$ , and conditionally acceptable at 60-70 dBA- $L_{dn}$ ).

#### Municipal Code

The municipal code of the City of San Mateo, Section 10.04.010, Disturbing the Peace, states “No person shall make in any place or suffer to be made upon his premises or premises within his control, any noise, disorder or tumult, to the disturbance of the public peace within the city.”

The municipal code in its Goals and Policies section states further that “Most of San Mateo has existing noise levels which exceed the normally acceptable levels for noise sensitive uses.”

### 15.2.1.3 City of Brisbane

#### General Plan

The Noise Element of the City of Brisbane’s General Plan states that the policy of the city is “To minimize the intrusion of unwarranted and intrusive noise on community life.” It states further “the Community Noise Equivalent Level (CNEL) of 65 dB represents a noise level at which noise insulation features are generally required.” CNEL measurements are, for all intents and purposes, identical to the Day-Night Sound Level ( $L_{dn}$ ).

#### Municipal Code

The City of Brisbane Municipal Code 8.28.030 states that “no person shall cause, produce, suffer or allow to be produced by any machine, animal or device...in a single family residential zoning district, a noise level more than 10 dB above the local ambient for a cumulative period of more than 15 minutes in any hour.” For a multi-family residential zoning district, no noise level more than 10 db above the local ambient is allowed 3 feet from any wall, floor, or ceiling inside any dwelling unit.

### 15.2.1.4 City of South San Francisco

#### General Plan

The guiding policy of the noise element of the South San Francisco General Plan is to “protect public health and welfare by eliminating or minimizing the effects of existing noise problems and by preventing increased noise levels in the future.” The plan prohibits industrial development that will result in noise levels of 60 dBA CNEL at areas zoned for noise-sensitive uses.

#### Municipal Code

The Municipal Code of the City of South San Francisco is more specific than the General Plan when establishing permissible noise levels. It limits noise levels in single-family or duplex residential areas to 60 dBA between the hours of 7 a.m. and 10 p.m. and 50 dBA between 10 p.m. and 7 a.m. However, construction activities, which are authorized by a valid city permit, are allowed on weekdays between 8 a.m. and 8 p.m. and on Saturdays

between 9 a.m. and 8 p.m. Any single piece of equipment is limited to a noise level of 90 dB at a distance of 25 feet.

#### 15.2.1.5 City of San Bruno

##### General Plan

The City of San Bruno's General Plan states that noise levels for relevant land uses (e.g., residential, schools, libraries, churches, and hospitals) should be less than 65 dBA CNEL. Industrial land uses are limited to less than 75 dB CNEL.

##### Municipal Code

Ambient Noise Levels of the City of San Bruno Municipal code (Section 6.16.303) limit sound levels in residential zones between 10 p.m. and 7 a.m. to 45 dBA and between 7 a.m. and 10 p.m. to 60 dBA. However, during the daytime period the ambient base level may be exceeded by 20 dBA for a period not to exceed 30 minutes during any 24-hour period. Construction-generated noise is limited to 85 dBA between 7 a.m. and 10 p.m., as measured at 100 feet.

#### 15.2.1.6 Town of Colma

##### General Plan

Land Use Compatibility for Community Noise Environments (Table N-3) establishes normally acceptable sound levels or sensitive receptors (e.g., residential, schools, libraries, and hospitals) at 60 dBA-L<sub>dn</sub>, and conditionally acceptable levels at 70 dBA-L<sub>dn</sub>.

##### Municipal Code

There is no noise ordinance for the Town of Colma. Instead, it uses the California Penal Code Section 415, "Disturbing the Peace," which prohibits any person from maliciously and willfully disturbing another person by loud and unreasonable noise.

#### 15.2.1.7 City of Millbrae

##### General Plan

The noise element of the Millbrae General Plan has two primary concerns:

1. Protecting the City's existing neighborhoods and commercial areas
2. Assuring that new development is done appropriately

A Land Use Compatibility Chart for community noise environments establishes normally acceptable sound levels for sensitive receptors (e.g., residential, schools, libraries, and hospitals) at 60 dBA-L<sub>dn</sub>, and conditionally acceptable levels at 75 dBA-L<sub>dn</sub>. The acceptable level for industrial, manufacturing, and utilities land uses is less than 70 dBA-L<sub>dn</sub>.

