

4.4 NOISE

4.4.1 Introduction

This noise impact analysis has been prepared to evaluate the potential noise impacts and mitigation measures associated with the Del Mar Fairgrounds Master Plan project located in the Cities of Del Mar and San Diego, California. This analysis is intended to satisfy the requirement of a project-specific noise impact analysis by examining the short-term and long-term impacts of the proposed project and by evaluating the effectiveness of mitigation measures incorporated as part of the project designs. This section summarizes the results of noise modeling, and the noise modeling output is provided in Appendix J of this EIR.

4.4.2 Existing Environmental Setting

Fundamentals of Noise.

Noise Definition. Noise impacts can be described in three categories. The first is audible impact, which refers to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 decibels (dB) or greater, since this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant. The decrease in noise levels due to distance divergence was accounted for in the analysis of construction noise associated with the proposed project.

Characteristics of Sound. Sound is increasing in many places in the environment and can affect the quality of life. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep. To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is the number of complete vibrations, or cycles per second, of a wave, resulting in the tone's range from high to low. Loudness is the strength of a sound and describes a noisy or quiet environment; it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

Measurement of Sound. Sound intensity is measured through the A-weighted decibel (dBA) scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units, such as inches or pounds, decibels are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 dB is 10 times more intense than 1 dB, 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Thirty (30) dB represents 1,000 times more acoustic energy than 1 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source, such as highway traffic or railroad operations, the sound decreases 3 dB decibels for each doubling of distance in a hard site environment. Line source noise, when produced within a relatively flat environment with absorptive vegetation, decreases 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoyance effects of sound. The equivalent continuous sound level (L_{eq}) is the total sound energy of time-varying noise over a sample period. The predominant rating scales for human communities in the State are the L_{eq} and community noise equivalent level (CNEL) or the day-night average level (L_{dn}) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within 1 dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for construction noise impacts. L_{max} reflects peak operating conditions and addresses the annoyance aspects of intermittent noise.

Another noise scale often used together with the L_{max} in noise ordinances for enforcement purposes is noise standards in terms of percentile noise levels. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

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environments. The second category, potentially audible, refers to a change in the noise level between 1 and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise level of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Psychological and Physiological Effects of Noise. Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions and thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dBA will result in dizziness or loss of equilibrium.

Table 4.4.A lists definitions of acoustical terms; Table 4.4.B shows common sound levels and their noise sources; and Table 4.4.C shows land use compatibility for exterior community noise, as recommended by the California Department of Health, Office of Noise Control.

Vibration. Vibration energy propagates from a source through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as motion of building surfaces, rattling of items on shelves or hangings on walls, or a low-frequency rumbling noise. The rumble noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Groundborne vibration is usually measured in terms of vibration velocity, either the root-mean-square (rms) velocity or peak particle velocity (PPV). The rms is best for characterizing human response to building vibration, and PPV is used to characterize potential for damage. Ground vibrations from construction activities do not often reach the levels that can damage structures, but they can achieve the audible and experiential ranges in buildings very close to the site. Problems with ground-borne vibration from construction sources are usually localized to areas within approximately 100 ft from the vibration source.

Sensitive Land Uses in the Project Vicinity. Certain land uses are considered more sensitive to noise than others. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to noise. The closest sensitive land uses to the project construction areas include the residences along the north and south side of Via de la Valle near the Solana Gate entrance, the existing residences along Camino Del Mar west of the proposed hotel and exhibit hall, the Hilton Hotel north of the proposed Health Club/Sports Training Facility, and the residences along Jimmy Durante Boulevard south of the proposed fire station. These sensitive land uses may potentially be affected by the noise generated during construction and operation of the proposed project.

Table 4.4.A: Definitions of Acoustical Terms

Term	Definition
Decibel, dB	A unit or level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{02} , L_{08} , L_{50} , L_{90}	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period, respectively.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max} , L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustic Measurement and Noise Control, 1991.

Table 4.4.B: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near jet engine	140	Deafening	128 times as loud
Civil defense siren	130	Threshold of pain	64 times as loud
Hard rock band	120	Threshold of feeling	32 times as loud
Accelerating motorcycle at a few feet away	110	Very loud	16 times as loud
Pile driver; noisy urban street/heavy city traffic	100	Very loud	8 times as loud
Ambulance siren; food blender	95	Very loud	
Garbage disposal	90	Very loud	4 times as loud
Freight cars; living room music	85	Loud	
Pneumatic drill; vacuum cleaner	80	Loud	2 times as loud
Busy restaurant	75	Moderately loud	
Near freeway auto traffic	70	Moderately loud	Reference level
Average office	60	Quiet	½ as loud
Suburban street	55	Quiet	
Light traffic; soft radio music in apartment	50	Quiet	¼ as loud
Large transformer	45	Quiet	
Average residence without stereo playing	40	Faint	⅛ as loud
Soft whisper	30	Faint	
Rustling leaves	20	Very faint	
Human breathing	10	Very faint	Threshold of hearing
	0	Very faint	

Source: Compiled by LSA Associates, Inc., 2004.

Table 4.4.C: Land Use Compatibility for Exterior Community Noise

Land Use Category	Noise Range (L _{dn} or CNEL), dB			
	I	II	III	IV
Passively used open spaces	50	50–55	55–70	70+
Auditoriums, concert halls, amphitheaters	45–50	50–65	65–70	70+
ResidentialClow-density single family, duplex, mobile homes	50–55	55–70	70–75	75+
ResidentialCmulti-family	50–60	60–70	70–75	75+
Transient lodgingCmotels, hotels	50–60	60–70	70–80	80+
Schools, libraries, churches, hospitals, nursing homes	50–60	60–70	70–80	80+
Actively used open spacesCplaygrounds, neighborhood parks	50–67	—	67–73	73+
Golf courses, riding stables, water recreation, cemeteries	50–70	—	70–80	80+
Office buildings, business commercial and professional	50–67	67–75	75+	—
Industrial, manufacturing, utilities, agriculture	50–70	70–75	75+	—

Source: Office of Noise Control, California Department of Health 1976.

Noise Range I—Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Noise Range II—Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made, and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air-conditioning, will normally suffice.

Noise Range III—Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Noise Range IV—Clearly Unacceptable: New construction or development should generally not be undertaken.

Once the proposed project has been completed, the on-site hotel and swimming pool would be sensitive to the local long-term mobile and stationary noise sources.

Overview of the Existing Noise Environment. The primary existing noise sources in the project area are transportation facilities. Traffic on Interstate 5 (I-5), Jimmy Durante Boulevard, and Via de la Valle is the dominant source contributing to the ambient noise levels in the project vicinity. Noise from motor vehicles is generated by engine vibrations, the interaction between the tires and the road, and the exhaust system. An existing rail line is located approximately 150 feet (ft) west of the site proposed for the hotel and exhibit hall. Noise levels on and in the vicinity of the project site would change as a result of the proposed project. Potential noise impacts associated with the project include road noise due to increases in vehicular traffic and construction noise.

Existing Traffic Noise. Existing traffic noise levels in the study area are listed in Tables 4.4.D, 4.4.E, and 4.4.F. These tables provide the existing (2008) traffic noise levels for each of the Del Mar Fairground's three seasons (Interim, Fair, and Race Meet). The traffic analysis evaluated the weekday and weekend traffic volumes for each of the seasons. Due to the higher traffic volumes that occur on weekdays, the noise analysis was prepared using the weekday volumes. These noise levels represent worst-case scenarios, which assume that no shielding (such as buildings or walls) is provided between the traffic and the location where the noise contours are drawn.

Tables 4.4.D, 4.4.E, and 4.4.F show that traffic noise is generally moderate to high along existing street segments in the project vicinity, ranging from 64.4 to 72.5 dBA.

