6.11 NOISE

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the project:				
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?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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 of public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
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?	☐	☐	☐	☒

6.11.1 Approach to Analysis

For construction noise impacts, the analysis based on both quantitative and qualitative assessments of noise associated with construction activities. In general, a qualitative analysis for construction noise impacts is warranted due to the relatively brief period during which construction noise would affect any individual land use along the route or in the vicinity of a POP. In the case of some of the longer directional boring locations, however, a quantitative approach is warranted. Quantitative analyses were conducted for the nine longest directional boring locations. All nine of these locations are in the San Francisco Bay Area.

For operational noise impacts, the approach differs between POPs that would be located in existing commercial or industrial buildings and POPs that would be located in new buildings. A qualitative analysis is provided for the former and a quantitative analysis is provided for the latter.

6.11.2 Impact Significance Criteria

The analysis of the significance of potential impacts is based on the five general criteria listed above. Evaluation of permanent increases in ambient noise levels were based on the following specific criteria: (1) a change of 5 DNL or more is considered significant where the resultant noise level remains "normally acceptable" for the affected land uses and (2) a change of 3 DNL or more is considered significant where the resultant noise level would exceed the maximum level considered "normally acceptable" for the affected land uses.

6.11.3 Impact Mechanisms

The potential impact mechanisms would be: (1) temporary noise increases along the route due to noise from construction equipment during cable installation and (2) long-term noise increases from operation of equipment at the POPs. Both temporary and long-term noise increases would have the potential to affect sensitive land uses, such as residences, along route segments and in the vicinities of the POPs.

The construction-related noise sources would be typical construction equipment commonly used intermittently at construction sites with the exception of the directional boring activity. Directional boring (drilling) would be a continuous operation throughout the workday and has the potential to exceed regulatory noise thresholds.

Noise-producing operational equipment installed at POPs would vary. Some POPs would include air conditioning units and an emergency back-up generator while others would rely on the air conditioning units within existing buildings and would not have an emergency back-up generator.

6.11.4 Impact Assessment

6.11.4.1 San Francisco Bay Area Network

a. Would the proposed project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact NOI-1: Noise levels in excess of local standards would be generated in some locations during project construction and operation. (Less than Significant with Identified Mitigation)

The San Francisco Bay portion of the project would have potential impacts from temporary noise sources associated with construction and long-term noise sources associated with operations at the POPs. Such noise sources are typically regulated on the local level through enforcement of noise ordinances, implementation of general plan policies, and imposition of conditions of approval for permits. Most of the San Francisco Bay Area jurisdictions in which project construction would occur have established construction hours and, in some cases, construction equipment noise standards (see Table 5.11-1). The following sections addresses noise impacts that would result from trenching for cable installation, directional boring, and POP construction and operation.

Trenching for Cable Installation

Construction of the backbone would involve installation of new conduit for fiber optic cable within active railroad rights-of-way: the Caltrain right-of-way along the Peninsula and the UPRR right-of-way along the East Bay. As many as 12 construction crews would be working on any given workday somewhere in the Bay Area. The entire cable installation activity for the San Francisco Area Network would be completed within a 4-to-6-month period.

Construction in railroad rights-of-way would mostly involve dirt trenching, which would typically proceed at a rate of approximately 2,600 feet per day. Repair or replacement of existing conduit associated with the Pacific Bell Structure would occur in public roadway rights-of-way. Construction in public roadway rights-of-way would typically proceed at a rate of approximately 85 feet per day (metropolitan street trenching) to 200 feet per day (industrial or residential street trenching).

Noise levels generated by trenching for cable installation would vary depending on the particular type, number, and duration of use of various pieces of construction equipment. The types of equipment that may be used include backhoes, excavators, trucks, pavers, and rollers. Such equipment typically generates between 80 and 90 dBA at 50 feet (U.S. Department of Transportation 1995).

At any one location along the construction routes, the duration of noise impacts would be relatively brief, approximately 1 to 3 days, given the rate at which project construction would proceed. Depending upon the local noise regulations, noise levels potentially could exceed regulatory thresholds if mitigation were not required by the construction permit issued by the local authority.