##### Municipal Code

There is no noise ordinance for the City of Millbrae. Like the Town of Colma, it uses the California Penal Code Section 415, "Disturbing the Peace," which prohibits any person from maliciously and willfully disturbing another person by loud and unreasonable noise.

### 15.2.1.8 Town of Hillsborough

#### General Plan

It is the stated policy of the Town of Hillsborough “to minimize noise levels through the town and to mitigate, wherever possible, the effects of noise in order to provide a safe and healthy environment consistent with residential land uses.” The noise standard, therefore, is consistent with the state of California and limits exterior sound levels of up to 60 dBA-L<sub>dn</sub> for residential and other sensitive-receptor land uses.

#### Municipal Code

The declared policy of the town of Hillsborough is that the peace, health, safety, and welfare of the town’s residents require protection from excessive, unnecessary, and unreasonable noises from any and all sources in the town. Except for construction-generated noises, the Hillsborough Code of Regulations is not quantitative and limits basic noise-producing activities at any time of day to “normal noises of vehicular traffic, human voices, domestic pets and other inevitable and ordinary noises of living.” Construction activities may be conducted pursuant to a valid building permit issued by the town, so long as the activities do not produce single, or in combination, a total combined noise level of more than 100 dBA outside the property plane.

### 15.2.1.9 City of Daly City

#### General Plan

The City of Daly City General Plan Noise Compatibility Guidelines define normally acceptable noise levels for relevant land uses (e.g., residential and single family) at 60 dBA-CNEL. Other sensitive receptors (e.g., schools, libraries, churches, and hospitals) are limited to 65 dBA-CNEL for normally-acceptable noise levels. The plan also states that construction noises are regulated through the environmental review process by the Engineering and Planning Divisions. Typically, construction activities are limited to the daytime hours, 8 a.m. to 5 p.m., and prohibited on weekends and holidays.

#### Municipal Code

The Municipal Code of the City of Daly City defines noise in Chapter 9.22 as “Disturbing the Peace.” It states that between the hours of 10 p.m. and 6 a.m., “no person shall cause, create or permit any noise or other disturbance upon his property which may be heard by or which noise disturbs or harasses, any other person beyond the confines of the property from which the noise, music, sound or disturbance emanates.”

### 15.2.1.10 City of Burlingame

#### General Plan

The declared policy of the City of Burlingame is “excluding and prohibiting all annoying, excessive and unnecessary noises from all sources which are subject to its regulatory, administrative and police powers.” Suggested outdoor noise levels suitable to various land-use categories in the City of Burlingame General Plan consistent with this policy are:

1. Public, quasi-public, and residential land uses – 60 dBA-CNEL
2. Passively-used open spaces – 45 dBA-CNEL
3. Commercial – 65 dBA-CNEL
4. Industrial – 75 dBA-CNEL

### Municipal Code

The General Noise Regulations of the City of Burlingame Code of Regulations states “it is unlawful for any person willfully to make or continue, or cause to be made or continued, any loud, unnecessary or unusual noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person or normal sensitiveness residing in the area.”

## 15.2.2 Existing Noise Environment

Contributors to the noise environment at the Project location primarily consist of continuous sounds of traffic from highways and city streets, airplane noise, sounds emanating from neighborhoods (e.g., voices and radio and television broadcasts) and naturally-occurring sounds (e.g., winds and wind-generated noises (e.g., rustling foliage)). Other contributing noise sources may be electrical devices used at industrial facilities and other man-made localized sources. Generally, intermittent short-term noises do not significantly contribute to longer-term noise averages.