Railroad Noise Levels. The Del Mar Fairgrounds site is located approximately 100 to 150 ft east of the existing San Diego Northern Railway (SDNR) railroad track. Amtrak, the Coaster, and freight trains use this track. Noise from the railroad activities could potentially impact the proposed hotel and exhibit hall.

Table 4.4.D: Existing Interim Season Event Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Highway 101 between Lomas Santa Fe and Dahlia Drive	21,870	63	127	270	68.8
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	21,500	< 50 ¹	66	139	64.8
Camino Del Mar between 15th Street and 11th Street	22,600	< 50	68	143	65.1
Stevens Avenue between Lomas Santa Fe and Via de la Valle	13,800	< 50	78	164	65.9
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	19,500	54	116	250	69.8
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	52,000	106	224	480	72.5
Via de la Valle between San Andres Drive and El Camino Real	24,000	51	110	236	69.4
Jimmy Durante Boulevard between Via De La Valle and 15th Street	17,725	54	110	235	68.3

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted Decibel

Table 4.4.E: Existing Fair Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Highway 101 between Lomas Santa Fe and Dahlia Drive	20,200	60	121	256	68.4
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	23,700	< 50 ¹	71	148	65.3
Camino Del Mar between 15th Street and 11th Street	34,700	< 50	90	190	66.9
Stevens Avenue between Lomas Santa Fe and Via de la Valle	12,200	< 50	72	151	65.4
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	23,250	61	131	281	70.5
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	44,380	96	202	432	71.9
Via de la Valle between San Andres Drive and El Camino Real	25,800	54	115	248	69.7
Jimmy Durante Boulevard between Via De La Valle and 15th Street	15,352	< 50	100	214	67.7

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic

CNEL = Community Noise Equivalent Level

dBA = A-weighted Decibel

Table 4.4.F: Existing Race Meet Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Highway 101 between Lomas Santa Fe and Dahlia Drive	19,000	58	116	246	68.2
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	21,800	< 50 ¹	67	140	64.9
Camino Del Mar between 15th Street and 11th Street	25,000	< 50	73	153	65.5
Stevens Avenue between Lomas Santa Fe and Via de la Valle	9,700	< 50	62	130	64.4
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	19,500	54	116	250	69.8
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	45,700	98	206	441	72.0
Via de la Valle between San Andres Drive and El Camino Real	22,500	< 50	105	226	69.1
Jimmy Durante Boulevard between Via De La Valle and 15th Street	13,775	< 50	94	199	67.2

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic

CNEL = Community Noise Equivalent Level

dBA = A-weighted Decibel

4.4.3 Regulatory Setting

State of California Sound Transmission Control Standards. The California Sound Transmission Control Standards are found in California Code of Regulation, Title 24, Building Standards, Chapter 2.5, Sound Transmission Control, as adopted March 1, 1986. The purpose of the standards is to establish minimum noise insulation performance standards to protect persons within new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings.

The standards state that interior noise levels with windows closed attributable to exterior sources shall not exceed an annual noise level of 45 dB CNEL in any habitable room. In addition, residential buildings or structures within 60 dB CNEL from airport, vehicular, or industrial noise sources shall require an acoustical analysis showing that the proposed building has been designed to limit intruding noise to the allowable 45 dB CNEL interior noise level.

The State Office of Noise Control, in "Guidelines for the Preparation and Content of Noise Elements of the General Plan," established in February 1976, provided guidance for the acceptability of projects within specific L_{dn} /CNEL contours. Residential uses are normally unacceptable in areas exceeding 70 dB CNEL and conditionally acceptable within 55 to 70 dB CNEL. Schools, libraries, hospitals, and nursing homes are treated as noise-sensitive land uses requiring acoustical studies within areas exceeding 60 dB CNEL. Commercial/professional office buildings and industrial land uses are normally unacceptable in areas exceeding 75 dB CNEL and are conditionally acceptable within 67 to 75 dB CNEL for commercial/professional offices and 70 to 75 dB CNEL for industrial land uses, respectively. Golf courses are normally unacceptable in areas exceeding 70 dB CNEL. The land use compatibility guidelines are summarized in Table 4.4.C.

State of California's Modeled Community Noise Control Ordinance (Maximum Noise Levels).

The State-modeled community noise control ordinance has established recommended guidelines for maximum allowable noise levels. Typically, the noise metric used for stationary sources is defined as noise levels that cannot be exceeded for a certain percentage of time during a specified time period. For example, for residential uses, the maximum allowable exterior noise level is 55 dBA between the hours of 7:00 a.m. and 10:00 p.m. and 50 dBA between the hours of 10:00 p.m. and 7:00 a.m., plus the following limits:

- Basic noise level for a cumulative period of not more than 30 minutes in any 1 hour (L_{50}); or
- Basic noise level plus 5 dBA (55 dBA + 5 dBA = 60 dBA daytime; 50 dBA + 5 dBA = 55 dBA nighttime) for a cumulative period of not more than 15 minutes in any 1 hour (L_{25}); or
- Basic noise level plus 10 dBA (55 dBA + 10 dBA = 65 dBA daytime; 50 dBA + 10 dBA = 60 dBA nighttime) for a cumulative period of not more than 5 minutes in any 1 hour (L_8); or
- Basic noise level plus 15 dBA (55 dBA + 15 dBA = 70 dBA daytime; 50 dBA + 15 dBA = 65 dBA nighttime) for a cumulative period of not more than 1 minute in any 1 hour (L_2); or
- Basic noise level plus 20 dBA (55 dBA + 20 dBA = 75 dBA daytime; 50 dBA + 20 dBA = 70 dBA nighttime) for any period of time (L_{max}).

The basic interior noise standard for residential uses are set as 45 dBA between 10:00 p.m. and 7:00 a.m., and 55 dBA between 7:00 a.m. and 10:00 p.m., plus the following limits:

- Basic noise level for a cumulative period of not more than 5 minutes in any 1 hour (L_5); or
- Basic noise level plus 5 dBA (45 dBA + 5 dBA = 50 dBA nighttime; 55 dBA + 5 dBA = 60 dBA daytime) for a cumulative period of not more than 1 minute in any 1 hour (L_2); or
- Basic noise level plus 10 dBA (45 dBA + 10 dBA = 55 dBA nighttime; 55 dBA + 10 dBA = 65 dBA daytime) for any period of time (L_{max}).

Therefore, the maximum allowable exterior noise level for residential uses would be 75 dBA L_{max} during the day and 70 dBA L_{max} during the night. The maximum allowable interior noise level for residential uses would be 65 dBA L_{max} during the day and 55 dBA L_{max} during the night.

Construction Restrictions. The proposed project site is located within the Cities of San Diego and Del Mar and adjacent to the City of Solana Beach. The 22nd DAA has identified the construction hour limits of the affected local jurisdictions as the appropriate guide to limit the short-term noise effects of construction activity. The Cities have established the following construction hour limits within their respective Municipal Codes:

San Diego: Section 59.5.0404 of the City's Municipal Code limits all construction activities to between the hours of 7 a.m. and 7 p.m. Monday through Saturday. No construction is permitted on Sundays or legal holidays with the exception of Columbus Day or Washington's birthday.

Del Mar: Section 9.20.050 of the City's Municipal Code limits all construction activities to between the hours of 7 a.m. and 7 p.m. Monday through Friday and between 9 a.m. and 7 p.m. on Saturdays. No construction is permitted on Sundays or City holidays.

Solana Beach: Section 7.34.100 of the City's Municipal Code limits all construction activities to between the hours of 7 a.m. and 7 p.m. Monday through Friday and between 8 a.m. and 7 p.m. on Saturdays. No construction is permitted on Sunday, New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day.

4.4.4 Methodology

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the project site. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The existing average daily traffic (ADT) volumes in the area were taken from the Traffic Impact Analysis (TIA) prepared for this project (Linscott Law & Greenspan, April 2009, included in Appendix K of this EIR). Traffic noise levels were modeled using the weekday traffic conditions. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values.

