5.0 ENVIRONMENTAL IMPACT ANALYSIS

13. NOISE

1. INTRODUCTION

This section of the Draft EIR, which has been prepared based on information from Acoustical Engineering Services, Inc. (AES), analyzes the potential noise and vibration impacts associated with construction and operation of the Project. The noise calculation worksheets, which are the primary basis for this analysis, are included in **Appendix 5.13** of this Draft EIR.

a. Background Information Regarding Noise

(1) Fundamentals of Sound and Environmental Noise

Noise is commonly defined as sound that is undesirable because it interferes with speech communication and hearing, causes sleep disturbances, or is otherwise annoying (unwanted sound). The decibel (dB) is a conventional unit for measuring the amplitude of sound because it accounts for the large variations in sound pressure amplitude and reflects the way people perceive changes in sound amplitude. The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human frequency-dependent response, the A-weighted system is used to adjust measured sound levels (dBA). The term "A-weighted" refers to filtering the noise signal in a manner that corresponds to the way the human ear perceives sound. Examples of various sound levels in different environments are shown in **Table 5.13-1**, Typical Noise Levels, on page 5.13-2.

People commonly judge the relative magnitude of sound sensation using subjective terms such as "loudness" or "noisiness." A change in sound level of 3 dBA is considered barely perceptible, a change in sound level of 5 dBA is considered readily perceptible, and an upward change of 10 dBA is recognized as twice as loud.[1]

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[1] *Engineering Noise Control, Bies & Hansen, 1988.*

See also, U.S. Department of Transportation, Federal Highway Administration, "Highway Traffic Noise Analysis and Abatement Policy and Guidance," www.fhwa.dot.gov/environment/noise/regulations_and_guidance/polguide/polguide02.cfm, accessed on April 14, 2015.

Table 5.13-1
Typical Noise Levels

Common Outdoor Activities	Noise Levels, dBA	Common Indoor Activities
	—110—	Rock Band
Jet Fly-over at 1,000 feet	—105—	
	—100—	
Gas Lawn Mower at 3 feet	—95—	
	—90—	
Diesel Truck at 50 feet at 50 mph	—85—	Food Blender at 3 feet
	—80—	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime	—75—	
Gas Lawn Mower at 100 feet	**—70—**	Vacuum Cleaner at 10 feet
Commercial Area	—65—	Normal Speech at 3 feet
Heavy Traffic at 300 feet	**—60—**	
	—55—	Large Business Office
Quiet Urban Daytime	**—50—**	Dishwasher Next Room
	—45—	
Quiet Urban Nighttime	**—40—**	Theater, Large Conference Room
Quiet Suburban Nighttime	—35—	(Background)
	—30—	Library
Quiet Rural Nighttime	—25—	Bedroom at Night, Concert Hall
	—20—	(Background)
	—15—	Broadcast/Recording Studio
	—10—	
	—5—	
Lowest Threshold of Human Hearing	**—0—**	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement (TeNS), 1998 and AES, 2015.

(2) Outdoor Sound Propagation

In an outdoor environment, sound levels attenuate through the air as a function of distance. Such attenuation is called “distance loss” or “geometric spreading” and is based on the type of source configuration (i.e., a point source or line source). The rate of sound attenuation for a point source, such as a piece of equipment (e.g., air conditioner, electrical transformer or bulldozer), is 6 dBA per doubling of distance from the noise source. For example, an outdoor condenser fan that generates a sound level of 60 dBA at a distance of 5 feet would attenuate to 54 dBA at a distance of 10 feet. The rate of sound attenuation for a line source, such as a constant flow of traffic on a roadway, is 3 dBA per doubling of distance.[2]

[2] *Caltrans, Technical Noise Supplement (TeNS), 1998.*

Structures (e.g., buildings and solid walls) and natural topography (e.g., hills) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., line-of-sight is not fully blocked), some barrier insertion loss would still occur, but to a lesser extent. A receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall reflects noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source and receiver) to an upper range of 20 dBA with a more substantial barrier.[3]

(3) Environmental Noise Descriptors

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider the effect of noise both as total acoustical energy content and the time and duration of occurrence. The most frequently used noise descriptors, including those used by the County of Los Angeles, are summarized below. All noise descriptors used in this noise analysis are based on the A-weighted sound pressure levels, dBA.

Equivalent Sound Level (L_{eq}). L_{eq} is a measurement of the acoustic energy content of noise averaged over a specified time period. Thus, the L_{eq} of a time-varying sound and that of a steady sound are the same if they deliver the same amount of energy to the receptor's ear during exposure. L_{eq} for minimum 15-minute periods, during the daytime or nighttime hours, and 24-hour periods are commonly used in environmental assessments.

Maximum Sound Level (L_{max}). L_{max} represents the maximum sound level measured during a measurement period.

Statistical Sound Level (L_n). L_n is a statistical description of the sound level that is exceeded over some fraction of a given period of time. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_8 and L_{25} represent the noise levels that are exceeded 8 and 25 percent of the time, respectively, or for 5 and 15 minutes during a 1-hour period, respectively. The County of Los Angeles noise limits are provided in terms of statistical sound levels.

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[3] *Ibid.*

Community Noise Equivalent Level (CNEL). CNEL is the time average of all A-weighted sound levels for a 24-hour period with a 10 dBA adjustment (upward) added to the sound levels that occur between the hours of 10:00 P.M. and 7:00 A.M., and a 5 dBA adjustment (upward) added to the sound levels which occur between the hours of 7:00 P.M. and 10:00 P.M. These penalties attempt to account for increased human sensitivity to noise environment during the quieter nighttime periods, particularly where sleep is the most probable activity. As discussed below, CNEL has been adopted by the State of California to define the community noise environment for development of the community noise element of a General Plan.[4]

b. Background Information Regarding Ground-Borne Vibration

Vibration is commonly defined as an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV) or the root-mean-square (RMS) velocity is commonly used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal, while RMS is defined as the square-root of the average of the squared amplitude of the signal. PPV is typically used for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response to ground-borne vibration. The RMS vibration velocity level can be presented in inch per second or in Vibration dB (VdB) referenced to 1 micro-inch per second. Ground-borne vibration generated by man-made activities (e.g., road traffic, construction operations) typically attenuates rapidly with distance from the source of the vibration.

2. ENVIRONMENTAL SETTING

a. Regulatory Setting

(1) Federal Regulations

(a) Federal Transit Administration Vibration Standards

The Federal Transit Administration (FTA) has published a technical manual entitled *Transit Noise and Vibration Impacts Assessment*, which provides ground-borne vibration impact criteria with respect to building damage during construction activities.[5] **Table 5.13-2**, FTA Vibration Impact Criteria—Typical Levels for Building Damage, on page 5.13-5 provides the FTA vibration criteria applicable to construction activities.

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[4] *State of California, General Plan Guidelines, 2003, http://opr.ca.gov/docs/General_Plan_Guidelines_2003.pdf, accessed March 4, 2015.*

[5] *Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006, www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf, accessed March 4, 2015.*

Table 5.13-2
FTA Vibration Impact Criteria—Typical Levels for Building Damage

Building Category	Construction Vibration Damage Criteria	
	PPV (inch per second)	RMS (VdB)
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: Federal Transit Administration, 2006.

According to FTA guidelines, a vibration criterion of 0.20 inch per second PPV should be considered for non-engineered timber and masonry buildings. Furthermore, structures or buildings constructed of reinforced-concrete, steel, or timber, have vibration damage criteria of 0.50 inch per second PPV pursuant to the FTA guidelines. Older buildings are susceptible to ground vibrations and have a vibration criterion of 0.12 inch per second PPV, pursuant to the FTA criteria.