Noise monitoring was conducted at locations that characterized the average noise environment for the respective transmission-route segments or the substations. Those measurement locations were selected to best represent the typical noise environment along that route or location. In most cases, those sites were selected for ease and safety of access and the availability of PG&E-owned facilities and properties (e.g., power poles and property line fences) on which to mount long-term sound-measuring devices. All acoustic measurements were taken for multiple 24-hour periods (for one week, including weekdays and weekends) and produced hourly-average noise data (average energy equivalent level [ $L_{eq}$ ]). Long-term noise measurements were obtained using calibrated microphones and integrating sound level meters/statistical data loggers (Larson Davis Model 820 and Model 700). These noise-measurement summaries are shown in Table 15-1 and locations of the measurements are indicated in Figure 15-1.

Noise-sensitive receptors are those facilities or activities (e.g., residential areas, hospitals, schools, performance spaces, and offices) for which excessive noise may cause annoyance or loss of business (e.g., commercial activities with heavy telephone use for which a quiet environment is required).

### 15.2.2.1 Transmission Lines

Noise measurements were taken at six sites along the route during both weekend and weekday periods in May 2002.

- The nearest sensitive receptors to Route Segment 1A are residences (greater than 100) located approximately 1000 ft. east of the proposed overhead transmission line. Noise monitoring for this route segment was conducted at the corners of Skyline Blvd. and Chateau Drive in Hillsborough.
- The nearest sensitive receptors to Route Segment 2B are residences (greater than 50) located approximately 100 ft. east and west of the underground portion of the transmission line. Noise monitoring for this route segment was conducted at the corners of San Bruno and Acacia avenues in San Bruno.

- The nearest sensitive receptors to Route Segment 3A are residences (approximately 50) located 300 ft. north of that route. Noise monitoring for this route segment was conducted at the corner of Junipero Serra Blvd. and Arroyo Ave. in South San Francisco.
- The nearest sensitive receptors to Route Segment 4A are an elementary school approximately 15 yards south and approximately 25 residences located 50 ft. north and east of the underground route. Noise monitoring for this route segment was conducted at the corner of Hillside Blvd. and F Street in Colma.
- The nearest sensitive receptors to Route Segment 5 are approximately 75 residences located 400 ft. north of the underground transmission lines. Monitoring for this route segment was conducted on Guadalupe Canyon Parkway in Daly City.

#### 15.2.2.2 Substation and Transition Structure Sites

As was the case in selection of monitoring sites for the transmission routes, the locations selected for environment-noise measurements at the substation and transition-structure sites were based on ease and safety of access and the availability of PG&E-owned facilities and properties (e.g., power poles and property-line fences) on which to mount the long-term sound measuring devices (Figure 15-1).

##### Jefferson Substation

The Jefferson Substation is located in an undeveloped setting on Cañada Road, near Woodside, CA. The measurements to characterize the noise levels at this site were collected at the corner of Chateau Road and Skyline Blvd. This monitoring site was located approximately 1 mile north of the substation and was selected to characterize the noise environment of the Jefferson Substation area, as well as the southern end of the transmission route.

##### Martin Substation

The Martin Substation is located in an industrial/residential setting in Brisbane, CA. One long-term measurement was taken to characterize the noise levels at this site. The measurements were collected at a position along property lines closest to sensitive receptors at the corner of Geneva and Talbert Streets. The closest sensitive receptor, a residence, is located 60 yards north of the substation property line.

##### Transition Station

The proposed transition structure will be located on an undeveloped parcel, adjacent to Highway 35 and within some commercial and residential development. One measurement was taken at a position determined to be representative of noise levels in the area. There are no sensitive receptors within 400 yards of the proposed location for the transition structure.

##### Noise Survey Results

Table 15-1 summarizes the noise-survey results in terms of  $L_{eq}$ , minimum  $L_{eq}$ , maximum  $L_{eq}$ ,  $L_{dn}$ ,  $L_{50}$ ,  $L_{10}$ , and  $L_{90}$  statistical descriptors in which noise level is exceeded a given percent of the time.  $L_{dn}$  describes average noise over a one-hour period, with a 10 dB penalty applied to noise levels between 10 p.m. and 7 a.m.