Directional Boring

Directional boring (drilling) is the proposed construction technique at most of the road and rail crossings along the construction routes for both the backbone and Pacific Bell structure. Directional boring would typically proceed at a rate of approximately 300 feet per day. Unlike trenching, however, the noise source does not move along the route. The noise is generated at the borehole location and continues at that location until that bore is completed.

Directional boring is proposed at 202 locations along the San Francisco Bay Area Network (see Appendix J, Tables J-1, J-2, and J-3). At most (102 locations) of these locations, the boring distance is 300 feet or less. Assuming a boring rate of 300 feet per day, the boring activity at these locations would last 1 day or less. At most (91 locations) of remaining locations, the boring activity would last 5 days or less. At nine locations, the boring distance is greater than 1,500 feet. At these locations, the boring would require more than 5 days (more than 1 workweek). This analysis focuses on these nine boring locations, which are listed in Table 6.11-1.

Boring would be accomplished with a mobile directional boring rig and a boring mud pump system. Cuttings would be collected and contained within the boring setup. Hauling of cuttings from the boring site would occur not more than once a day during boring operations.

Typical mobile drill rigs produce noise levels of approximately 80 dBA at a distance of 50 feet, based on federal construction contractor standards (CERL 1975). Noise levels decrease 6 dBA with

each doubling of the distance from the noise source. This means, for example, that at a distance of approximately 280 feet from the boring location, the maximum noise level would be approximately 60 dBA, which is generally considered an acceptable construction noise level in residential areas. Depending upon the local noise regulations, noise levels potentially could exceed regulatory thresholds if mitigation were not required by the construction permit issued by the local authority.

For each of the nine longest directional bores, the surrounding land uses and distances to sensitive receptors are described in the following paragraphs. Table 6.11-1 indicates the bore length, the estimated duration in days of the boring activity at each location, the distance to the nearest sensitive receptors, and the noise level that would be experienced at those receptors.

Table 6.11-1. Directional Bores Requiring Five Days or Longer

Directional Bore Location	*Bore Length (feet)*	*Boring Duration (days)*	*Distance to Nearest Sensitive Receptor (feet)*	*Noise Level at Nearest Sensitive Receptor (dBA)*
Webster Street to Oak Street in Oakland	2,185	7.3	Over 3,200	Less than 45
Paseo Padre Parkway in Fremont	2,100	7.0	130	72
42nd Avenue and Hillsdale Boulevard in San Mateo	1,878	6.3	250	66
Mount Diablo Avenue to East Poplar Avenue in San Mateo	2,010	6.7	25	86
Willow Street to Prevost Street in San Jose	2,005	6.7	30	85
Park Avenue to The Alameda in San Jose	1,510	5.0	800	56
Stevens Creek in Mountain View	2,310	7.7	350	64
Palo Alto Station in Palo Alto	1,575	5.3	350	64
Santa Clara Station in Santa Clara	1,700	5.7	450	61

Webster Street to Oak Street in Oakland. The entry site would be located within the railroad right-of-way next to the Embarcadero just east of Webster Street in the Jack London Square area of the City of Oakland. Land uses in the vicinity of this site are commercial and industrial in nature. No noise-sensitive uses are located in the vicinity of this site.

Paseo Padre Parkway in Fremont. The entry site would be located within the railroad right-of-way south of Paseo Padre Parkway in the City of Fremont. In this area, the rail line runs in a north-south orientation. Residential land use is located east of the rail line, and open space (between two roughly parallel rail lines) is located to the west. Additional residences are located further to the west beyond the second (roughly parallel) rail line. The closest noise-sensitive uses would be residences that are located to the east at the western end of Shadowbrooke Common, approximately 130 feet from the entry site. Additional residences are located to the southeast along Vallero Drive; the closest of these residences would be approximately 200 feet from the entry

site. In contrast, the closest residences to the west are located approximately 500 to 600 feet from the entry site. The residences along Shadowbrooke Common lie behind a soundwall that parallels the rail line; such a wall would also serve to reduce construction noise levels emanating toward these closest residences from the railroad right-of-way. The southerly end of the soundwall lies near the terminus of Shadowbrooke Common and thus the soundwall would not reduce construction-related noise for residences located further south, such as those along Vallero Drive. The existing noise environment in this area is characterized by relatively low background noise levels associated with distant traffic (e.g., on Paseo Padre Parkway) punctuated intermittently by single-event noise associated with railroad operations.