(2) State Regulations

(a) Land Use Compatibility for Community Noise Exposure

The State of California has adopted noise compatibility guidelines for general land use planning. The types of land uses addressed by the state standards and the acceptable noise categories for each land use are included in the *State of California General Plan Guidelines, Appendix C: Noise Element Guidelines* (State Noise Guidelines), which is published and updated by the Governor's Office of Planning and Research. The level of acceptability of the noise environment is dependent upon the activity associated with each particular land use. **Table 5.13-3**, Land Use Compatibility for Community Noise Exposure, on page 5.13-6 provides the exterior noise guidelines associated with various land uses, as set forth by the State.

Table 5.13-3
Land Use Compatibility for Community Noise Exposure

Land Use	Community Exposure Level, CNEL (dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential: Low-Density Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	Above 75
Residential: Multi-Family	50–65	60–70	70–75	Above 75
Transient Lodging: Motels, Hotels	50–65	60–70	70–80	Above 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50–70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50–75	—	Above 70
Playgrounds, Neighborhood Parks	50–70	—	67.5–75	Above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	—	70–80	Above 80
Office Buildings, Business Commercial and Professional	50–70	67.5–77.5	Above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	Above 75	—

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.

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 included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

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.

Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Office of Planning and Research, State of California General Plan Guidelines, Appendix C: Noise Element Guidelines, Figure 2, p. 250, October 2003.

(3) County Regulations

(a) County of Los Angeles General Plan

As discussed in more detail in **Section 5.11**, Land Use and Planning, of this Draft EIR, the County's General Plan directs future growth and development in the County's unincorporated areas and establishes goals, policies, and objectives that pertain to the entire County. The current General Plan, adopted in 1980, includes a Noise Element as a

planning tool to develop strategies and action programs that address a multitude of noise sources and issues. The noise guidelines used by the County are based on the community noise compatibility guidelines established by the State of California, described above. Specific regulations that implement these guidelines are set forth in the Los Angeles County Code (County Code), discussed below. Relevant policies in the Noise Element focus on minimizing transportation-related noise and promoting public awareness of noise effects.

As also discussed further in **Section 5.11**, Land Use and Planning, of this Draft EIR, the County circulated a draft General Plan update, entitled Los Angeles County General Plan 2035 (Draft General Plan), in January 2014 and a Draft EIR addressing the Draft General Plan in June 2014. This Draft General Plan contains a new Noise Element that addresses land use compatibility as it relates to noise levels, noise abatement to achieve acceptable noise levels as defined by the County's Exterior Noise Standards, and cumulative noise impacts.

The General Plan policy consistency analysis provided in **Section 5.11**, Land Use and Planning, of this Draft EIR, indicates the Project would be consistent with applicable General Plan polices related to noise.

(b) Santa Clarita Valley Area Plan: One Valley One Vision 2012

As discussed in greater detail in **Section 5.11**, Land Use and Planning, of this Draft EIR, the recently updated Santa Clarita Valley Area Plan: One Valley One Vision 2012 (Area Plan) serves as a long-term guide for development in the Santa Clarita Valley Planning Area (Valley Planning Area) over the next 20 years. The Area Plan ensures consistency between the General Plans of the County and the City of Santa Clarita (City) in order to achieve common goals. The Area Plan's Noise Element is a comprehensive program for including noise management in the planning process, providing a tool for planners to use in achieving and maintaining land uses that are compatible with existing and future environmental noise levels. Relevant policies include reducing residential interior and exterior noise levels to 45 dBA CNEL and 60 dBA CNEL, respectively; minimization/mitigation of construction noise; Noise Ordinance enforcement; locating new residences at least 150 feet from the centerline for Interstate 5 (I-5); minimizing noise impacts from parks, recreational facilities, and schools on residences; notification for owners/tenants of new residential developments regarding certain nearby noise sources such as Six Flags Magic Mountain theme park (Six Flags Magic Mountain); and the use of appropriate noise buffers between commercial and residential land uses.

The Area Plan policy consistency analysis provided in **Section 5.11**, Land Use and Planning, of this Draft EIR, indicates the Project would be consistent with applicable Area Plan polices related to noise.

(c) County of Los Angeles Noise and Vibration Standards

The Noise Control Ordinance of the County of Los Angeles (County Noise Ordinance) identifies exterior noise standards for any source of sound at any location within the unincorporated areas of the County, and specific noise restrictions, exemptions, and variances for exterior noise sources. Specifically, Section 12.08.010, et seq., of the County Code provides maximum exterior noise level standards for four general noise zones and establishes maximum exterior noise levels for each zone. These noise zones are:

1. Noise-Sensitive Areas—Noise-sensitive zones are designated by the County Health Officer.

2. Residential Properties—This category includes all types of residential developments and properties subject to residential zoning.

3. Commercial Properties—This category includes all types of commercial developments and also includes properties subject to commercial zoning classifications.

4. Industrial Properties—This category includes all properties developed with manufacturing uses and industrial zoning.

For each of these zones, the County Noise Ordinance states that exterior operational noise levels caused by Project-related on-site fixed sources (i.e., point noise sources) shall not exceed the levels identified in **Table 5.13-4**, County of Los Angeles Exterior Noise Standards, on page 5.13-9, or the ambient noise level, whichever is greater, when the ambient noise level is determined without the noise source operating.[6] These standards are based on the duration of the noise. Thus, the louder the noise, the shorter the duration that such noise can last. To define these specific durations of noise, the noise metrics used include L_{50}, L_{25}, $L_{8.3}$, $L_{1.7}$, and L_{max}. As described above, these metrics are based upon a one hour timeframe and indicate exceedences of 50, 25, 8.3, and 1.7 percent of the time, plus the maximum sound level during that time period.

The County Noise Ordinance identifies restrictions regarding construction noise. Specifically, the operation of equipment used in construction, drilling, repair, alteration or

[6] *Ambient noise level is the existing background noise level at the time of measurement or prediction.*

Table 5.13-4
County of Los Angeles Exterior Noise Standards

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level[a] dBA
I	Noise-Sensitive Area[b]	Anytime	45
II	Residential Properties	10:00 P.M. to 7:00 A.M. 7:00 A.M. to 10:00 P.M.	45 50
III	Commercial Properties	10:00 P.M. to 7:00 A.M. 7:00 A.M. to 10:00 P.M.	55 60
IV	Industrial Properties	Anytime	70

[a] *This Table is used by the County to develop noise standards based on the duration of the noise source. These standards are described below.*

***Standard No. 1** shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No. 1 shall be the applicable noise level; or, if the ambient L_{50} exceeds the forgoing level, then the ambient L_{50} becomes the exterior noise level for Standard No. 1.*

***Standard No. 2** shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level from Standard 1 plus 5 dBA; or, if the ambient L_{25} exceeds the forgoing level, then the ambient L_{25} becomes the exterior noise level for Standard No. 2*

***Standard No. 3** shall be the exterior noise level which may not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from Standard 1 plus 10 dBA; or, if the ambient $LB_{8.3}$ exceeds the forgoing level, then the ambient $L_{8.3}$ becomes the exterior noise level for Standard No. 3.*

***Standard No. 4** shall be the exterior noise level which may not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from Standard 1 plus 15 dBA, or, if the ambient $L_{1.7}$ exceeds the forgoing level, then the ambient $L_{1.7}$ becomes the exterior noise level for Standard No. 4.*

***Standard No. 5** shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 4 shall be the applicable noise level from Standard 1 plus 20 dBA; or, if the ambient L_0 exceeds the forgoing level, then the ambient L_0 becomes the exterior noise level for Standard No. 4.*

[b] *Not defined in the County Noise ordinance. To be designated by the County Health Officer.*

Source: Los Angeles County Code, Section 12.08.390.