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TABLE 15-1  
Noise Measurement Results (A-Weighted Decibels [dBA])

Location	Average ( $L_{eq}$ )	Minimum ( $L_{eq}$ )	Maximum ( $L_{eq}$ )	Average ( $L_{50}$ )	Average ( $L_{90}$ )	Average ( $L_{dn}$ )
Transmission Lines						
Overhead Route Segment	75	65	93	74	71	78
Underground Segment 2	64	57	82	62	59	68
Underground Segment 3	68	57	94	64	60	72
Underground Segment 4a	70	69	79	70	69	76
Underground Segment 5	81	80	83	81	80	84
Substations, Transition Structure						
Martin Substation	72	55	90	68	58	78
Jefferson Substation	75	65	93	74	71	78
Transition Structure	64	57	82	62	59	68

## 15.3 Potential Impacts

### 15.3.1 Significance Criteria

#### 15.3.1.1 Operations Noise

Operations noise impacts from Project components would be considered significant if the transmission line or substation generated noise levels that exceeded the following criteria:

- 60 to 65 dBA- $L_{dn}$  (or CNEL) within cities and towns along the Project route within the Project Area
- Sound levels that could be considered public nuisances in the Project Area

In addition, Appendix G of the revised CEQA Guidelines states, a Project may be deemed to have a significant effect on the environment if it would increase substantially the ambient noise levels of adjoining areas. A change in noise level of less than 3 dBA is barely perceptible to the human ear. A permanent increase in noise environment of 5 dBA or greater constitutes a significant noise impact.

#### 15.3.1.2 Construction Noise

Some local agencies do not set noise-level limits for construction activities occurring during allowed hours (usually between 7 a.m. and 6 p.m., or as otherwise specified in subsection 15.2.1). They require that construction contractors use available noise-suppression devices and techniques to minimize disturbance to nearby businesses and residences.

Significance criteria for construction-related noise activities are not established because of the temporary nature of noise generated from construction activities. The following construction-noise specifications are often used for projects.

In residential areas, construction noise from stationary noise sources that generate repetitive or long-term noise lasting more than 3 hours would be significant if the equivalent noise level,  $L_{eq}$ , measured over any 30-minute period exceeds 65 dBA at a distance of 200 feet or at the nearest sensitive receptor. In commercial areas, such sources should not exceed 70 dBA at a distance of 200 feet or at the nearest sensitive receptor (Nelson 1982).

## 15.3.2 Construction Impacts

### 15.3.2.1 Noise Levels During Construction

Construction of 230 kV transmission lines will require cranes, augers, compressors, air tampers, generators, trucks, and other equipment. Generators will not be operated at night except as emergency power back-up contingencies for essential safety purposes. Helicopters will be used for the overhead section of Segment 1 to transport construction materials, remove and install new towers, and to string the conductors. Typical noise levels for this equipment (at 15 yards from the source) are listed in Table 15-2.

Pile drivers are to be used to install the series line reactors at the Martin Substation and San Mateo Substation. The noise of pile driving operations on construction sites has long been acknowledged as a source of major disturbance to neighboring residences. Noise from such activities, although only momentary in nature, has been measured at impulse levels above 90 dbA near the machine depending on the type of pile-driving device. Many methods of mitigation have been proposed for construction projects to reduce the noise associated with pile driving. These mitigation measures include sound barriers (e.g., blankets near the machinery and perimeter barriers around the Project). In general, the reduction in noise levels achieved by these mitigation measures is limited.

TABLE 15-2  
Typical Noise Levels of Construction Equipment

Equipment	Range of Noise Level (dBA) at 15 yards
Earthmoving	
Front loaders/Excavators	72-84
Backhoes	72-93
Tractors, dozers	76-96
Scrapers/ graders	80-93
Pavers	86-88
Trucks	82-94
Materials Handling	
Concrete mixers/Millers	75-88
Concrete pumps/Spreaders	81-83
Cranes (movable)	75-86
Cranes (derrick)	86-88

TABLE 15-2  
Typical Noise Levels of Construction Equipment

Equipment	Range of Noise Level (dBA) at 15 yards
Stationary	
Pumps	69-71
Generators	71-82
Compressors	74-86
Drill rigs	70-85

Source: Adapted from Magrab (1975) by Wilson, Ihrig & Associates, Inc. (WIA, 1986).