42nd Avenue and Hillsdale Boulevard in San Mateo. The entry site would be located within the Caltrain right-of-way just south of the Caltrain station at Hillsdale Shopping Center in the City of San Mateo. Land uses in the vicinity include Bay Meadows Racetrack and Golf Course to the north; commercial uses to the south; residential uses to the east; and commercial uses (specifically, Hillsdale Shopping Center) to the west. The closest noise-sensitive uses would be the residences on McLellan Avenue at a distance of approximately 250 to 300 feet from the entry site. More distant residences (300 to 600 feet) would be located along East Hillsdale Boulevard and Poinsettia Avenue. Noise sources that influence the noise environment at the closest residences include traffic on heavily-traveled East Hillsdale Boulevard and Caltrain commuter rail operations. There is a grade separation between the Caltrain tracks and East Hillsdale Boulevard (i.e., the train passes over the roadway). This grade separation acts as a berm reducing the influence of noise sources located west of the Caltrain tracks, such as traffic on El Camino Real, on receptors located east of the tracks (such as the residences on McLellan Avenue).

Mount Diablo Avenue to East Poplar Avenue in San Mateo. The entry site would be located within the Caltrain right-of-way just north of the rail overcrossing of East Poplar Avenue in the City of San Mateo. (The exit site would be located near Mount Diablo Avenue.) At the entry site location, residential uses lie adjacent to both edges of the railroad right of way. To the east, at a distance of 65 feet, a multi-family residential structure has been constructed to reduce the effect of railroad noise on its residents. Specifically, the façade that faces the railroad is a long continuous wall without windows. As such, the residents of the multi-family structure would also be protected from construction noise taking place within the railroad right-of-way. To the west, at a distance of 25 feet, residences are more directly exposed to railroad noise, but they benefit to some extent from their position relative to the railroad tracks. The railroad tracks are approximately 15 feet above the grade of the residences to the west. Background noise levels in this area are relatively high and are influenced primarily by traffic on heavily-traveled East Poplar Avenue and Caltrain commuter rail operations.

Willow Street to Prevost Street in San Jose. The entry site would be located within the railroad right-of-way just west of the overcrossing by the rail line of Prevost Street in the City of San Jose. In this area, the railroad right-of-way extends through a residential area; residences are located immediately to the north of the railroad right-of-way at a distance of 30 feet, but they are buffered somewhat to the south by a strip of open space between the rail line and Fuller Avenue. The distance between the rail line and the residences to the south along Fuller Avenue is approximately 130 feet. Through this area, the railroad line is elevated approximately 15 feet above the grade of adjacent residential uses. Noise sources that influence the noise environment at these residences include traffic on nearby Guadalupe Freeway, rail operations, and traffic on local streets. Construction noise impacts potentially could be reduced if the drilling were to occur on the south

side of the right-of-way. Under this scenario, the berm would break the line-of-sight with the first level of the residences immediately along the right-of-way to the north (but not their second stories). Residences to the south along Fuller Avenue, however, would lose the benefit from the berm under this scenario.