The daily noise level generated by the rail activities was estimated using the noise levels and methods in the Federal Transit Administration's "Transit Noise and Vibration Impact Assessment" (May

2006). The construction noise analysis reflects the construction phasing plan included in Section 3.6 of this EIR.

4.4.5 Impact Significance Criteria

For this project, the following thresholds of significance are used. A project may be considered to have a significant effect on noise if the project would:

- Threshold 4.4.1** **Expose persons to or generate noise levels in excess of standards established in the State Sound Transmission Control Standards and Modeled Community Noise Control Ordinance.**
- Threshold 4.4.2** **Expose persons to or generate excessive groundborne vibration or groundborne noise levels.**
- Threshold 4.4.3** **Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**
- Threshold 4.4.4** **Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.**

As the proposed project is owned and operated by the 22nd DAA, a State agency, the applicable noise standards governing the project site are the criteria in the State's Sound Transmission Control Standards and Modeled Community Noise Control Ordinance.

There is no public airport and no private airstrip within 2 mi of the proposed project site. The proposed project is located approximately 8 mi northwest of the Miramar Marine Corps Air Station (MCAS) and 21 mi north of the San Diego International Airport. Based on the distance and orientation of these airports, the proposed project area is located outside of the 60 dBA CNEL contour for these facilities, and no further analysis of airport noise is warranted.

4.4.6 Project Impacts

- Threshold 4.4.1** **Expose persons to or generate noise levels in excess of standards established in the State Sound Transmission Control Standards and Modeled Community Noise Control Ordinance.**

Near-Term Project Impact Analysis.

Construction Noise. Construction noise impacts would be associated with demolition, excavation, grading, and erection of buildings on site during construction of the proposed project. Construction-related noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once project construction is completed.

Two types of construction noise impacts could occur during the construction of the proposed project. The first type involves construction crew commutes and the transport of construction

equipment and materials to and from the site for the proposed project, which would incrementally increase noise levels on roads leading to the site. As shown in Table 4.4.G, there would be a relatively high single-event noise exposure potential at a maximum level of 87 dBA L_{max} with construction trucks passing at 50 ft. However, the projected construction traffic represents a minor increase when compared to the existing traffic volumes on Via de la Valle, Jimmy Durante Boulevard, and I-5, and therefore associated construction traffic noise-level changes to existing traffic noise levels would be below the level considered to be perceptible.

Table 4.4.G: Typical Maximum Construction Equipment Noise Levels (L_{max})

Type of Equipment	Range of Maximum Sound Level Measured at 50 ft (dBA)	Suggested Maximum Sound Level for Analysis at 50 ft (dBA)
Pile drivers (12,000 to 18,000 ft-lb/blow)	81–96	93
Rock drills	83–99	96
Jackhammers	75–85	82
Pneumatic tools	78–88	85
Pumps	74–84	80
Scrapers	83–91	87
Haul trucks	83–94	88
Cranes	79–86	82
Portable generators	71–87	80
Rollers	75–82	80
Dozers	77–90	85
Tractors	77–82	80
Front-end loaders	77–90	86
Hydraulic backhoes	81–90	86
Hydraulic excavators	81–90	86
Graders	79–89	86
Air compressors	76–89	86
Trucks	81–87	86

Source: LSA Associates, Inc., 2009).

dBA = A-weighted Decibel

ft = feet/foot

lb = pound

L_{max} =Maximum Instantaneous Noise Level

The second type of construction noise impact is related to noise generated during demolition, excavation, grading, and construction on the project site. Construction is performed in discrete steps, or phases, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 4.4.G lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 ft between the equipment and a noise receptor. Construction of the near-term projects would occur at more than 50 ft from the closest receptor. The Solana Gate project is approximately 100 ft from the closest residence, the proposed fire

station site is approximately 725 ft from the closest residence, and the proposed Health Club/Sports Training Facility is approximately 240 ft from the existing Hilton Hotel. The hotel/exhibit hall project is the largest proposed construction undertaking and it is approximately 350 ft from the nearest residence. Typical maximum noise levels range up to 91 dBA L_{max} at 50 ft during the noisiest construction phases. The site preparation phase, which includes excavation and grading of the site, typically generates the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three or four minutes at lower power settings.

Construction of the proposed project is expected to require the use of earthmovers, bulldozers, water trucks, and pickup trucks. This equipment would be used on site. Based on Table 4.4.G, the maximum noise level generated by each scraper on site is assumed to be 87 dBA L_{max} at 50 ft from the earthmover. Each bulldozer would also generate 85 dBA L_{max} at 50 ft. The maximum noise level generated by water trucks and pickup trucks is approximately 86 dBA L_{max} at 50 ft from these vehicles. Each doubling of a sound source with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, the worst-case combined noise level during this phase of construction would be 91 dBA L_{max} at a distance of 50 ft from the active construction area. The closest residence is at a distance of approximately 100 ft.

Pile driving, expected to be required for the construction of the hotel/exhibit hall complex, will be the single noisiest activity on site, generating up to 93 dBA L_{max} at a distance of 50 ft. Pile driving activities would generate higher noise levels than the standard construction equipment. However, the duration of the pile driving will be much shorter than the demolition, grading, and construction phases.

The greatest construction noise impacts at 50 ft from the source are summarized below:

Phase One:

City of Solana Beach: 85 dBA L_{max} from construction of Solana Gate realignment, Maintenance Building B Complex, and Maintenance Building D.

City of Del Mar: 67 dBA L_{max} from the construction of the relocated fire station.

City of San Diego: 77 dBA L_{max} from the construction of the Health Club/Sports Training Facility. 79 dBA L_{max} from the RV lot improvements.

Phase Two:

City of Solana Beach: 59 dBA L_{max} from the pile driving activities for the hotel/exhibit hall. 57 dBA L_{max} after the pile driving has been completed.

City of Del Mar: 76 dBA L_{max} from the pile driving activities for the hotel/exhibit hall.
74 dBA L_{max} after the pile driving has been completed.

City of San Diego: 59 dBA L_{max} from the pile driving activities for the hotel/exhibit hall.
57 dBA L_{max} after the pile driving has been completed.

These impacts would be potentially significant and adverse. The 22nd DAA has identified the construction hour limits of the affected local jurisdictions as the appropriate guide to limit the short-term noise effects of construction activity. Mitigation Measure 4.4.1 consolidates the construction hour limits of the Cities of San Diego, Del Mar, and Solana Beach into a single, most-restrictive limit on construction activity. Construction would be limited to the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 7:00 p.m. on Saturdays. No construction is permitted on Sundays or federal or City of Del Mar holidays. As described in Section 3.6 of this EIR, the two phases of construction of the near-term projects total 38 months of construction activity. While this construction represents over three years of activity, the nature and location of construction of all the near-term projects would vary throughout that period. Exposure of specific off-site areas to construction noise would be different depending on the nature (demolition, grading, construction) and proximity of any given construction work effort within the approximately 300 ac project site. Implementation of Mitigation Measure 4.4.1 would reduce construction noise impacts to adjacent sensitive land uses to a less than significant level.

Traffic Noise Impacts.

Off-Site Traffic Noise Impact. The TIA (April 2009) identifies the change in traffic levels compared to existing conditions in the Interim, Fair, and Race Meet seasons. Tables 4.4.H, 4.4.I, and 4.4.J list the project impacts compared to the existing conditions for the Interim, Fair, and Race Meet seasons. Tables 4.4.K, 4.4.L, and 4.4.M list the near-term baseline traffic conditions for the Interim, Fair, and Race Meet seasons. Tables 4.4.N, 4.4.O, and 4.4.P list the project impacts compared to the near-term baseline traffic conditions for the Interim, Fair, and Race Meet seasons. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between the traffic and the location where the noise contours are drawn. For all of the roadway segments save one, the change in noise levels is 0.4 dBA or less. Greater increases in noise levels occur on Jimmy Durante Boulevard between Via de la Valle and 15th Street. Tables 4.4.J and 4.4.P show that the proposed project would result in traffic noise increases of up to 2.0 dBA above the baseline conditions along Jimmy Durante Boulevard between Via de la Valle and 15th Street. The largest increase in noise levels for this roadway segment occurs during the Race Meet Season. As described in Section 4.4.2, a noise level increase of 3 dBA or more is perceptible to the human ear and would be considered potentially significant. Therefore, the proposed project would not result in potentially significant long-term off-site traffic noise impacts, and no mitigation is required.