demolition work is prohibited between the hours of 7:00 P.M. and 7:00 A.M., and anytime on Sundays or holidays where the sound therefrom creates a noise disturbance across a residential or commercial real-property line. Exceptions to this provision include emergency work of public service utilities or by variance issued by the health officer.[7]

[7] *Los Angeles County Code Section 12.08.440. Noise disturbance is defined in Los Angeles County Code Section 12.08.230 as "an alleged intrusive noise which violates an applicable noise standard as set forth in this chapter." The County Health Officer has the authority to define and determine the extent of a noise disturbance on a case-by-case basis.*

The County Noise Ordinance further states the contractor must conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those listed in **Table 5.13-5**, County of Los Angeles Construction Noise Limits, on page 5.13-11. All mobile and stationary internal-combustion-powered equipment and machinery are also required to be equipped with suitable exhaust and air-intake silencers in proper working order. In addition, Section 12.12.030 of the County Noise Ordinance also provides that, on any Sunday, or at any other time between the hours of 8:00 P.M. and 6:30 A.M. the following day, a person shall not perform construction or repair work of any kind upon any building or structure, or perform any earth excavating, filling or moving, where any of the foregoing entails the use of any air compressors; jackhammers; power-driven drill; riveting machine; excavator, diesel-powered truck, tractor or other earth moving equipment; hand hammers on steel or iron, or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in a dwelling, apartment, hotel, mobile home, or other place of residence.

Section 12.08.560 of the County Noise Ordinance establishes maximum vibration thresholds during construction activities. Specifically, the operation of any device that creates vibration above the vibration perception threshold (motion velocity of 0.01 inch per second over the range of 1 to 100 hertz) of an individual at or beyond the property boundary on private property, or at 150 feet from the source if on a public space or public right-of-way is prohibited.

Table 5.13-5
County of Los Angeles Construction Noise Limits

	Noise Limits, dBA (L_{eq})		
	Single-Family Residential	**Multi-Family Residential**	**Semi-Residential/ Commercial[a]**
Residential Structures			
Mobile Equipment: Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment			
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	75	80	85
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	60	64	70
Stationary Equipment: Maximum noise levels for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment			
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	60	65	70
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	50	55	60
	All Structures		
Business Structures			
Mobile Equipment: Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment			
Daily, including Sundays and legal holidays, all hours	85		

[a] *Refers to residential structures within a commercial area. This standard does not apply to commercial structures.*

Source: Los Angeles County Code, §12.08.440(B)

(4) Previously Adopted Plans and Mitigation

(a) Newhall Ranch RMDP/SCP and EIS/EIR

The Project Site is included in the project area for the Applicant's Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan (RMDP/SCP), shown in **Figure 3-5**, RMDP/SCP Project Area, in **Section 3.0**, Project Description, of this Draft EIR, which covers certain aspects of resource management for the Project and other nearby developments. As discussed in greater detail in **Section 4.1**, Environmental and Regulatory Setting, the RMDP component of the Newhall Ranch

RMDP/SCP project is a conservation, mitigation, and permitting plan for the long-term management of sensitive biological resources and development-related infrastructure in the River and tributary drainages within the 11,999-acre Specific Plan area and along the extension of Magic Mountain Parkway through the Project Site. The SCP component of the Newhall Ranch RMDP/SCP project is a conservation and management plan to permanently protect and manage a system of preserves designed to maximize the long-term persistence of the San Fernando Valley spineflower (*Chorizanthe parryi ssp. Fernandina*) (spineflower), a federal candidate and state-listed endangered plant species. The SCP encompasses the Specific Plan area, the Valencia Commerce Center planning area, and the Project Site, in order to conduct conservation planning and preserve design on the Project Applicant's land holdings in Los Angeles County that contain known spineflower populations.

The Newhall Ranch RMDP/SCP project was the subject of a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) (SCH No. 2000011025) by the U.S. Army Corps of Engineers (Corps) and the California Department of Fish and Wildlife (CDFW).[8,9] At the time CDFW certified the EIR portion of the EIS/EIR in December 2010, it also adopted the Mitigation Monitoring and Reporting Plan (MMRP) for the RMDP/SCP project. This regulatory plan, required under CEQA, describes the mitigation measures, monitoring, and/or reporting plan for the Newhall Ranch RMDP/SCP project (including the Entrada South Project Site). CDFW adopted one mitigation measure to reduce potential impacts to noise resulting from implementation of the Newhall Ranch RMDP/SCP project (see Mitigation Measure (MM) RMDP/SCP NOI-1 in **Appendix 2A**).

b. Existing Conditions

(1) Project Site

The Project Site is currently undeveloped with limited on-site noise generating sources associated with use of portions of the Project Site for pasture and a nursery operated by Six Flags Magic Mountain. The existing noise environment in the Project vicinity is primarily comprised of automobile traffic on nearby roadways, including I-5, The Old Road, and Magic Mountain Parkway, as well as operation of Six Flags Magic Mountain Theme Park (Theme Park) located immediately north of the Project Site. There are no sensitive receptors currently located on-site.

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[8] *Newhall Ranch Resource Management and Development Plan and Spineflower Conservation Plan, Final Joint Environmental Impact Statement and Environmental Impact Report, June 2010.*

[9] *The California Department of Fish and Game was officially renamed the California Department of Fish and Wildlife as of January 1, 2013.*

(2) Sensitive Receptors in the Surrounding Area

Some land uses are considered more sensitive to intrusive noise than others based on the types of activities typically involved at the receptor location. Uses that are sensitive to noise include residences, schools, hospitals, and senior citizen facilities. In addition, a "frequent use" outdoor area where people congregate for recreation or other purposes can be sensitive to noise. Frequent use areas include the backyards of single-family residences, outdoor recreation areas in multi-family complexes, active or passive recreational areas in parks, and play areas at schools.

The nearest existing noise sensitive receptors to the Project Site are residential uses within the Westridge community located to the south of the Project Site. Other noise sensitive receptors include the Hilton Garden Inn (located on The Old Road) approximately 1,000 feet northeast of the Project Site, and the Best Western Inn and Holiday Inn Express (located east of I-5) approximately 700 feet east of the Project Site. The Travel Village RV Park is also located approximately 7,100 feet northwest of the Project Site. In addition, the approved Mission Village community is located immediately west of the Project Site.

(3) Existing Ambient Noise Levels

(a) Ambient Noise Measurements

As shown in **Figure 5.13-1**, Noise Measurement Locations, on page 5.13-14, ambient noise measurements were completed at eight locations that represent the existing noise environment at the Project Site and noise sensitive land uses in the surrounding vicinity. The ambient noise measurements were conducted in August 2010 and June 2013.[10] Noise measurements were recorded using a Quest 2900 Integrated Sound Level Meter (SLM), which meets the noise measurement requirements set forth by the County. All instruments were calibrated and operated according to the manufacturer's specification. Consistent with the industry standard, the microphone was placed at approximately 5 feet above the local grade.

Table 5.13-6, Measured Ambient Noise Levels, on page 5.13-15, presents the measured ambient noise data. In general, current ambient noise levels at the Project's northern boundary are primarily associated with the operation of Six Flags Magic Mountain. The Theme Park typically opens at 10:30 A.M. and closes between 6:00 P.M. and 10:00 P.M. There are also special events when the park remains open as late as 1:00 A.M. As indicated in **Table 5.13-6**, Measured Ambient Noise Levels, the existing ambient noise levels along the Project's northern boundary adjacent to Six Flags Magic Mountain range

[10] *Conducted by Impact Sciences in August 2010 and AES in June 2013.*

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Figure 5.13-1
Noise Measurement Locations

Source: Acoustical Engineering Services, 2014.