Park Avenue to The Alameda in San Jose. The entry site would be located within the railroad right-of-way just north of the overcrossing by the rail line of The Alameda (State Route 82) in the City of San Jose. Land uses in the vicinity of this site include industrial and commercial uses to the north; industrial uses and the Caltrain train station to the south; the San Jose Arena and associated parking facilities to the east; and commercial uses to the west along Stockton Street and The Alameda. The closest noise-sensitive uses would be residential areas located to the northwest and southwest at distances of approximately 800 to 1,000 feet from the entry site. Noise sources that influence the noise environment at these residences include traffic on The Alameda, Stockton Avenue, and other city streets. In addition to distance alone, noise generated at the entry site would be reduced in the directions of the nearest noise-sensitive uses by the shielding provided by the many intervening structures (commercial and industrial in nature) that lie between the entry site and those uses.

Stevens Creek in Mountain View. The entry site would be located within the Caltrain right-of-way just north of Stevens Creek in the City of Mountain View. Land uses in the vicinity of this site include residential uses to the north; commercial uses to the south; open space (riparian corridor) and State Route 85 to the east; and commercial and residential uses to the west. The closest noise-sensitive uses would be the residences located to the east on Promethean Way. These residences would be approximately 350 to 400 feet from the entry site. Noise sources that influence the noise environment at these residences include traffic on heavily-traveled Central Expressway, light rail line operations, and Caltrain commuter rail operations. A 10- to 12-foot soundwall has been constructed along Central Expressway to reduce traffic noise impacts on these residences, and this soundwall would also reduce noise from project construction activities to the extent they would be audible above the relatively high background noise levels. Additional residences would be located west of the entry site (approximately 400 feet away) along Calderon Avenue (west of West Evelyn Avenue), but the newly-constructed office building (referred to as Techfarm Plaza) located on the east side of West Evelyn Avenue would essentially block noise emanating from the entry site in a westerly direction.

Palo Alto Station in Palo Alto. The entry site would be located within the Caltrain right-of-way in the immediate vicinity of the southeast corner of El Camino Park in the City of Palo Alto. Land uses in the vicinity of this site include commercial and residential uses to the north; the Caltrain station and the Palo Alto Community Farm to the south; commercial and residential uses to the east; and El Camino Park to the west. The closest noise-sensitive uses would be the residences located to the east across Alma Street. These residences would be approximately 350 to 400 feet from the entry site for directional boring. More distant residences (approximately 500 to 600 feet away) would be located along Hawthorne Avenue, east of Alma Street. Background noise levels along Alma Street are relatively high due to the traffic on that heavily-traveled street, which is a designated truck route, and Caltrain commuter rail operations.

Santa Clara Station in Santa Clara. The entry site would be located within the Caltrain right-of-way just south of the overcrossing of the rail line by De La Cruz Boulevard in the City of Santa Clara. Land uses in the vicinity of this site include industrial uses to the north; commercial and

residential uses to the south; industrial uses to the east; and Lafayette Park to the west. The closest noise-sensitive use would be the residence located to the south along Harrison Street (at El Camino Real). This residence would be approximately 450 to 500 feet from the entry site. Noise sources that influence the noise environment at this residence include traffic on heavily-traveled El Camino Real (State Route 82), rail operations (including Caltrain as well as freight trains), and aircraft operations associated with San Jose International Airport, which is located less than one mile to the east. Lafayette Park would be largely unaffected by noise from directional boring due to the shielding provided by the intervening embankment of De La Cruz Boulevard as it extends over the railroad tracks.

POP Construction and Operation

Construction of the POPs would involve site preparation, construction of concrete slab foundations, and installation of structures and equipment at the POPs that would be located in the cities of San Mateo, Redwood City, Palo Alto, Mountain View, Santa Clara, Fremont and Hayward. (The POPs in San Jose and Oakland would be installed in existing commercial buildings.) The new structures at POPs would be pre-fabricated concrete equipment buildings, and as such, they would not be constructed, per se, but would be attached to the concrete slab foundations.