Table 4.4.H: Project Impacts Compared to Existing Interim-Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Highway 101 between Lomas Santa Fe and Dahlia Drive	22,580	64	130	276	68.9	0.1
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	22,590	< 50 ¹	68	143	65.0	0.2
Camino Del Mar between 15th Street and 11th Street	23,510	< 50	70	147	65.2	0.1
Stevens Avenue between Lomas Santa Fe and Via de la Valle	14,780	< 50	81	172	66.2	0.3
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	20,370	56	120	257	70.0	0.2
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	56,130	111	236	505	72.9	0.4
Via de la Valle between San Andres Drive and El Camino Real	24,430	52	111	239	69.5	0.1
Jimmy Durante Boulevard between Via De La Valle and 15th Street	20,560	59	121	259	68.9	0.6

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted Decibel

Table 4.4.I: Project Impacts Compared to Existing Fair-Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Highway 101 between Lomas Santa Fe and Dahlia Drive	20,820	61	123	262	68.6	0.2
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	24,620	< 50 ¹	72	152	65.4	0.1
Camino Del Mar between 15th Street and 11th Street	35,500	< 50	91	193	67.0	0.1
Stevens Avenue between Lomas Santa Fe and Via de la Valle	13,010	< 50	75	158	65.7	0.3
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	23,990	62	133	287	70.7	0.2
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	47,710	101	212	453	72.2	0.3
Via de la Valle between San Andres Drive and El Camino Real	26,130	54	116	250	69.8	0.1
Jimmy Durante Boulevard between Via De La Valle and 15th Street	17,535	53	109	233	68.2	0.5

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted Decibel

Table 4.4.J: Project Impacts Compared to Existing Race Meet Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Highway 101 between Lomas Santa Fe and Dahlia Drive	19,620	59	119	252	68.3	0.1
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	22,720	< 50 ¹	69	144	65.1	0.2
Camino Del Mar between 15th Street and 11th Street	25,800	< 50	74	156	65.6	0.1
Stevens Avenue between Lomas Santa Fe and Via de la Valle	10,510	< 50	66	137	64.8	0.4
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	20,240	56	119	256	69.9	0.1
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	49,030	102	215	462	72.3	0.3
Via de la Valle between San Andres Drive and El Camino Real	22,830	< 50	106	228	69.2	0.1
Jimmy Durante Boulevard between Via De La Valle and 15th Street	21,970	61	127	271	69.2	2.0

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted Decibel

Table 4.4.K: Near-Term Baseline Interim-Season Event Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Highway 101 between Lomas Santa Fe and Dahlia Drive	24,430	67	137	291	69.3
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	23,090	< 50 ¹	69	145	65.1
Camino Del Mar between 15th Street and 11th Street	24,020	< 50	71	149	65.3
Stevens Avenue between Lomas Santa Fe and Via de la Valle	16,810	< 50	88	187	66.8
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	21,690	58	125	268	70.2
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	56,080	111	235	505	72.9
Via de la Valle between San Andres Drive and El Camino Real	26,460	55	117	252	69.8
Jimmy Durante Boulevard between Via De La Valle and 15th Street	15,287	< 50	100	213	67.7

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted Decibel

Table 4.4.L: Near-Term Baseline Fair-Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Highway 101 between Lomas Santa Fe and Dahlia Drive	22,760	64	131	277	69.0
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	25,290	< 50 ¹	73	154	65.5
Camino Del Mar between 15th Street and 11th Street	36,120	< 50	92	195	67.1
Stevens Avenue between Lomas Santa Fe and Via de la Valle	15,210	< 50	83	175	66.4
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	25,440	65	139	298	70.9
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	48,460	101	214	458	72.2
Via de la Valle between San Andres Drive and El Camino Real	28,260	57	122	263	70.1
Jimmy Durante Boulevard between Via De La Valle and 15th Street	16,220	< 50	105	222	67.5

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted Decibel

Table 4.4.M: Near-Term Baseline Race Meet Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Highway 101 between Lomas Santa Fe and Dahlia Drive	21,560	62	126	268	68.7
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	23,390	< 50 ¹	70	147	65.2
Camino Del Mar between 15th Street and 11th Street	26,420	< 50	75	159	65.7
Stevens Avenue between Lomas Santa Fe and Via de la Valle	12,710	< 50	74	155	65.6
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	21,690	58	125	268	70.2
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	49,780	103	218	466	72.4
Via de la Valle between San Andres Drive and El Camino Real	24,960	53	113	242	69.6
Jimmy Durante Boulevard between Via De La Valle and 15th Street	14,643	< 50	97	207	67.5

Source: LSA Associates, Inc., March 2008

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted Decibel

Table 4.4.N: Project Impacts Compared to Near-Term Baseline Interim-Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Highway 101 between Lomas Santa Fe and Dahlia Drive	25,140	68	139	296	69.4	0.1
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	24,180	< 50 ¹	71	150	65.3	0.2
Camino Del Mar between 15th Street and 11th Street	24,930	< 50	73	153	65.5	0.2
Stevens Avenue between Lomas Santa Fe and Via de la Valle	17,790	< 50	91	194	67.0	0.2
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	22,560	60	128	275	70.4	0.2
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	60,210	116	247	529	73.2	0.3
Via de la Valle between San Andres Drive and El Camino Real	26,890	55	118	255	69.9	0.1
Jimmy Durante Boulevard between Via De La Valle and 15th Street	21,497	60	125	267	69.1	1.4

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic

CNEL = Community Noise Equivalent Level

dBA = A-weighted Decibel

Table 4.4.O: Project Impacts Compared to Near-Term Baseline Fair-Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Highway 101 between Lomas Santa Fe and Dahlia Drive	23,380	65	133	282	69.1	0.1
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	26,210	< 50 ¹	75	158	65.7	0.2
Camino Del Mar between 15th Street and 11th Street	36,920	< 50	93	198	67.2	0.1
Stevens Avenue between Lomas Santa Fe and Via de la Valle	16,020	< 50	86	181	66.6	0.2
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	26,180	66	141	304	71.1	0.2
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	51,790	106	223	479	72.5	0.3
Via de la Valle between San Andres Drive and El Camino Real	28,590	57	123	265	70.2	0.1
Jimmy Durante Boulevard between Via De La Valle and 15th Street	18,460	57	114	242	68.0	0.5

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted Decibel

Table 4.4.P: Project Impacts Compared to Near-Term Baseline Race Meet Season Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Highway 101 between Lomas Santa Fe and Dahlia Drive	22,180	63	128	273	68.8	0.1
Camino Del Mar between Jimmy Durante Boulevard and 15th Street	24,310	< 50 ¹	72	150	65.4	0.2
Camino Del Mar between 15th Street and 11th Street	27,220	< 50	77	162	65.9	0.2
Stevens Avenue between Lomas Santa Fe and Via de la Valle	13,520	< 50	77	162	65.8	0.2
Via de la Valle between Camino Del Mar and Jimmy Durante Boulevard	22,430	59	127	274	70.4	0.2
Via de la Valle between Jimmy Durante Boulevard and I-5 Southbound Ramps	53,110	108	227	487	72.6	0.2
Via de la Valle between San Andres Drive and El Camino Real	25,290	53	114	245	69.6	0.0
Jimmy Durante Boulevard between Via De La Valle and 15th Street	23,233	63	131	281	69.5	2.0

Source: LSA Associates, Inc., April 2009.