Table 5.13-6
Measured Ambient Noise Levels

Location/Description (see Figure 5.13-1, Noise Measurement Locations)	Measurement Date/Time	Measured Ambient Noise Levels,[a] dBA		
		Daytime Hours Average L_{eq} (7:00 A.M.–10:00 P.M.)	Nighttime Hours Average L_{eq} (10:00 P.M.–7:00 A.M.)	CNEL (24-hour)
R1—Project northern boundary adjacent to Six Flags Magic Mountain	8/16/2010 6/29/2013 6/30/2013	41.4–66.6 55.4–60.8 45.6–64.1	41.6–51.9 46.9–62.8 46.1–57.0	63.6 64.4 63.6
R2—Project northeast boundary	8/24/2010 6/28/2013	62.0 63.5	63.0 63.1	67.5[b] 67.9[b]
R3—Project southern boundary adjacent to the residential uses within the Westridge community	8/10/2010 6/29/2013 6/30/2013	42.1–49.0 42.6–60.8 39.7–52.3	40.8–49.6 49.2–52.9 46.4–53.3	52.6 58.1 56.5
R4—Residential uses and school on Valencia Boulevard within the Westridge community	8/10/2010 6/28/2013	55.1–63.4 52.9	38.9–53.7 49.6	61.4 55.1[b]
R5—Travel Village RV Park on the south side of Highway 126, northwest of the Project Site	8/10/2010 6/28/2013	43.2–51.4 51.7	38.4–46.5 50.7	50.8 55.6[b]
R6—Project northwest boundary adjacent to Six Flags Magic Mountain	8/13/2010 8/14/2010 8/15/2010	41.2–53.7 40.9–54.1 41.1–53.5	44.4–50.4 41.9–48.9 45.0–53.5	55.1 54.1 56.7
R7—Project western boundary	8/13/2010 8/14/2010 8/15/2010	39.4–51.2 38.0–70.9 35.9–63.1	36.9–44.0 35.4–45.5 42.5–47.2	49.1 57.8 53.2
R8—Within Project Site	8/13/2010 8/14/2010	40.1–51.7 38.4–49.4	41.3–57.9 41.6–49.3	56.5 51.7

[a] *Measurements made in 2010 are from Impact Sciences and measurements made in 2013 are from AES. The 2013 noise measurements were conducted in 2013 to confirm that no substantial changes in noise levels have occurred since 2010. The 2013 noise measurements focused on locations next to roadways, where traffic is the primary source of noise. Measurement Locations R6, R7, and R8 are not adjacent to existing roadways. Thus, these locations would not be affected by any potential changes in traffic volumes and associated traffic noise.*

[b] *Calculated based on the short-term measurements pursuant to FTA procedure.*

Source: IS, 2010, AES, 2013

from 54.1 dBA CNEL (measured at Location R6) to 63.6 dBA CNEL (measured at Location R1). These existing ambient noise levels within the Project Site, which account for

operation of Six Flags Magic Mountain, fall within the normally acceptable level for residential uses.

The existing ambient noise environment near the Project's southern property line is dominated primarily by local street traffic and other noise sources typically associated with residential uses. The existing ambient noise levels in this area range from 52.6 dBA CNEL to 58.1 dBA CNEL (measured at Location R3). Noise levels within the site interior range from 51.7 dBA CNEL to 56.5 dBA CNEL (measured at Location R8). The highest noise levels occur along the Project Site's northeastern boundary near the intersection of Magic Mountain Parkway and The Old Road, where vehicular traffic and commercial uses generate noise levels of 67.5 dBA CNEL to 67.9 dBA CNEL.

(b) Modeled Existing Noise Levels at Nearest Sensitive Receptor Locations

As discussed above, the closest existing sensitive receptors to the Project Site are residential units located to the south of the Project Site. **Figure 5.13-2**, Existing Ambient Noise Contours, 24-Hour CNEL dBA, on page 5.13-17, shows the location of the approximately 55 nearest residential units in relation to the southern boundary of the Project Site. Noise levels at these 55 sensitive receptors were modeled and account for the measured noise levels near Six Flags Magic Mountain and the existing traffic volumes from nearby roadways, based on data from the Traffic Study, provided in **Appendix 5.20A** of this Draft EIR. **Table 5.13-7**, Calculated Existing Exterior Noise Levels at Nearby Sensitive Receptors, on page 5.13-18, provides the calculated 24-hour CNEL noise levels at the 55 nearby sensitive receptors under existing conditions. As indicated therein, existing CNEL noise levels at these residential uses range from 45.1 to 66.5 dBA CNEL. **Figure 5.13-2**, Existing Ambient Noise Contours, 24-Hour CNEL dBA, also provides a noise contour map depicting existing CNEL noise levels at the nearest sensitive receptors.

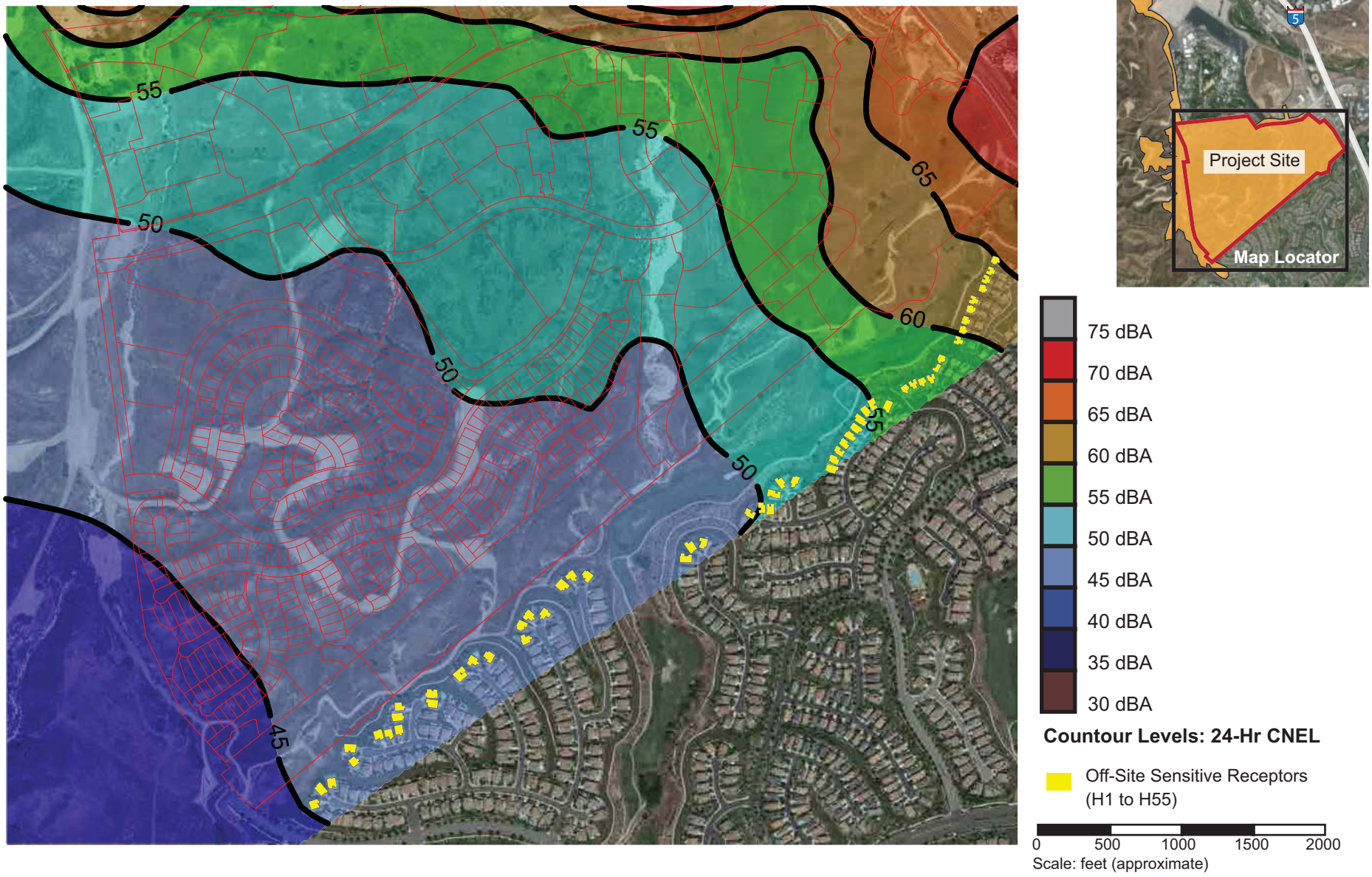

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Figure 5.13-2
Existing Ambient Noise Contours, 24-hour CNEL dBA

Source: Acoustical Engineering Services, 2014.