Over the long term, the project would introduce new stationary equipment noise sources at the POP sites. The equipment associated with the two POPs that would be located in existing commercial buildings (i.e., the San Jose and Oakland POP sites) would not be expected to affect noise levels outside of those buildings and, thus, would not expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. At the other POPs, the equipment would include air conditioning units and, at some of the POPs, back-up generators. Generally, each POP site would include two equipment shelters, each of which would have two wall-mounted air conditioning units. Typically, only one of the two air conditioning units at each shelter would be operating at any one time: one would cycle on as the other cycles off. Based on noise measurement data for the same model air conditioner (Marvair Model AVP36 Compac I) used for similar applications, each air conditioning unit would generate approximately 62 dBA at 20 feet (Hotinger 2000). With two shelters, configured side-by-side, the two air conditioning units would generate approximately 65 dBA at 20 feet.

At five of the POPs (Hayward, Fremont, San Mateo, Redwood City, and Santa Clara), a diesel-powered, back-up generator would be installed in its own shelter. These generators would provide 60 kilowatts of power and would be operated only for routine testing and maintenance or during an actual interruption in power from the utility grid. Routine testing and maintenance would include weekly tests of 1-hour duration or less. Based on noise measurement data for the same model generator (Onan Model 60DGCB) used for similar applications, which includes a mounted muffler, each generator would generate approximately 84 dBA at 23 feet (Hotinger 2000).

Noise levels that would be generated by air conditioning units and generators at the POP sites have been calculated and are presented in Table 6.11-2. These noise levels take into account the noise measurement data cited above and the distances to the nearest sensitive uses. The table also presents the applicable local noise standards. As shown in Table 6.11-2, unmitigated noise levels would exceed local noise standards at the POPs in San Mateo, Fremont, and Hayward. To address these issues, Metromedia would implement the POP site-specific measures described below. With implementation of the POP-specific measures, the project would not expose persons to or generate

noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Table 6.11-2. Operational Noise Levels from Equipment at the POPs

POP Site	*Sensitive Land Use*	*Distance to Land Use (Ft)*	PROJECT NOISE SOURCES			*Local Standard (dBA)*	*Project Combined (DNL)*[a]	*Local Standard (DNL)*
			AC Units (dBa)	*Generator (dBA)*	*Combined (dBA)*			
Hayward	Residence	20	65	80.6	80.7	NA	71.3	60
Fremont	Residence	300	41	62	61.9	45	52.1	60
San Mateo	Residence	280	42	61	61.4	NA	51.7	60
	Park	50	57	70	70.1	NA	64.3	60
Redwood City	Residence	330	41	61	61.1	NA	51.1	55
Palo Alto	Residence	160	47	NA	47	61	52.9	60
Mountain View	Residence	350	40	NA	40	50	46.1	55
Santa Clara	Residence	100	51	71	71.5	55	62.4	55

[a] DNL values represent annual average daily values including continuous operation of two air conditioning (AC) units and 1 hour per week of operation of the generator at the applicable POP sites.

Underlined values exceed the applicable standard.

NA = Not Applicable.

Source: ESA 2000a.

Mitigation Measure NOI-1a: Metromedia would require construction contractors to comply with the construction hours and construction equipment standards set forth in Table 5.11-1. For construction in those jurisdictions that have no specific construction-related standards, Metromedia would require its contractors to limit noisy construction activity to the hours of 7:00 a.m. to 7:00 p.m., Monday through Saturday. Given these measures, project construction would not expose persons to or generate noise levels in excess of standards established in local general plans or noise ordinances, or applicable standards of other agencies.

Mitigation Measure NOI-1b: Metromedia would implement the following POP site-specific measures:

- At the San Mateo POP, Metromedia would either modify the air conditioning units or redesign the facility layout such that the air conditioning units would face north towards the State Route 92 overpass rather than towards the south where Trinta Park is located. Also, Metromedia may need to install a generator that provides an equivalent noise reduction of approximately 12 dBA relative to the model used as the basis for this impact analysis. With these two measures, the DNL impact from the project at Trinta Park should be reduced to 59 dBA, which would be less than the 60 DNL standard.

- At the Fremont POP, Metromedia would install a generator that provides an equivalent noise reduction of approximately 17 dBA relative to the model used as the basis for this impact analysis. Also, Metromedia would only conduct routine tests of the generator between the hours of 7:00 a.m. to 10:00 p.m. With use of this generator, the combined noise impact of project sources at the nearest residences would be 46 dBA, which would be higher

than the nighttime noise standard for such equipment of 45 dBA but would be less than the daytime standard of 50 dBA.