¹ Traffic noise within 50 ft of the roadway centerline requires site-specific analysis.

ADT = Average Daily Traffic CNEL = Community Noise Equivalent Level dBA = A-weighted Decibel

On-Site Traffic Noise Impact. Implementation of the proposed project would construct a new sensitive land use, the proposed on-site hotel, adjacent to Jimmy Durante Boulevard. Based on the preliminary site plans, the proposed hotel would be located within 85 ft of the centerline of Jimmy Durante Boulevard. In addition, the site plans include an outdoor pool, also located within 85 ft of the centerline of Jimmy Durante Boulevard.

The peak noise levels along Jimmy Durante Boulevard occur during the Race Meet season. As shown in Table 4.4.P, the 65 dBA CNEL noise contour extends 131 ft from the centerline of Jimmy Durante Boulevard. The proposed hotel would be exposed to a “worst-case” traffic noise level of 68 dBA CNEL.

Based on the United States Environmental Protection Agency’s (EPA) Protective Noise Levels (EPA 550/9-79-100, November 1978), with a combination of exterior walls, doors, and windows, standard construction for California (warm climate) residential buildings would provide more than 24 dBA in exterior-to-interior noise reduction with windows closed and 12 dBA or more with windows open (the national average is 25 dBA with windows closed and 15 dBA with windows open). The proposed hotel structure would provide greater noise reductions than those achieved through standard residential construction because hotels typically do not have operable/openable windows, and window glazing is generally at a thickness greater than standard residential windows. Therefore, these values are conservative as applied to this project.

With windows and doors open, the interior noise level within the hotel would exceed the State’s interior noise standard of 45 dBA CNEL (i.e., 68 dBA - 12 dBA = 56 dBA). With windows closed, interior noise levels in these units would not exceed 45 dBA CNEL (i.e., 68 dBA - 24 dBA = 44 dBA). Therefore, building facade upgrades to further reduce noise would not be required. However, mechanical ventilation such as air-conditioning would be required to ensure that windows can remain closed for a prolonged period of time.

Hotel rooms located within 445 ft of the roadway centerline and with no intervening structures between them and traffic on Jimmy Durante Boulevard would be directly exposed to traffic noise of 57 dBA CNEL or higher. These impacts would be potentially significant and adverse. These units require a mechanical ventilation system such as an air-conditioning system to achieve the interior noise standard of 45 dBA CNEL and to reduce on-site impacts to sensitive receptors at the hotel. With implementation of Mitigation Measure 4.4.2, which requires mechanical ventilation in hotel rooms located within 445 ft of the centerline of Jimmy Durante Boulevard, on-site noise impacts at the hotel would be reduced to below a level of significance.

The outdoor pool area would be exposed to traffic noise levels exceeding the outdoor noise standard of 65 dBA CNEL. These impacts would be potentially significant and adverse. A barrier would be necessary to reduce on-site impacts to sensitive receptors at the outdoor pool area. Mitigation Measure 4.4.3 requires a combination concrete/Plexiglas or glass wall with a minimum effective height of 6 ft to be installed around the perimeter of the pool area to reduce impacts to sensitive noise receptors at the outdoor pool area. This barrier would provide a minimum noise reduction of 5 dBA, reducing the outdoor noise level to 63 dBA CNEL. Therefore, with implementation of Mitigation Measure 4.4.3, which requires a sound

barrier around the outdoor pool area, on-site noise impacts at the outdoor pool area would be reduced to below a level of significance.

Train Noise Impacts. The ATSF rail line borders the western boundary of the project site at a distance of approximately 230 ft from the proposed hotel. Up to 25 commuter trains per day use the ATSF rail line, running from approximately 6:00 a.m. to 12:30 a.m. The Noise Element of the Solana Beach General Plan includes noise levels at various distances from this railroad line. These noise levels are listed in Table 4.4.Q. However, due to the age of the document (1988), the noise levels were updated to reflect the current rail activity. Please see Table 4.4.R.

Table 4.4.Q: Solana Beach General Plan Railroad Noise Levels

Distance (ft)	100	200	500	1000
1988 CNEL (dBA)	70	66	58	53

Source: City of Solana Beach General Plan, 1988.
ft = feet; CNEL = community noise equivalent; dBA = A-weighted decibel

Table 4.4.R: Updated Railroad Noise Levels

Distance (ft)	100	200	500	1000
2008 CNEL (dBA)	72	68	60	55

Source: LSA Associates, Inc., 2009.
ft = feet; CNEL = community noise equivalent; dBA = A-weighted decibel

The existing rail activities are estimated to generate a daily noise level of 72 dBA CNEL at a distance of 100 ft. At 230 ft, this noise level would be reduced to 67 dBA CNEL. With windows and doors open, the interior noise level within the hotel would exceed the State's interior noise standard of 45 dBA CNEL (i.e., 67 dBA - 12 dBA = 55 dBA). With windows closed, interior noise levels in these units would not exceed 45 dBA CNEL (i.e., 67 dBA - 24 dBA = 43 dBA). Therefore, building facade upgrades would not be required. However, mechanical ventilation such as air-conditioning would be required to ensure that windows can remain closed for a prolonged period of time.

Hotel rooms located within 792 ft of the railroad centerline and with no intervening structures between them and the rail line would be directly exposed to rail noise of 57 dBA CNEL or higher. These impacts would be potentially significant and adverse. These units require a mechanical ventilation system such as an air-conditioning system to achieve the interior noise standard of 45 dBA CNEL and to reduce on-site impacts to sensitive receptors at the hotel. With implementation of Mitigation Measure 4.4.4, which requires mechanical ventilation in hotel rooms located within 792 ft of the centerline of the ATSF rail line, on-site noise impacts at the hotel would be reduced to below a level of significance.

The outdoor pool area would be located approximately 1,300 ft from the centerline of the ATSF rail line. At this distance the pool would be exposed to rail noise levels of up to 53 dBA CNEL, which is below the maximum exterior noise level of 65 dB established by the State of California Sound Transmission Control Standards. Therefore, no exterior mitigation measures would be required. However, Mitigation Measure 4.4.3 requires a 6 ft barrier to reduce the effect of vehicular traffic noise to the pool, which will also reduce the effect of rail noise.

The intermittent noise generated by the train horns and crossing bells represents an existing source of nuisance noise for nearby residents. Nuisance noise from train horns and crossing bells may reach a noise level of 95 dBA at a distance of 50 ft. This indicates that, in cases where there are no noise obstructions, noise could be audibly intrusive in residential interiors as much as 1,000 ft away¹. The proposed hotel uses are located approximately 1,200 ft from the railroad tracks. The estimated noise level at this distance is 67 dBA L_{max} . Therefore, the intermittent noise from train horns and crossing bells is less than 75 dBA L_{max} daytime and 70 dBA L_{max} nighttime noise thresholds for any period of time. The impact of the intermittent noise from train horns and crossing bells is less than significant.

Railroad noise from trains traveling on the railroad tracks is an existing condition that is neither increased or reduced by the proposed near-term projects. The noise from trains traveling on the railroad tracks is intermittent and brief in duration as each train approaches and passes a receptor. Guests of the proposed hotel will be subject to noise from the trains; however, the average noise levels will be below the maximum interior noise standards as described above. Also, the railroad noise is intermittent nuisance noise. Therefore, the proposed hotel will not be subject to significant noise impacts from the existing train activity.

Stationary Noise Impact. Potential operational noise impacts would be associated with the operation of new stationary sources within the proposed project site. These activities are potential point sources of noise that could affect on-site and off-site noise-sensitive receptors such as residences. On-site noise-producing activities include traffic circulation, doors slamming in parking lots; vehicle engine start-ups; truck loading and unloading activities; heating, ventilation, and air-conditioning (HVAC) equipment; events occurring on the rooftops of the Health Club/Sports Training Facility or hotel; and people conversing in parking lots.