### 15.3.2.2 Transmission Lines

**Impact 15.1: Temporary Noise Associated with Transmission Line Construction.** Two types of noise are associated with construction activities: intermittent and continuous. Using the standard rule-of-thumb of the inverse square law, which equates to a 6 dB decrease of sound for each doubling of distance (Beranek 1988), and referring to Table 15-2, the maximum intermittent construction-noise levels range from 80 to 88 dBA at 45 yards for supporting-structure assembly operations, and 84 to 90 dBA during tamping operations. Helicopter noise levels are expected to range from 92 to 95 dBA at 150 feet from the helicopter (WIA 1986).

The continuous noise levels from construction activities at 15 yards would range from 70 to 77 dBA. At 30 yards, the continuous noise levels would be 64 to 71 dBA. At 60 yards, the noise levels would be 58 to 65 dBA (Beranek 1988). While this would constitute a temporary and less-than-significant noise impact to nearby residents, with implementation of Mitigation Measure 15.1, noise levels would be further reduced to less-than-significant levels.

### 15.3.2.3 Substations

**Impact 15.2: Temporary Noise Associated with Modifications to Martin Substation.** Modification of the substation will involve use of earth-moving equipment, pile driving drivers, trucks, and cranes. The noise levels will vary with the type of activity and the actual equipment being used. The potential continuous noise from these activities could be as high as 90 dBA (at 60 yards, the distance from construction to the nearest receptor). Pile driving could take an estimated two weeks. With implementation of Mitigation Measure 15.1, the impact of temporary noise at the Martin Substation would be less than significant.

**Impact 15.3: Temporary Noise Associated with Modifications to Jefferson Substation.** Modification of the substation will involve use of earth-moving equipment, trucks, and cranes. The noise levels will vary with the type of activity and the actual equipment being used. The potential continuous noise from these activities could be as high as 65 dBA. However, with implementation of Mitigation Measure 15.1, impacts would be less than significant.

**Impact 15.4: Temporary Noise Associated with Modifications to Ralston Substation**

Construction. Modification of the substation will involve use of trucks and cranes. The noise levels will vary with the type of activity and the actual equipment being used. The potential continuous noise from these activities could be as high as 50 dBA (at 300 yards, the distance from construction to the nearest receptor). However, with implementation of Mitigation Measure 15.1, impacts would be less than significant.

**Impact 15.5: Temporary Noise Associated with Modifications to Hillsdale Junction Switchyard.** Modification of the substation will involve the use of trucks and cranes. The noise levels will vary with the type of activity and the actual equipment being used. The potential continuous noise from these activities could be as high as 60 dBA (at 100 yards, the distance from construction to the nearest receptor). However, with implementation of Mitigation Measure 15.1, impacts would be less than significant.

**Impact 15.6: Temporary Noise Associated with Modifications at Millbrae and Monta Vista Substations.** Equipment modifications at the two substations will take place inside existing control buildings and therefore will not generate any noticeable noise.

**Impact 15.7: Temporary Noise Associated with Modifications to San Mateo Substation.** Modification of the substation will involve use of earth-moving equipment, pile drivers, trucks, and cranes. The noise levels will vary with the type of activity and the actual equipment being used. The duration of pile driving activities is estimated at four weeks. The potential continuous noise from these activities could be as high as 72 dBA (at 800 yards, the distance from construction to the nearest receptor). With implementation of Mitigation Measure 15.1, the impact of temporary noise at the San Mateo Substation would be less than significant.

**Impact 15.8: Temporary Noise Associated with Transition Station.** Construction of the transition station will involve the use of trucks and cranes. The noise levels will vary with the type of activity and the actual equipment being used. The potential continuous noise from these activities could be as high as 50 dBA (at 400 yards, the distance from construction to the nearest receptor). However, with implementation of Mitigation Measure 15.1, impacts would be less than significant.