- At the Hayward POP, Metromedia would either modify the air conditioning units or redesign the facility layout such that the air conditioning units would face south away from the residences that are located immediately adjacent to the site. Second, Metromedia would install a generator that provides an equivalent noise reduction of approximately 17 dBA relative to the model used as the basis for this impact analysis. Lastly, Metromedia would only conduct routine tests of the generator between the hours of 7:00 a.m. to 10:00 p.m. With these three measures, the DNL impact from the project should be reduced to 59 dBA, which would be less than the 60 DNL standard.

Mitigation Measure NOI-1c: Metromedia would implement a variety of measures to reduce noise levels from directional boring where noise levels of 60 dBA or greater would be experienced at sensitive receptor locations. For example: special mufflers can be applied to the boring rig exhaust; shielding can be erected between the noise source and the receptor; or, as an extreme measure, a temporary enclosure can be erected to house the boring operation. The applicant proposes to implement all reasonable and customary noise reduction measures as part of the proposed project. The applicant will also post the name and telephone number of a person for the public to contact to resolve noise-related problems.

b. Would the proposed project expose persons to or generate excessive groundborne vibration or groundborne noise levels?

Impact NOI-2: Exposure of sensitive receptors to localized groundborne vibration and groundborne noise. (Less than Significant)

The project would involve temporary sources of groundborne vibration and groundborne noise during construction from operation of heavy equipment and long-term sources during its operational phase from operation of back-up generators. During project construction, operation of heavy equipment would generate localized groundborne vibration and groundborne noise that could be perceptible at residences or other sensitive uses in the immediate vicinity of the construction route. However, since the duration of impact at any one location would be very brief (from 1 to 3 days) and since the impact would occur during less sensitive daytime hours, the impact from construction-related groundborne vibration and groundborne noise would not be significant.

Over the long term, occasional use of back-up generators would generate groundborne vibration and groundborne noise in the immediate vicinity of generator equipment shelters at the POPs, but, except at the proposed Hayward POP, sensitive land uses would be located at sufficient distances such that the groundborne vibration and groundborne noise from the generators would not be perceptible. At the Hayward POP, residential uses would be located near to the proposed generator site, but the related groundborne vibration and groundborne noise would not be significant since the generator would be installed on top of an isolator pad, which would minimize the vibration produced by the generator, and because its use would normally be 1 hour per week or less.

Mitigation Measure: No mitigation is required.

c. Would the proposed project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact NOI-3: Permanent increases in ambient noise levels from use of equipment at POPs. (Less than Significant with Identified Mitigation)

As described under Impact NOI-1, the project would introduce new permanent sources of noise at the POPs (not including the POPs that would be located in existing commercial buildings). Without the mitigation measures identified in Impact NOI-1, project-related noise sources would result in a significant permanent increase in ambient noise levels at the Hayward POP since the increase in noise would be approximately 17 DNL above the existing noise level. At the other POP sites, the increase in noise due to the project would range from 0.1 DNL at the Mountain View POP to 2.7 DNL at Trinta Park near the San Mateo POP site. These increases would not be significant. To address the impact at the Hayward POP site, Metromedia would implement a number of measures that are described under Mitigation NOI-1b. With implementation of those measures, the permanent increase in noise at the Hayward POP site would be reduced from 17 DNL to 4.6 DNL, which would be less than the 5-DNL significance criterion.