As noise spreads from a source, it loses energy, so the farther the noise receiver is from the noise source, the lower the perceived noise level is. Geometric spreading causes the sound level to attenuate, or be reduced, resulting in a 6 dBA reduction in the noise level for each doubling of distance from a single point source of noise, such as a car door slam, to the noise-sensitive receptor of concern. Although individual activities may generate relatively high and intermittent noise, when added to the typically lower ambient noise and averaged over a longer period of time, the noise level would be much lower and would be considered a less than significant impact, and no mitigation is required.

¹ Centre City Development Corporation, Downtown Community Plan Final EIR, March 2006, Section 5.7.

Truck Delivery Loading/Unloading Noise. During loading and unloading activities, noise would be generated by the trucks' diesel engines, exhaust systems, and brakes during low-speed gear shifting, braking activities, backing up toward the docks, dropping down the dock ramps, and maneuvering away from the docks. These peak-event noise sources are measured as a single event from a point source.

Based on similar projects and LSA's experience with the analysis of periodic truck loading and unloading activities, peak noise levels from the proposed on-site truck loading and unloading activities are expected to range up to 75 dBA L_{max} when measured at 50 ft from the point source. Therefore, sensitive land uses located within 89 ft of the loading and unloading activities would be potentially exposed to noise levels exceeding the State's 70 dBA L_{max} nighttime noise threshold. The closest existing off-site sensitive receptors to a proposed loading dock are the existing residences located 350 ft southwest of the proposed hotel. At this distance, the loading dock noise would be reduced to 58 dBA L_{max} . This level is below the State's daytime and nighttime stationary noise thresholds. Therefore, no mitigation is required.

The closest on-site sensitive receptors would be the users of the outdoor pool area of the proposed hotel. Mitigation Measure 4.4.3 requires a 6 ft barrier to reduce the effect of vehicular traffic noise to the pool, which will also reduce the effect of loading activity noise. The loading activity is located approximately 250 ft from the proposed hotel pool.

The noise level at 250 ft would be 61 dBA L_{max} , which is lower than the State of California's 70 dBA L_{max} nighttime noise threshold. Therefore, the noise effects of loading activity to the users of the outdoor pool area is below a level of significance.

Parking Lot Noise. Existing and proposed parking facilities are located throughout the Fairgrounds. Noise associated with parking lot activities includes on-site vehicular traffic, car door slamming, car alarms, vehicle engine start-up, tires squealing, and people conversing.

Representative parking activities, such as employees or customers conversing and slamming doors, would generate approximately 60–70 dBA L_{max} at 50 ft. This level of noise is much lower than that of the truck delivery and loading/unloading activities. Parking lot noise will not result in a significant noise impact with respect to residences adjacent to the project site. Therefore, impacts related to parking lot noise are considered less than significant, and no mitigation is required.

Heating/Ventilation/Air Conditioning Equipment Noise. HVAC equipment is typically located on the building rooftop. HVAC equipment generates a sound pressure level (SPL) of up to 95 dBA at 1 meter (3.28 ft). The roof edge creates a natural noise barrier that reduces noise levels from these rooftop HVAC units by 8 dBA or more. The closest off-site sensitive land uses to the HVAC equipment would be located at a distance of 250–350 ft and would experience a noise level of 49 dBA L_{max} . This noise level would not exceed the State's nighttime maximum noise level of 70 dBA L_{max} . Typically, HVAC systems turn off and on

intermittently as needed. If the HVAC equipment would operate continuously through the day, evening, and night, the average noise level from the HVAC equipment would be 56 dBA CNEL, which is below the maximum exterior noise level of 65 dB established by the State of California Sound Transmission Control Standards. Therefore, noise generated from HVAC equipment uses would be less than significant, and no mitigation is required.

Rooftop Event Noise. Events occurring on the hotel or Health Club/Sports Training Facility rooftops could generate noise levels of up to 80 dBA L_{max} at a distance of 50 ft. This noise level is based on measurements of on-site events that occur at the existing Del Mar arena prior to construction of the arena roof. Actual activities and events held on the hotel and Health Club/Sports Training Facility rooftops are expected to be smaller in scale and less intense than events held at the arena. Therefore, these values are conservative as applied in this case. The closest off-site sensitive land uses to the rooftop activities would be located at a distance of 250–350 ft and would experience a noise level of 66 dBA L_{max} . This noise level would not exceed the State's nighttime maximum noise level of 70 dBA L_{max} . The hotel occupants, located within 50 ft of the rooftop activities, would be exposed to noise levels of up to 80 dBA L_{max} . With windows closed, the hotel structure would provide 25 dBA or more of exterior to interior noise attenuation. Therefore, the interior noise from rooftop events would be reduced to 55 dBA L_{max} or lower. This noise level would not exceed the State's nighttime interior noise threshold of 55 dBA L_{max} . Therefore, noise generated from the rooftop events would be less than significant, and no mitigation is required.

Fire Station Noise. It is proposed that the fire station be moved from the existing on-site location to an off-site location on the other side of the San Dieguito River. The proposed new location of the fire station is closer to existing residences than the existing station. The traffic generated by the fire station is limited to employee trips and occasional deliveries in addition to emergency response trips. The number of trips is not expected to change compared to existing conditions as a result of the near-term and long-term projects. The proposed hotel may result in a small increase in demand for emergency services; however, the fire station will remain in proximity to the project site across the San Dieguito River from the hotel complex, and these responses would not result in a notable increase in traffic on local streets. The siren noise generated by the fire trucks could be displaced from the existing location to the new location. The Fire Department has stated its willingness to use fire truck lights only and refrain from siren use until farther away from the residential neighborhoods.

Section 9.20.060 of the Del Mar Municipal Code, Section 7.34.050 of the Solana Beach Municipal Code, and Section 59.5.0402 of the San Diego Municipal Code state that noise generated by emergency vehicles are exempt from the local noise ordinances and the State Sound Transmission Control Standards and Modeled Community Noise Control Ordinance do not establish standards for emergency vehicle sirens. Since there is the potential for an increase in exposure of existing (residences) and proposed (hotel guests/pool users) sensitive receptors to siren noise, Mitigation Measure 4.4.5 is included to ensure that current practices of relying on emergency lights to the greatest extent feasible before utilizing emergency sirens continues to be implemented. Noise generated from the proposed fire station would be

similar to existing fire station conditions and is considered less than significant, and no mitigation is required.

Airport Noise Impact. The proposed project is located approximately 8 miles (mi) northwest of MCAS Miramar and 21 mi north of the San Diego International Airport. Based on the distance and orientation of these airports, the proposed project area is located outside of the 60 dBA CNEL contour. Therefore, no mitigation measures are required.

San Dieguito River Noise Impacts. Activities occurring on site, such as the proposed parking lots, the loading docks, and the rooftop events, would be located within 100 ft of the San Dieguito River. At this distance, the noise levels from these activities would range from 64 dBA L_{max} from the parking lots to 74 dBA L_{max} from the rooftop activities. See Section 4.6, Biological Resources, for more information regarding potential indirect effects of noise on biological resources.

Long-Term Project Impact Analysis.

Construction Noise. Construction-related noise impacts of the long-term projects are similar to those discussed above under near-term projects, in that impacts would be associated with demolition, excavation, grading, and erection of buildings on site during construction of the proposed long-term projects. The two types of construction noise impacts are transportation-related (construction crew commutes and the transport of construction equipment and materials to the site) and noise generated during demolition, excavation, grading, and construction of the project improvements. Construction-related noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once project construction is completed.

As described above for the near-term projects, construction-related trips are expected to be a small percentage of the total existing traffic at the time the long-term projects are undertaken. Therefore, the change in traffic noise levels as a result of the addition of construction vehicles to overall traffic levels on the adjacent streets would be relatively small and is anticipated to be less than significant.