### 15.3.3 Operation Impacts

**Impact 15.9: Operations Noise Associated With Martin Substation.** A single-bank 3-phase transformer is planned for the Martin Substation. The 230/115 kV, 420 MVA transformer is planned to be located near the center of the yard, approximately 25 yards from the north property line. To predict the noise impact of the transformer in operation, before and after substation modifications, the noise impact characteristics were computer modeled using the CYMAUDI 2 noise propagation software. This model is designed to compute noise levels generated outdoors by large power apparatus (e.g., power transformers and converters).

For these simulations, a worst-case scenario was assumed; full load, daytime transformer operation at FA rating (all cooling fans operational). The results of the computer-modeling efforts are presented in Figures 15-2 and 15-3.

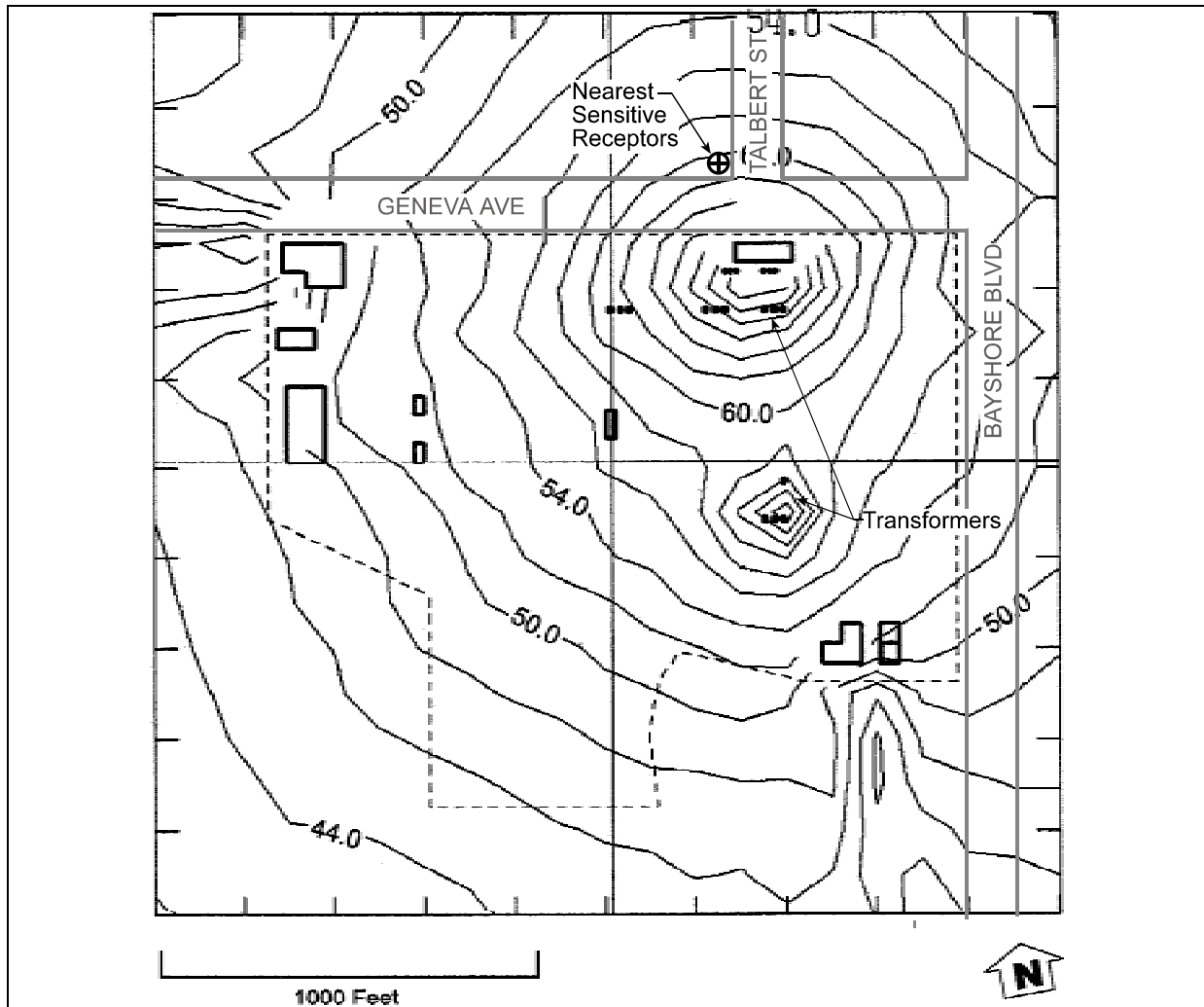


FIGURE 15-2  
Martin Substation Isophonic Distribution Before Modifications

Transformer noise is known to contain pure-tone or “hum” components. This tonal quality is typically the most offensive characteristic of transformer noise. While a 5-dB penalty (added to the measured value) is sometimes applied to account for the increased sensitivity of people to noise containing pure tones, no penalty is imposed for pure-tone components in the local noise ordinances.

The noise level from the proposed modifications to the substation transformers measured at 20 yards (the nearest receptor on Geneva Road) is predicted to be approximately 60 dBA- $L_{eq}$  or approximately 1 dBA greater than before the installation of the new transformer. However, an increase of 1 dBA is not perceptible. Additionally, measured ambient noise level at the Martin Substation was 75 dBA- $L_{eq}$  and would effectively overwhelm any substation-generated noise. Therefore, no additional noise would be encountered by the residents adjacent to the Martin Substation due to the Project completion. This transformer-generated noise is well within the City of Brisbane guidelines (subsection 15.2.1), will not increase the ambient noise level, and therefore will not cause a significant impact.