Table 5.13-7
Calculated Existing Exterior Noise Levels at Nearby Sensitive Receptors

Sensitive Receptor	24-Hour CNEL (dBA)	Existing Noise Exposure Compatibility Category
H1	45.1	Normally Acceptable
H2	45.3	Normally Acceptable
H3	45.5	Normally Acceptable
H4	46.1	Normally Acceptable
H5	46.3	Normally Acceptable
H6	46.7	Normally Acceptable
H7	47.0	Normally Acceptable
H8	47.1	Normally Acceptable
H9	47.1	Normally Acceptable
H10	47.3	Normally Acceptable
H11	47.7	Normally Acceptable
H12	48.1	Normally Acceptable
H13	48.2	Normally Acceptable
H14	48.5	Normally Acceptable
H15	48.8	Normally Acceptable
H16	48.1	Normally Acceptable
H17	48.5	Normally Acceptable
H18	48.8	Normally Acceptable
H19	47.7	Normally Acceptable
H20	48.0	Normally Acceptable
H21	48.3	Normally Acceptable
H22	50.6	Normally Acceptable
H23	51.2	Normally Acceptable
H24	52.2	Normally Acceptable
H25	50.1	Normally Acceptable
H26	50.9	Normally Acceptable
H27	51.1	Normally Acceptable
H28	51.2	Normally Acceptable
H29	52.1	Normally Acceptable
H30	52.9	Normally Acceptable
H31	53.1	Normally Acceptable
H32	53.3	Normally Acceptable
H33	53.6	Normally Acceptable
H34	53.9	Normally Acceptable
H35	54.5	Normally Acceptable
H36	55.0	Conditionally Acceptable
H37	55.4	Conditionally Acceptable
H38	56.7	Conditionally Acceptable
H39	57.7	Conditionally Acceptable
H40	59.0	Conditionally Acceptable
H41	57.7	Conditionally Acceptable
H42	58.5	Conditionally Acceptable

Table 5.13-7 (Continued)
Calculated Existing Exterior Noise Levels at Nearby Sensitive Receptors

Sensitive Receptor	24-Hour CNEL (dBA)	Existing Noise Exposure Compatibility Category
H43	58.7	Conditionally Acceptable
H44	58.9	Conditionally Acceptable
H45	59.5	Conditionally Acceptable
H46	60.8	Conditionally Acceptable
H47	60.1	Conditionally Acceptable
H48	60.7	Conditionally Acceptable
H49	61.3	Conditionally Acceptable
H50	61.9	Conditionally Acceptable
H51	62.9	Conditionally Acceptable
H52	63.2	Conditionally Acceptable
H53	64.1	Conditionally Acceptable
H54	65.3	Conditionally Acceptable
H55	66.5	Conditionally Acceptable

(c) Existing Off-Site Roadway Noise Levels

In addition to the ambient noise measurements in the vicinity of the Project Site, the existing traffic noise on local roadways in the surrounding areas was calculated to quantify the 24-hour CNEL noise levels using information provided by the Traffic Study, provided in **Appendix 5.20A** of this Draft EIR. Fifty-nine (59) local roadway and 12 freeway segments were selected based on proximity to noise sensitive uses along the roadway segments and potential increases in traffic volumes from the Project. The traffic noise levels were calculated using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) and traffic volume data from the Traffic Study. The TNM traffic noise prediction model calculates the hourly L_{eq} noise levels based on specific information including hourly traffic volume, vehicle mix, vehicle speed, and lateral distance between the noise receptor and the roadway. Vehicle mix/distribution data used in the noise calculations are shown in **Table 5.13-8**, Vehicle Mix for Traffic Noise Model, on page 5.13-20. To calculate the 24-hour CNEL levels, the hourly L_{eq} levels were calculated during daytime hours (7:00 A.M. to 7:00 P.M.), evening hours (7:00 P.M. to 10:00 P.M.), and nighttime hours (10:00 P.M. to 7:00 A.M.).

Table 5.13-9, Calculated Existing Roadway Traffic Noise Levels, on page 5.13-21, provides the calculated CNEL for the analyzed roadway segments based on existing traffic volumes. As shown therein, the existing CNEL due to surface street traffic volumes range from 57.4 dBA CNEL along Westridge Parkway (south of Valencia Boulevard) to 75.5 dBA CNEL along State Route 126 (SR-126) (between Commerce Center Drive and The Old Road). The calculated noise levels for I-5 range from 77 dBA CNEL (north of

Table 5.13-8
Vehicle Mix for Traffic Noise Model

Vehicle Type	Percent of Average Daily Traffic (ADT), %			Total Percent of ADT per Vehicle Type
	Daytime Hours (7 A.M.–7 P.M.)	Evening Hours (7 P.M.–10 P.M.)	Nighttime Hours (10 P.M.–7 A.M.)	
Local Street Segments				
Automobile	77.60	9.70	9.70	97.00
Medium Truck[a]	1.60	0.20	0.20	2.00
Heavy Truck[b]	0.80	0.10	0.10	1.00
Total	80.00	10.00	10.00	100.00
Freeway Segments				
Automobile	70.08	8.76	8.76	87.60
Medium Truck[a]	2.40	0.30	0.30	3.00
Heavy Truck[b]	7.52	0.94	0.94	9.40
Total	80.00	10.00	10.00	100.00

[a] *Medium Truck—Trucks with 2 axles.*

[b] *Heavy Truck—Trucks with 3 or more axles.*

Source: Stantec, 2015 and AES, 2015.

Lake Hughes Road and between Lake Hughes Road and Parker Road) to 83.7 dBA CNEL (south of State Route 14 (SR-14)). Currently, the existing traffic-related noise levels at the sensitive receptors located along several of the analyzed roadway segments exceed normally acceptable noise levels for residential uses (i.e., 65 dBA CNEL or lower).

Table 5.13-9
Calculated Existing Roadway Traffic Noise Levels

Roadway Segment	Adjacent Land Uses	Normally Acceptable Noise Level, CNEL dBA	Calculated Traffic Noise Levels[a] CNEL dBA	Existing Noise Exposure Compatibility Category[b]
Local Street Segments				
Avenue Stanford				
– North of Rye Canyon Rd.	Commercial, Religious	50–70	60.8	Normally Acceptable
– South of Rye Canyon Rd.	Commercial	50–70	61.7	Normally Acceptable
Bouquet Canyon Road				
– East of Seco Canyon Rd.	Commercial, Residential	50–70	71.7	Normally Unacceptable
– Between Seco Canyon Rd. and Newhall Ranch Rd.	Commercial, Residential	50–70	72.7	Normally Unacceptable
– Between Newhall Ranch Rd. and Soledad Canyon Rd.	Commercial	50–70	72.0	Conditionally Acceptable
– Between Soledad Canyon Rd. and Magic Mountain Pkwy.	Commercial	50–70	70.4	Conditionally Acceptable
Commerce Center Drive				
– North of SR-126	Commercial	50–70	67.7	Conditionally Acceptable
– South of SR-126	Open Space	50–75	62.2	Normally Acceptable
Copper Hill Drive				
– North of Decoro Dr.	Residential	50–60	71.9	Normally Unacceptable
– Between Decoro Dr. and Newhall Ranch Rd.	Commercial, Residential	50–70	72.2	Normally Unacceptable
Decoro Drive				
– Between Copper Hill Dr. and McBean Pkwy.	Residential, School	50–70	69.1	Conditionally Acceptable
– Between McBean Pkwy. And Seco Canyon Dr.	Commercial, Residential, School,	50–70	68.3	Conditionally Acceptable
Lyons Avenue				
– Between I-5 and Wiley Canyon Rd.	Commercial	50–70	70.2	Conditionally Acceptable
– Between Wiley Canyon Rd. and Orchard Village Rd.	Commercial, Residential	50–70	70.2	Normally Unacceptable
– East of Orchard Village Rd.	Commercial, Library, Religious, Residential	50–70	70.7	Normally Unacceptable