The long-term projects include the seasonal train platform, the multilevel parking structure, improvements to the Backstretch Area, a new Horseman's Village, construction of a new truck tunnel under the Racetrack, and a vehicle wash rack. These projects are generally interior to the Fairgrounds site or near I-5 and not adjacent to sensitive off-site land uses. Construction activity noise would result from demolition, grading, and construction, including demolition in the Backstretch area, excavation for the tunnel, and construction of the multilevel parking structure and seasonal train platform. The long-term projects would be subject to Mitigation Measure 4.4.1, limiting hours of construction in accordance with the noise ordinances of the affected jurisdictions. Construction would be limited to the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between 9:00 a.m. and 7:00 p.m. on Saturdays. No construction will be permitted on Sundays or federal or City of Del Mar holidays. Furthermore, exposure of off-site

areas to construction noise would be different depending on the nature and location of the specific construction activity undertaken at any one time within the 300 ac project site. Therefore, it is anticipated that the noise effect from construction of the long-term projects would be less than significant.

Traffic Noise. Tables 4.4.S and 4.4.T list the 2030 long-term baseline Interim-Season traffic noise levels with and without the proposed project. As shown in Table 4.4.T, the proposed project would result in traffic noise increases of up to 0.8 dBA above the long-term baseline conditions along Jimmy Durante Boulevard between Via de la Valle and 15th Street. As described in Section 4.4.2, a noise level increase of 3 dBA or more is perceptible to the human ear and would be considered potentially significant. Therefore, the proposed project would not result in potentially significant long-term off-site traffic noise impacts, and no mitigation is required.

The long-term project traffic noise levels along Jimmy Durante Boulevard listed in Tables 4.4.S and 4.4.T are lower than the increase in traffic noise levels for the near-term projects. Therefore, the mitigation measures proposed for the proposed near-term project impacts would also mitigate the long-term traffic noise impacts.

Operational Noise. Long-term projects include the construction of a truck tunnel under the Racetrack, a seasonal train platform, a multilevel parking structure, improvements to the Backstretch Area, vehicle wash rack, and a new Horsemen's Village. The truck tunnel and vehicle wash rack would be located in the interior of the Fairgrounds site, and its use would be limited to Fairgrounds vehicles only (including Fairgrounds vendors and contractors). Noise from truck activity at the tunnel and vehicle wash rack would be limited based on use and would not affect off-site locations because of their locations in the interior of the Fairgrounds.

The seasonal train platform is anticipated to be located adjacent to the railroad tracks, south of the Racetrack. The intent of the train platform is to allow for increased transit service to the Fairgrounds during high-use events in order to reduce the number of motor vehicles on the freeway and City streets, with commensurate reductions in vehicular noise and air quality impacts. Noise associated with the new seasonal train service to the Fairgrounds could affect land uses along the railroad tracks and near the platform itself, including the proposed hotel. These effects are expected to be less than significant because it is anticipated that the actual increase in train service will be small compared to the existing levels of train service on the tracks and existing noise levels from train activity. Also, operational train noise is intermittent and exposure by individual receptors is very brief in duration. However, the noise impacts associated with the platform and increased use of the tracks will be further analyzed at the time a specific project is proposed by SANDAG or other transit agency.

The outdoor pool area would be located approximately 1,300 feet from the seasonal train platform. At this distance, noise from the platform activities would be reduced to below the background noise levels as a result of attenuation by distance and the intervening building structure. Also, Mitigation Measure 4.4.3 requires a wall around the pool area. Therefore, no additional mitigation measures would be required.

The multilevel parking structure is proposed in a portion of the east lot near I-5. Operational noise as a result of the parking structure would include vehicular noise and activity noise such as car door slamming. The proposed location of the parking structure is not adjacent to any noise-sensitive uses, such as residences or schools. Therefore, the noise impacts of the facility are expected to be less than significant.

Threshold 4.4.2 Expose persons to or generate excessive groundborne vibration or groundborne noise levels.

Near-Term Project Impact Analysis. The primary source of vibration during construction would be generated by the proposed pile driving. It is anticipated that driven precast concrete piles or augur cast piles would be utilized for foundation support of the hotel and exhibit hall buildings. Should pile driving be required for the Health Club/Sports Training Facility, the closest pile-driving activities to a sensitive receptor is estimated to occur at a distance of 240 ft from the Hilton Hotel. Using Equation 9 and Table 17 from the Caltrans *Transportation and Construction-Induced Vibration Guidance Manual* (Jones & Stokes, June 2004) it was estimated that the vibration level at this structure would be 0.03 inch per second (in/sec). Although perceptible, this level would not exceed the 0.1 in/sec threshold below which there is virtually no risk of resulting in architectural damage to normal buildings. Pile driving would be limited to the hours of construction specified in Mitigation Measure 4.4.1, and would be short in duration. Therefore, the proposed project would not result in significant vibration impacts.

Long-Term Project Impact Analysis. Long-term project noise impacts related to groundborne noise and vibration are similar to those discussed above under near-term projects. Should pile driving be required for the parking structure, it is estimated that the vibration level at this structure would be below the 0.1 in/sec threshold, below which there is virtually no risk or architectural damage to normal buildings. Pile driving would be limited to the hours of construction specified in Mitigation Measure 4.4.1, and would be short in duration. Therefore, the proposed multilevel parking structure would not result in significant vibration impacts.

Threshold 4.4.3 Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Near-Term Project Impact Analysis. Construction-related noise is the primary potential source of substantial temporary or periodic increases in ambient noise levels in the project vicinity. As discussed in detail under Threshold 4.4.1, during construction activities, short-term construction-related worker commutes and equipment transport noise impacts would not be substantial. As discussed above, construction noise impacts related to noise generated during demolition, excavation, grading, and construction on sensitive receptors are potentially significant. The 22nd DAA has identified the construction hour limits of the affected local jurisdictions as the appropriate guide to limit the short-term noise effects of construction activity. Mitigation Measure 4.4.1 consolidates the construction hour limits of the Cities of San Diego, Del Mar, and Solana Beach into a single, most-restrictive limit on construction activity. In addition, exposure of off-site areas to

construction noise will vary over the course of the two construction phases depending on the nature (demolition, grading, construction) and location of the construction work within the approximately 300 ac project site. Implementation of Mitigation Measure 4.4.1, which requires compliance with local construction hour limits, would reduce construction noise impacts to adjacent sensitive land uses to a less than significant level.

Long-Term Project Impact Analysis. Temporary construction-related noise impacts of the long-term projects are similar to those discussed above under near-term projects. As described above, construction-related trips for the long-term projects are expected to be a small percentage of the total existing traffic at the time the long-term projects are undertaken. Therefore, the change in traffic noise levels as a result of the addition of construction vehicles to overall traffic levels on the adjacent streets would be relatively small and is anticipated to be less than significant. Construction activity noise would result from demolition, grading, and construction, including demolition in the Backstretch area, excavation for the tunnel, and construction of the multilevel parking structure and seasonal train platform. The long-term projects would be subject to Mitigation Measure 4.4.1, limiting hours of construction in accordance with the noise ordinances of the affected jurisdictions. Furthermore, exposure of off-site areas to construction noise would be different depending on the nature and location of the specific construction activity undertaken at any one time within the 300 ac project site. Construction-related noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once project construction is completed. Therefore, it is anticipated that the noise effect from construction of the long-term projects would be less than significant with implementation of Mitigation Measure 4.4.1.

Threshold 4.4.4 Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Near-Term Project Impact Analysis. Operational traffic and rail activity are the primary potential sources of a substantial permanent increase in ambient noise levels in the project vicinity. As discussed in detail under Threshold 4.4.1, hotel rooms located within 445 ft of the roadway centerline and with no intervening structures between them and traffic on Jimmy Durante Boulevard would be directly exposed to traffic noise of 57 dBA CNEL or higher. These impacts would be potentially significant and adverse, therefore, these units require a mechanical ventilation system such as an air-conditioning system to achieve the interior noise standard of 45 dBA CNEL and to reduce on-site impacts to sensitive receptors at the hotel. With implementation of Mitigation Measure 4.4.2, which requires mechanical ventilation in hotel rooms located within 445 ft of the centerline of Jimmy Durante Boulevard, on-site noise impacts at the hotel would be reduced to below a level of significance.