Mitigation Measure NOI-3: Metromedia would implement the measures listed under Mitigation Measure NOI-1b.

d. Would the proposed project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact NOI-4: Temporary and intermittent noise increases during project construction. (Less than Significant)

The project would result in temporary and intermittent noise increases due to construction, including directional boring. (See Impact NOI-3 for a discussion of the noise from back-up generators at the proposed POPs, which would represent another intermittent noise source associated with the project.) Project construction-related equipment and activities are described above under Impact NOI-1. The effect of this noise would depend upon how much noise would be generated by the equipment, the distance between construction activities and the nearest noise-sensitive uses, and the existing noise levels at those sensitive uses. Project construction would involve use of equipment that would typically generate noise levels in the 80 to 90 dBA range within 50 feet. Residential uses would be located as close as 20 to 30 feet from construction equipment along some segments of the Caltrain and Union Pacific Railroad rights-of-way and along some of the public roadway rights-of-way. In some areas, intervening structures/sound walls and berms (between the construction zone and residences) may provide some noise attenuation.

While background noise levels along both types of rights-of-way are relatively high due to train passbys and motor vehicle traffic, the noise from construction equipment would be substantially above those background levels. Given compliance with local standards related to allowable construction hours (see Impact NOI-1), project construction would occur when a majority of people would be at work, but retired persons, people who work at home, and people caring for children in their homes could be annoyed by noise when construction activities occurred in their immediate vicinity. However, the duration of impact for each sensitive receptor would likely be 1 to 3 days, from the commencement of site preparation to the completion of backfilling, and given

the short duration of the impact, the temporary increase in noise due to project construction would not be significant.

Mitigation Measure: Metromedia would implement the measures listed under Mitigation Measures NOI-1a and NOI-1c.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the proposed project expose people residing or working in the project area to excessive noise level?.

The project does not involve the development of a noise-sensitive land use, and thus, would not expose people to excessive aircraft noise.

f. For a project within the vicinity of a private airstrip, would the proposed project expose people residing or working in the project area to excessive noise?

The project does not involve the development of a noise-sensitive land use, and thus, would not expose people to excessive aircraft noise.

6.11.4.2 Los Angeles Basin Network

a. Would the proposed project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact NOI-5: Noise levels in excess of local standards would be generated in some locations during project construction. (Less than Significant with Identified Mitigation)

The Los Angeles Basin portion of the project would have potential impacts from temporary noise sources associated with construction and long-term noise sources associated operations at the POPs. Such noise sources are typically regulated on the local level through enforcement of noise ordinances, implementation of general plan policies, and imposition of conditions of approval for permits. Most of the Los Angeles Basin jurisdictions in which project construction would occur have established construction hours and, in some cases, construction equipment noise standards (see Table 5.11-2). The following sections addresses the noise impacts that would result from trenching for cable installation, directional boring, and POP construction and operation.

Trenching for Cable Installation

Construction of new or replacement underground conduit for the Los Angeles Basin Network would occur within public roadway rights-of-way. As many as 12 construction crews would be working on any given workday somewhere in the Los Angeles area. The entire cable installation activity for the Los Angeles Basin Network would be completed within a 6-to-8-month period.

Construction in public roadway rights-of-way would typically proceed at a rate of approximately 85 feet per day (metropolitan street trenching) to 200 feet per day (industrial or residential street trenching). The types of construction equipment and their noise levels would be similar to that already described for the San Francisco Bay Area.

At any one location along the construction routes, the duration of noise impacts would be relatively brief, approximately 1 to 3 days, given the rate at which project construction would

proceed. Depending upon the local noise regulations, noise levels potentially could exceed regulatory thresholds if mitigation were not required by the construction permit issued by the local authority.

Directional Boring

Directional boring is proposed at 133 locations in the Los Angeles Basin Network (see Appendix J, Table J-4). At all but six of these locations, the boring distance is 300 feet or less. Assuming a boring rate of 300 feet per day, the boring activity at these locations would last 1 day or less. At the remaining six locations, the boring activity would last less than two and one-half days. This is a sufficiently brief timeframe for directional boring noise to be considered along with the standard construction equipment discussed under the cable installation section above. Separate quantitative analyses, therefore, were not performed for these drilling locations.