Table 5.13-9 (Continued)
Calculated Existing Roadway Traffic Noise Levels

Roadway Segment	Adjacent Land Uses	Normally Acceptable Noise Level, CNEL dBA	Calculated Traffic Noise Levels[a] CNEL dBA	Existing Noise Exposure Compatibility Category[b]
Magic Mountain Parkway				
– West of The Old Road	Commercial	50–70	61.3	Normally Acceptable
– Between The Old Road and Tourney Rd.	Commercial	50–70	70.8	Conditionally Acceptable
– Between Tourney Rd. and McBean Pkwy.	Commercial, Residential	50–70	70.5	Normally Unacceptable
– Between McBean Pkwy. and Valencia Blvd.	Commercial	50–70	67.9	Conditionally Acceptable
– Between Valencia Blvd. and Bouquet Canyon Rd.	Commercial, MF Residential	50–70	66.6	Conditionally Acceptable
McBean Parkway				
– Between I-5 and Tournament Rd.	School	50–70	70.4	Normally Unacceptable
– Between Tournament Rd. and Orchard Village Rd.	Residential, Religious	50–70	69.1	Conditionally Acceptable
– Between Orchard Village Rd. and Valencia Blvd.	Commercial, Residential, Hospital	50–70	70.6	Normally Unacceptable
– Between Valencia Blvd. and Magic Mountain Pkwy.	Commercial, Hotel	50–70	71.5	Normally Unacceptable
– Between Magic Mountain Pkwy. and Newhall Ranch Rd.	Commercial, Residential	50–70	74.2	Normally Unacceptable
– Between Newhall Ranch Rd. and Decoro Dr.	Residential	50–60	72.5	Normally Unacceptable
– North of Decoro Dr.	Residential	50–60	69.5	Conditionally Acceptable
Newhall Ranch Road				
– Between Avenue Stanford and Copper Hill Dr.	Commercial, Hotel	50–70	73.4	Normally Unacceptable
– Between Copper Hill Dr. and Dickason Dr.	Commercial	50–70	71.1	Conditionally Acceptable
– Between Dickason Dr. and McBean Pkwy.	Commercial, MF Residential	50–70	72.3	Normally Unacceptable
– Between McBean Pkwy. and Bouquet Canyon Rd.	Commercial, Residential, School, Park	50–70	73.3	Normally Unacceptable
– East of Bouquet Canyon Rd.	Commercial, Residential	50–70	71.8	Normally Unacceptable

Table 5.13-9 (Continued)
Calculated Existing Roadway Traffic Noise Levels

Roadway Segment	Adjacent Land Uses	Normally Acceptable Noise Level, CNEL dBA	Calculated Traffic Noise Levels[a] CNEL dBA	Existing Noise Exposure Compatibility Category[b]
Orchard Village Road				
– Between McBean Pkwy. and Wiley Canyon Rd.	Residential, School	50–70	69.1	Conditionally Acceptable
– Between Wiley Canyon Rd. and Lyons Ave.	Commercial, Residential, School	50–70	67.8	Conditionally Acceptable
Pico Canyon Road				
– West of The Old Road	Commercial, Residential, School	50–70	68.0	Conditionally Acceptable
– East of The Old Road	Commercial	50–70	70.0	Conditionally Acceptable
Rye Canyon Road				
– Between The Old Road and Avenue Stanford	Commercial	50–70	70.7	Conditionally Acceptable
– Between Avenue Stanford and Newhall Ranch Rd.	Commercial	50–70	69.6	Conditionally Acceptable
Soledad Canyon Road				
– East of Bouquet Canyon Rd.	Commercial	50–70	71.5	Conditionally Acceptable
SR-126				
– West of Wolcott Wy.	Agriculture	50–75	73.4	Conditionally Acceptable
– Between Wolcott Wy. and Commerce Center Dr.	Open Space, Residential	50–75	73.4	Normally Unacceptable
– Between Commerce Center Dr. and The Old Road	Agriculture	50–75	75.5	Conditionally Acceptable
The Old Road				
– Between Henry Mayo Dr. and Rye Canyon Rd.	Commercial	50–70	71.1	Conditionally Acceptable
– Between Rye Canyon Rd. and Magic Mountain Pkwy.	Commercial, Hotel	50–70	71.9	Normally Unacceptable
– Between Magic Mountain Pkwy. and Valencia Blvd.	Commercial, MF Residential	50–70	68.0	Conditionally Acceptable
– Between Valencia Blvd. and McBean Pkwy.	Open Space, Golf Course, Residential	50–75	69.3	Conditionally Acceptable

Table 5.13-9 (Continued)
Calculated Existing Roadway Traffic Noise Levels

Roadway Segment	Adjacent Land Uses	Normally Acceptable Noise Level, CNEL dBA	Calculated Traffic Noise Levels[a] CNEL dBA	Existing Noise Exposure Compatibility Category[b]
– Between McBean Pkwy. and Pico Canyon Rd.	Commercial, Residential	50–70	66.7	Conditionally Acceptable
– South of Pico Canyon Rd.	Commercial, Residential, Hotel	50–70	63.9	Conditionally Acceptable
Tourney Road				
– Between Magic Mountain Pkwy. and Valencia Blvd.	Commercial	50–70	63.9	Normally Acceptable
Valencia Boulevard				
– West of Westridge Pkwy.	Residential, School	50–70	72.0	Normally Unacceptable
– Between Westridge Pkwy. and The Old Road	Residential	50–60	69.5	Conditionally Acceptable
– Between The Old Road and Tourney Rd.	Commercial	50–70	72.3	Conditionally Acceptable
– Between Tourney Rd. and McBean Pkwy.	Residential	50–60	73.2	Normally Unacceptable
– Between McBean Pkwy. and Magic Mountain Pkwy.	Commercial	50–70	71.8	Conditionally Acceptable
– Between Magic Mountain Pkwy. and Bouquet Canyon Rd.	Commercial	50–70	72.4	Conditionally Acceptable
Westridge Parkway				
– North of Valencia Blvd.[c]	Residential, School	50–70	53.2	Normally Acceptable
– South of Valencia Blvd.	Residential	50–60	57.4	Normally Acceptable
Wiley Canyon Road				
– North of Lyons Ave.	Residential	50–60	67.6	Conditionally Acceptable
– South of Lyons Ave.	Commercial, Residential	50–70	63.7	Conditionally Acceptable
Freeway Segments				
Interstate 5 Freeway				
– North of Lake Hughes Rd.	Residential	50–60	77.0	Clearly Unacceptable
– Between Lake Hughes Rd. and Parker Rd.	Residential	50–60	77.0	Clearly Unacceptable
– Between Parker Rd. and Hasley Canyon Rd.	Residential	50–60	78.0	Clearly Unacceptable
– Between Hasley Canyon Rd. and SR–126	Residential, Commercial	50–70	78.9	Clearly Unacceptable