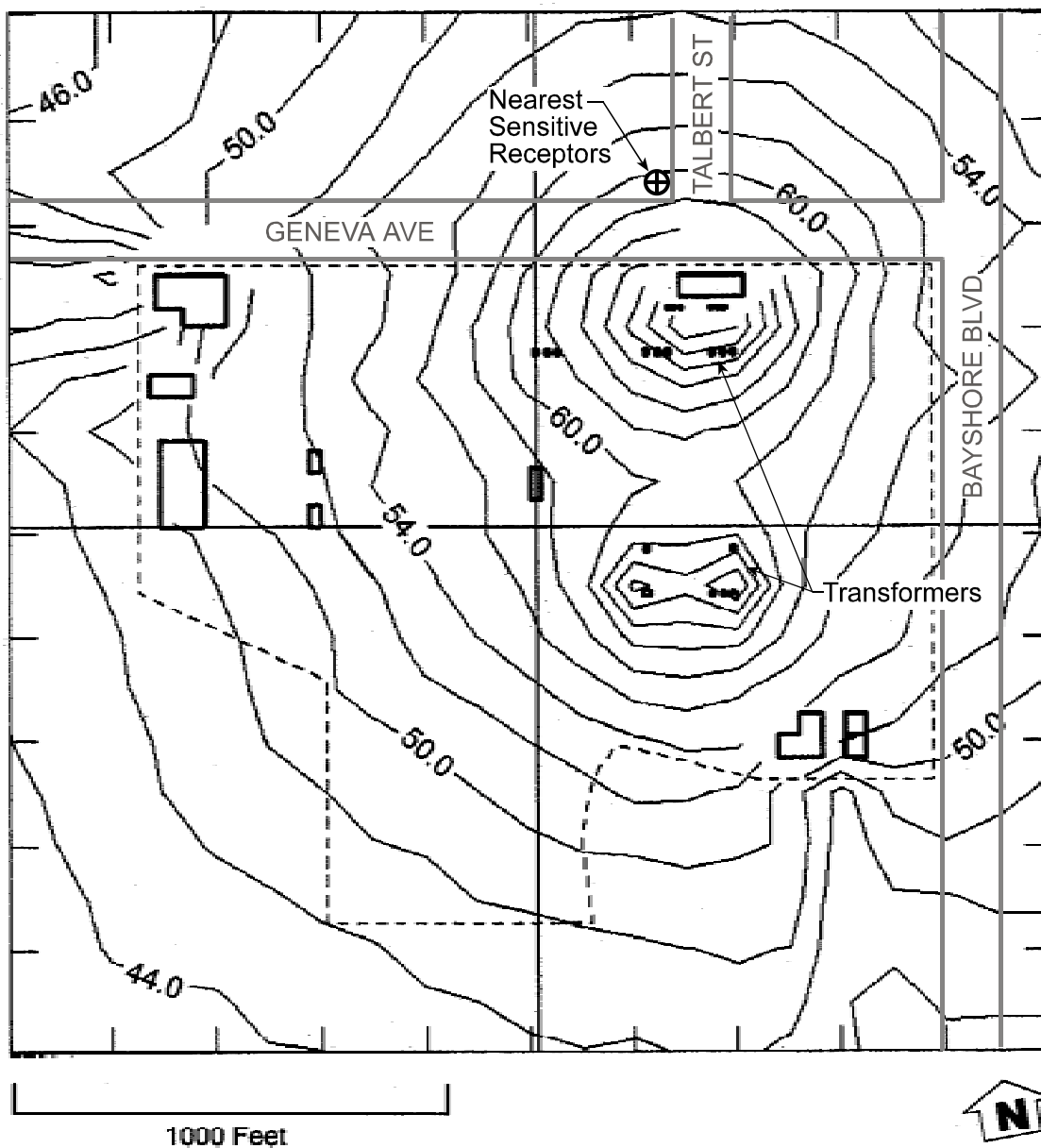


FIGURE 15-3  
Martin Substation Isophonic Distribution After Modifications

**Impact 15.10: Operations Noise Associated With Transmission Lines.** Audible transmission-line noise is generated from corona discharge, which is experienced as a random crackling or hissing sound. Corona discharge occurs with high voltages. Particles such as dust or water droplets that come into contact with a conductor tend to increase corona discharge. The potential for noise from corona discharge is greater during wet weather. The sound generated by 230 kV lines during adverse weather conditions (e.g., fog and rain) is generally expected to be 30 to 40 dBA at 30 yards from the outer conductor. Therefore, transmission-line noise could be as high as 46 dBA in adverse weather conditions at the closest sensitive receptor (WIA 1998). This would be a less-than-significant impact because applicable noise standards would not be exceeded and those noise levels will be less than measured ambient levels.

There are no audible transmission noises associated with underground transmission lines; therefore, impacts to the environment are not significant.

**Impact 15.11: Operations Noise Associated with Jefferson Substation.** No increases of ambient noise levels are expected at the Jefferson Substation, because no new noise-generating equipment is proposed for the Project.

**Impact 15.12: Transition Station.** The transition station will not contain any noise-generating components. Occasional maintenance activities will generate some occasional and temporary intermittent noise, (e.g., trucks driving to or at the site); therefore, impacts would be less than significant.