POP Construction and Operation

Installation of POPs for the Los Angeles Basin Network would involve minimal construction since all of them would be located in existing commercial and industrial buildings. All of the POPs would include operation of electronic equipment, and some of the POPs would include back-up generators. However, since all of the POPs for the Los Angeles Basin Network would be located in existing commercial and industrial buildings, the related noise sources such as generators would not be expected to generate noise levels in excess of standards established in local general plans or noise ordinances, or applicable standards of other agencies.

Mitigation Measure NOI-5: Metromedia would implement the measures listed under Mitigation Measures NOI-1a and NOI-1c, except that the construction hours and construction equipment standards set forth in Table 5.11-2 would be observed.

b. Would the proposed project expose persons to or generate excessive groundborne vibration or groundborne noise levels?

Impact NOI-6: Exposure of sensitive receptors to localized groundborne vibration and groundborne noise. (Less than Significant)

The project would involve temporary sources of groundborne vibration and groundborne noise during construction from operation of heavy equipment and long-term sources during its operational phase from operation of back-up generators. During project construction, operation of heavy equipment would generate localized groundborne vibration and groundborne noise that could be perceptible at residences or other sensitive uses in the immediate vicinity of the construction route. However, since the duration of impact at any one location would be very brief (from 3 to 5 days) and since the impact would occur during less sensitive daytime hours, the impact from construction-related groundborne vibration and groundborne noise would not be significant. Over the long term, occasional use of back-up generators would generate groundborne vibration and groundborne noise in the immediate vicinity of generator equipment, but since all of the POPs for the Los Angeles Basin Network would be located in existing commercial and industrial buildings, groundborne vibration and groundborne noise would not be perceptible outside of the buildings.

Mitigation Measure: No mitigation is required.

c. Would the proposed project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact NOI-7: Permanent increases in ambient noise levels from use of equipment at POPs. (Less than Significant)

The project would involve installation of permanent sources of noise at the POPs, including back-up generators and air conditioning units. The back-up generator would be used to power each POP in case of power outage. However, the back-up generators and air conditioning units would be located in existing commercial and industrial buildings and would, therefore, not result in a substantial permanent increase in ambient noise levels outside the building in which they would be located.

Mitigation Measure: No mitigation is required.

d. Would the proposed project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact NOI-8: Temporary and intermittent noise increases during project construction. (Less than Significant with Identified Mitigation)

The project would result in temporary and intermittent noise increases during construction. (See Impact NOI-7 for a discussion of the noise from back-up generators at the proposed POPs, which would represent another intermittent noise source associated with the project.) Project construction-related equipment and activities are described above under Impact NOI-5. The effect of this noise would depend upon how much noise would be generated by the equipment, the distance between construction activities and the nearest noise-sensitive uses, and the existing noise levels at those sensitive uses. Project construction would involve use of equipment that would typically generate noise levels in the 80 to 90 dBA range within 50 feet. Residential uses would be located as close as 20 to 30 feet from construction equipment along some segments of the construction routes. In some areas, intervening structures/sound walls and berms (between the construction zone and residences) may provide some noise attenuation.

While background noise levels along both types of rights-of-way are relatively high due to motor vehicle traffic, the noise from construction equipment would be substantially above those background levels. Given compliance with local standards related to allowable construction hours (see Impact NOI-5), project construction would occur when a majority of people would be at work, but retired persons, people who work at home, and people caring for children in their homes could be annoyed by noise when construction activities occurred in their immediate vicinity. However, the duration of impact for each sensitive receptor would likely be 3 to 5 days, from the commencement of trenching to the completion of backfilling and paving, and given the short duration of the impact, the temporary increase in noise due to project construction would not be significant.

Mitigation Measure NOI-8: Metromedia would implement the measures listed under Mitigation Measures NOI-1a and NOI-1c.

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 proposed project expose people residing or working in the project area to excessive noise level?

The project does not involve the development of a noise-sensitive land use, and thus, would not expose people to excessive aircraft noise.

f. For a project within the vicinity of a private airstrip, would the proposed project expose people residing or working in the project area to excessive noise?

The project does not involve the development of a noise-sensitive land use, and thus, would not expose people to excessive aircraft noise.