Table 5.13-9 (Continued)
Calculated Existing Roadway Traffic Noise Levels

Roadway Segment	Adjacent Land Uses	Normally Acceptable Noise Level, CNEL dBA	Calculated Traffic Noise Levels[a] CNEL dBA	Existing Noise Exposure Compatibility Category[b]
– Between SR–126 and Rye Canyon Rd.	Hotel, Commercial	50–70	79.5	Normally Unacceptable
– Between Rye Canyon Rd. and Magic Mountain Pkwy.	Hotel, Commercial	50–70	79.8	Normally Unacceptable
– Between Magic Mountain Pkwy. and Valencia Blvd.	Residential, Hotel, Commercial	50–70	80.3	Clearly Unacceptable
– Between Valencia Blvd. and McBean Pkwy.	Golf Course	50–75	80.9	Clearly Unacceptable
– Between McBean Pkwy. and Pico Rd./ Lyons Ave.	Residential, Commercial	50–70	81.1	Clearly Unacceptable
– Between Pico Rd./Lyons Ave. and Calgrove Blvd.	Residential, Commercial	50–70	81.4	Clearly Unacceptable
– Between Calgrove Blvd. and SR–14	Religious, Open Space	50–75	81.5	Clearly Unacceptable
– South of SR–14	Open Space, Residential	50–75	83.7	Clearly Unacceptable

[a] *Predicted noise levels at 75 feet from the roadway centerline for local roadways and 150 feet for I-5.*

[b] *Based on the more stringent noise land use category.*

[c] *Noise calculations reflect existing concrete block walls at the residences.*

Source: AES, 2015.

(4) Existing Ground-Borne Vibration Environment

Based on field observations, the primary sources of existing ground-borne vibration in the Project vicinity are vehicular traffic on local roadways and the rides at Six Flags Magic Mountain. According to the FTA technical study *Federal Transit Administration: Transit Noise and Vibration Impacts Assessments*, typical road traffic-induced vibration levels are unlikely to be perceptible by people. Specifically, the FTA study reports that "[i]t is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads."[11] Trucks and buses typically generate ground-borne vibration velocity levels of approximately 63 VdB at a distance of 50 feet, and these levels could reach 72 VdB when trucks and buses pass over bumps in the road. Per the FTA, 75 VdB is the dividing line between barely perceptible and distinctly perceptible.[12] Therefore, it is expected that the existing ground vibration environment in the vicinity of the Project Site falls below a level that is perceptible.

3. ENVIRONMENTAL IMPACTS

a. Methodology

(1) On-Site Construction Noise

Construction noise impacts were evaluated by calculating the Project-related construction noise levels at nearby sensitive receptor locations and comparing the results to existing ambient noise levels (i.e., noise levels without construction noise) and the County's noise standards for construction activities. Construction noise associated with the Project was analyzed using the anticipated construction equipment inventory, estimated construction durations, and estimated construction phasing. The Project construction noise model is based on construction equipment noise levels as published by the FHWA in its *Roadway Construction Noise Model (FHWA 2006)*. The ambient noise levels at surrounding sensitive receptor locations were estimated based on the field measurement data described above. The construction noise levels were then calculated for the receptor locations based on the standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance.

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[11] *Federal Transit Administration (FTA), "Transit Noise and Vibration Impact Assessment," page 7-1, 2006, www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf, accessed March 4, 2015.*

[12] *FTA, "Transit Noise and Vibration Impact Assessment," Figure 10-1, May 2006, www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf, accessed March 4, 2015.*

(2) Roadway Noise (Operation and Construction)

Project-related off-site roadway noise impacts were analyzed using the FHWA's TNM computer noise model. The TNM is the current Caltrans standard computer noise model for traffic noise studies. The model allows for the input of roadway configurations, noise receivers, and sound barriers, if applicable. The TNM noise model calculates the hourly L_{eq} noise levels based on the number of vehicles provided in the Traffic Study, provided in **Appendix 5.20A** of this Draft EIR. Traffic noise levels were calculated for land uses at a distance of 75 feet from the roadway centerline. Roadway noise impacts were evaluated by comparing the roadway noise under future with-Project conditions with the baseline noise levels that would occur under future without-Project conditions to determine significance. In addition, roadway noise impacts were evaluated by comparing the roadway noise under existing conditions with existing plus Project conditions.

Potential roadway noise impacts to the Project's proposed on-site uses were also analyzed using the FHWA's TNM computer noise model. Traffic noise levels from roadways affecting the on-site uses were calculated at 25 feet, 50 feet, and 100 feet from the edge of the roadway.

(3) Stationary Noise Sources

Outdoor stationary noise impacts were evaluated by identifying the noise levels generated by outdoor stationary noise sources associated with the Project (e.g., mechanical equipment, on-site surface parking lot activities and loading dock activities), calculating the hourly L_{eq} noise level from each noise source at the surrounding sensitive receiver property line locations, and comparing such noise levels to the County's exterior noise standards. For mechanical equipment, a noise performance criterion is specified to meet the County's noise standards since detailed information for this noise source is not available at this stage of the Project.

(4) Ground-Borne Vibration

Ground-borne vibration impacts from construction activities were evaluated by identifying potential vibration sources, estimating the vibration levels at the affected receptor(s), and comparing the levels with the significance thresholds described below. The vibration source levels for various types of construction equipment are based on data provided by the FTA.

b. Proposed Design Elements/Project Design Features

As discussed in **Section 3.0**, Project Description, of this Draft EIR, the proposed Project includes the development of 339 single-family homes, 1,235 multi-family units,

730,000 square feet of commercial uses, a school site, a park, two private recreational facilities, public utilities and infrastructure, open space, and roadway improvements. The Project also includes the extension of Magic Mountain Parkway to the planned Commerce Center Drive extension and the extension of Westridge Parkway to the planned terminus of B Drive.

As it relates to Project construction, Project grading would require the removal and recompaction of approximately 7.8 million cubic yards of existing material in a balanced cut and fill operation. Based on current economic projections, Project development is assumed to occur in phases over approximately nine years following receipt of all necessary entitlements. Accordingly, the analysis herein assumes Project buildout in 2024.

In addition, based on the applicable regulations and requirements previously discussed, the following regulatory compliance measures will apply as part of the Project.

- All construction activity occurring on the Project Site shall adhere to the requirements set forth in Section 12.08.440(A) of the County Noise Ordinance.
- All construction activities near occupied residences shall be restricted to between the hours of 6:30 A.M. and 8:00 P.M. on weekdays and Saturday, and shall be prohibited all Sundays and legal holidays pursuant to Section 12.12.030 of the County Noise Ordinance. Additional restrictions may apply between 7:00 P.M. and 7:00 A.M. pursuant to Section 12.08.440 of the County Noise Ordinance.
- All residential air conditioning equipment installed within the Project shall adhere to the requirements of Section 12.08.530 of the County Noise Ordinance.
- All stationary and point sources of noise occurring on the Project Site shall adhere to the requirements of Section 12.08.390 of the County Noise Ordinance.
- Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between the hours of 10:00 P.M. and 6:00 A.M. in such a manner as to cause a noise disturbance will be prohibited in accordance with Section 12.08.460 of the County Noise Ordinance.
- Loading zones and trash receptacles in commercial areas shall be located away from adjacent residential areas, or provide attenuation so that noise levels at residential uses do not exceed the standards identified in Sections 12.08.460 and 12.08.520 of the County Noise Ordinance.

Furthermore, the following Project design feature (PDF) has been incorporated into the Project's design and will be included in the Mitigation Monitoring and Reporting Program (MMRP) to ensure implementation:

PDF ES 5.13-1: Air conditioning units shall be provided for all residential units that have direct line-of-sight to Westridge Parkway or Magic Mountain Parkway, so that the windows may remained closed without compromising the comfort of the occupants.

c. Significance Thresholds

Based on Appendix G of the CEQA Guidelines and other relevant criteria, the Los Angeles County Department of Regional Planning has determined that a project would have a potentially significant impact related to noise based on the following criteria:

Threshold 5.13-1: Would the project result in exposure of persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?