**Impact 15.13: Operations Noise Associated with Substations.** No increases of ambient noise levels are expected at the Ralston Substation, Hillsdale Substation, Carolands Substation, Monta Visa Substation, and San Mateo Substation, because no new continuous noise-generating equipment is proposed for the Project.

## 15.4 Mitigation Measures

### 15.4.1 Construction Mitigation Measures

**Mitigation Measure 15.1.** The following noise-suppression techniques will be employed to minimize the impact of temporary construction noise on nearby sensitive receptors:

- Compressors and other small stationary equipment will be shielded with portable barriers.
- “Quiet” equipment (i.e., equipment that incorporates noise-control elements into the design; compressors and jackhammers have “quiet” models) will be used during construction whenever possible.
- Equipment exhaust stacks and vents will be directed away from buildings.
- Truck traffic will be routed away from noise-sensitive areas where feasible.
- PG&E will coordinate with Daly City and the City of San Mateo with regard to the construction activities (including pile driving) that will take place at the Martin and San Mateo substations. PG&E will coordinate with Daly City and the City of San Mateo to notify residents that are located near the perimeter of the substation properties of the timeframe for the construction activities.

### 15.4.2 Operation Mitigation Measures

Because significant impacts from the operation of the Project have not been identified, mitigation measures are not required.

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