The outdoor pool area would be exposed to traffic noise levels exceeding the outdoor noise standard of 65 dBA CNEL. These impacts would be potentially significant and adverse. A barrier would be necessary to reduce on-site impacts to sensitive receptors at the outdoor pool area. Mitigation Measure 4.4.3 requires a combination concrete/Plexiglas or glass wall with a minimum effective height of 6 ft to be installed around the perimeter of the pool area to reduce impacts to sensitive noise receptors at the outdoor pool area. This barrier would provide a minimum noise reduction of 5 dBA, reducing the outdoor noise level to 64 dBA CNEL. Therefore, with implementation of Mitigation

Measure 4.4.3, which requires a sound barrier around the outdoor pool area, on-site noise impacts at the outdoor pool area would be reduced to below a level of significance.

Hotel rooms located within 792 ft of the railroad centerline and with no intervening structures between them and the rail line would be directly exposed to rail noise of 57 dBA CNEL or higher. These impacts would be potentially significant and adverse. Although no building facade upgrades are required, these units require a mechanical ventilation system such as an air-conditioning system to achieve the interior noise standard of 45 dBA CNEL and to reduce on-site impacts to sensitive receptors at the hotel. With implementation of Mitigation Measure 4.4.4, which requires mechanical ventilation in hotel rooms located within 792 ft of the centerline of the ATSF rail line, on-site noise impacts at the hotel would be reduced to below a level of significance.

As discussed in detail under Threshold 4.4.1, all other permanent noise impacts are considered less than significant, and no further mitigation is required.

Long-Term Project Impact Analysis. As discussed in detail under Threshold 4.4.1, noise from truck activity at the tunnel would be limited based on use and would not affect off-site locations because of its location in the middle of the Fairgrounds.

The proposed seasonal train platform would be implemented by SANDAG (or other transit/CEQA Lead Agency) with assistance from the 22nd DAA. Noise associated with the new seasonal train service to the Fairgrounds could affect land uses along the railroad tracks and near the platform itself. These effects are expected to be less than significant because it is anticipated that the actual increase in train service will be small compared to the existing use of the train tracks. However, the noise impacts associated with the platform and increased use of the tracks will be further analyzed at the time a specific proposal is analyzed at a project-level by SANDAG or other Lead Agency.

Operational noise as a result of the multilevel parking structure would include vehicular noise and activity noise such as car door slamming. The proposed location of the parking structure is not adjacent to any noise-sensitive uses such as residences or schools. The RVs that utilize the RV parking lot are transitory (mobile rather than permanent structures) and not considered to be sensitive receptors comparable to residences or a school. Also, the proposed parking structure would be located in an area already being used for parking. Therefore, the noise impacts of the facility are expected to be less than significant.

4.4.7 Cumulative Impacts

The cumulative impact study area for noise corresponds to the traffic and circulation study area. Construction and on-site operations are point sources of noise and would not contribute to off-site cumulative noise impacts from other planned and future projects. Project-related operational traffic would contribute to cumulative traffic noise impacts in the vicinity of the project site; these impacts are discussed below.

Tables 4.4.J and P show that the proposed project, combined with other anticipated projects incorporated into the baseline condition, would result in traffic noise increases of up to 2.0 dBA along Jimmy Durante Boulevard. A noise level increase of 3 dBA or more is perceptible to the human ear

and would be considered potentially significant. Because sound levels would not increase by more than 3 dBA from their corresponding existing baseline levels, this would be considered a less than significant impact. Therefore, the proposed project would not contribute to a significant cumulative noise impact, and no mitigation is required.

4.4.8 Level of Significance prior to Mitigation

Prior to mitigation, the proposed project would result in significant adverse impacts related to noise. These significant impacts would be the result of the following:

- Construction noise impacts to sensitive receptors due to demolition, excavation, grading, and construction activities for the near-term and long-term projects
- Operational traffic noise impacts to the proposed hotel
- Operational traffic noise impacts to the proposed outdoor pool area
- Train noise impacts to the proposed hotel
- Emergency vehicle siren noise from the proposed fire station

Impacts related to groundborne noise and vibration and airports are considered less than significant.

4.4.9 Mitigation Measures

Construction of the proposed developments would result in relatively high noise levels and annoyance at the closest sensitive receptor locations. The following measure would reduce short-term construction-related noise impacts:

Mitigation Measure 4.4.1 During construction of any of the Master Plan projects, the construction contractor shall ensure, and the California Construction Authority (CCA) shall verify, that construction is limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and 9:00 a.m. to 7:00 p.m. on Saturdays. No construction activities are permitted outside of these hours or on Sundays, federal holidays, or City of Del Mar holidays.

The proposed hotel uses that would be directly exposed to traffic noise from Jimmy Durante Boulevard shall be required to implement the following mitigation measures to reduce the on-site traffic noise impacts:

Mitigation Measure 4.4.2 Prior to issuance a certificate of occupancy for the hotel, the 22nd District Agricultural Association (DAA) shall ensure, and the California Construction Authority (CCA) will verify, that hotel rooms located within 445 feet of the centerline of Jimmy Durante Boulevard are equipped with mechanical ventilation.

Mitigation Measure 4.4.3 Prior to issuance a certificate of occupancy for the hotel, the 22nd District Agricultural Association (DAA) shall ensure, and the California Construction Authority (CCA) will verify, that a 6-foot barrier is constructed around the perimeter of the proposed pool area.

Mitigation Measure 4.4.4 Prior to issuance a certificate of occupancy for the hotel, the 22nd District Agricultural Association (DAA) shall ensure, and the California Construction Authority (CCA) will verify, that hotel rooms located within 792 feet of the railroad centerline are equipped with mechanical ventilation.

Existing residences would be subject to noise from fire truck sirens that in some cases may be higher than existing levels as a result of the location of the new fire station. The following measure would reduce the impact from siren noise:

Mitigation Measure 4.4.5 Prior to issuance of a certificate of occupancy for the proposed fire station, the 22nd District Agricultural Association (DAA) shall request the Del Mar Fire Department to use fire truck lights only in proximity to residences and to refrain from siren use until farther away from the residential neighborhoods, to the greatest extent feasible and safe.

4.4.10 Programmatic Impact Avoidance and Mitigation Strategies

No significant operational noise impacts are anticipated as a result of the long-term projects. However, the following programmatic impact avoidance and mitigation strategy is required for potentially significant construction noise impacts.

Strategy 4.4.1 The 22nd District Agricultural Association (DAA) shall ensure implementation of Mitigation Measure 4.4.1, described above, during implementation of the long-term projects.

4.4.11 Level of Significance after Mitigation

With implementation of the mitigation measures identified above, potential construction and operational noise impacts from implementation of near-term and long-term projects would be reduced to below a level of significance, with the exception of fire truck siren noise.

The proposed relocation of the fire station may result in a significant operational noise impact to nearby sensitive receptors for emergency vehicle sirens. This impact can be reduced to below a level of significance with implementation of Mitigation Measure 4.4.5; however, implementation of this measure requires action by a public agency other than the 22nd DAA. Since implementation of the mitigation measure is within the control of another jurisdictional agency (i.e., Del Mar Fire Department), implementation cannot be assured by the 22nd DAA. Should the Del Mar Fire Department choose not to implement these operational procedures, the related project impacts may remain significant and adverse. The 22nd DAA is committed to working with the Del Mar Fire

Department to implement the mitigation measure to the best of its ability. However, because the 22nd DAA cannot ensure compliance by other agencies, for the purposes of this EIR, the impact is considered to remain significant after mitigation.