Threshold 5.13-2: Would the project result in exposure of sensitive receptors (e.g., schools, hospitals, senior citizen facilities) to excessive noise levels?

Threshold 5.13-3: Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?

Threshold 5.13-4: Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?

Threshold 5.13-5: 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 project expose people residing or working in the project area to excessive noise levels?

Threshold 5.13-6: 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?

Threshold 5.13-7: Would the project site be located near a high-noise source (airports, railroads, freeways, industry)?

Threshold 5.13-8: Is the proposed use considered sensitive (school, hospital, senior citizen facility) or are there other sensitive uses in close proximity?

Threshold 5.13-9: Would the project result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

The Project is not located within an airport land use plan or within 2 miles of a public or private airport or within the vicinity of a private airstrip. Therefore, the Project would not

expose people residing or working in the Project area to excessive noise levels associated with a public or private airport or from a private airstrip. As such, no further analysis of Thresholds 5.13-5 and 5.13-6 is necessary.

(1) Determining the Significance of Noise Impacts Under Thresholds 5.13-1 Through 5.13-4

(a) Construction

A significant construction noise impact could occur if sensitive receptors located either within the Project Site or off-site would be subjected to Project-related construction noise levels in excess of the County's Noise Ordinance standards. For mobile source equipment and short-term use of construction equipment (less than 10 days), the significance thresholds are 75 dBA for single-family residences and 80 dBA for multi-family residences between the hours of 7:00 A.M. to 8:00 P.M., every day, except Sundays and legal holidays. At all other times, the construction noise thresholds for these uses are 60 dBA for single-family residences and 64 dBA for multi-family residences. For stationary source equipment and long-term operation of construction equipment (10 days or more), the thresholds are 60 dBA for single-family residences and 65 dBA for multi-family residences between the hours of 7:00 A.M. to 8:00 P.M. every day, except Sundays and legal holidays. At all other times, the noise thresholds for these uses are 50 dBA for single-family residences and 55 dBA for multi-family residences.

(b) Operation

Project-related noise impacts to off-site noise-sensitive uses have been determined based on the standards set forth in Section 12.08.390 of the County Noise Ordinance (see **Table 5.13-4**, County of Los Angeles Exterior Noise Standards), the State Noise Guidelines (see **Table 5.13-3**, Land Use Compatibility for Community Noise Exposure) used by the County, and specific data regarding human responses to changes in noise levels. As discussed above, a change in a noise level of less than 3 dBA is not perceptible by the human ear in the context of the community noise environment. A change of 3 to 5 dBA may be perceptible to some individuals who are extremely sensitive to changes in noise. A 5 dBA increase is readily perceptible. Based on this information, significant off-site noise impacts would occur if Project-related operational activities result in increased noise levels that trigger any of the following:

- An increase in noise level of 5.0 dBA CNEL or greater at a noise-sensitive use results from Project-related activities and the resulting level remains within the "normally acceptable" or "conditionally acceptable" land use compatibility classification from the State Noise Guidelines; or

- An increase in noise level of 3.0 dBA CNEL or greater results from Project-related activities and the resulting noise level falls within the "normally unacceptable" or "clearly unacceptable" land use compatibility classification from the State Noise Guidelines; or

- An increase in noise levels resulting in a change from a "normally acceptable" or "conditionally acceptable" land use compatibility classification to a "normally unacceptable" or "clearly unacceptable" land use compatibility classification; or

- Noise levels from Project-related stationary sources are greater than the County Noise Ordinance standards identified in **Table 5.13-4**, County of Los Angeles Exterior Noise Standards, above.

(2) Determining the Significance of Noise Impacts Under Thresholds 5.13-7 and 5.13-8

A significant on-site noise impact would occur if on-site exterior "frequent use areas" associated with noise-sensitive receptors were exposed to noise levels above the "normally acceptable" levels identified in the State Noise Guidelines utilized by the County (i.e., 60 dBA CNEL for single-family, 65 dBA CNEL for multi-family, 70 dBA CNEL for schools and park uses, and 70 dBA CNEL for commercial uses, as identified in **Table 5.13-3**, Land Use Compatibility for Community Noise Exposure).[13] A significant on-site noise impact would also occur if interior noise levels for residential receptors were to exceed 45.0 dBA CNEL. Finally, if occupants of the Project were subject to exterior noise levels originating from stationary sources located on or off the Project Site that are above County Noise Ordinance standards (see **Table 5.13-4**, County of Los Angeles Exterior Noise Standards), a significant on-site noise impact would occur.

(3) Determining the Significance of Construction and Operational Vibration Impacts Under Threshold 5.13-9

(a) Construction

As discussed above, the FTA has published guidelines for assessing the impacts of ground-borne vibration associated with construction activities and operational activities. The FTA threshold for architectural damage for non-engineered timber and masonry buildings (e.g., most residential structures) is 0.2 in/sec PPV.[14] Therefore, construction

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[13] *A "frequent use area" is an exterior location in which people congregate for recreation or other purposes. Frequent use areas include backyards of single-family residences, outdoor recreation areas in multi-family complexes, active or passive recreational areas in parks, and play areas at schools.*

[14] *Federal Transit Administration, Office of Planning and Environment,* Transit Noise and Vibration Impact Assessment*, FTA-VA-90-1003-06, (2006) 12–13. The Federal Transit Administration recommends that*

(Footnote continued on next page)

related vibration levels that exceed 0.2 in/sec PPV at off-site buildings would be considered significant.

(b) Operation

With respect to ground-borne vibration caused by Project operation, Section 12.08.560 of the County's Noise Ordinance governs vibration. Accordingly, the Project would result in a significant impact if generated vibration were to exceed a motion velocity of 0.01 in/sec over the range of 1 to 100 Hertz.

d. Project Impacts

Threshold 5.13-1: Would the project result in exposure of persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?

Threshold 5.13-2: Would the project result in exposure of sensitive receptors (e.g., schools, hospitals, senior citizen facilities) to excessive noise levels?

Threshold 5.13-3: Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?

Threshold 5.13-4: Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?

Project impacts with respect to Thresholds 5.13-1 through 5.13-4 are addressed in the following combined analysis since these criteria relate to increases in ambient noise levels and exposure of persons to excessive noise.

(1) Construction Noise

The Project is expected to be completed by 2024 and could be developed in phases or all at once. Noise impacts from Project construction activities would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise sensitive receptors. Construction activities would include: site preparation, grading, utility installation, paving, and building construction. Each stage of construction would involve the

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these limits be viewed as "criteria that should be used during the environmental impact assessment phase to identify problem locations that must be addressed during final design."

use of various types of construction equipment and would, therefore, have its own distinct noise characteristics. Noise from construction equipment would generate both steady-state and episodic noise that could be heard within and adjacent to the Project Site.

(a) On-Site Construction Equipment

Individual pieces of construction equipment that would be used for Project construction produce maximum noise levels of 74 dBA to 88 dBA at a reference distance of 50 feet from the noise source, as shown in **Table 5.13-10**, Noise Levels Generated by Typical Construction Equipment, on page 5.13-34. The construction equipment reference noise levels are based on measured noise data from the FHWA.[15] These maximum noise levels would occur when equipment is operating under full power conditions. However, equipment used on construction sites typically operates at less than full power. The acoustical usage factor is the percentage of time that particular equipment is anticipated to be in full power operation during a typical construction day. These values are estimates and will vary based on the actual construction process and schedule.

To characterize construction-period noise levels, the average (hourly L_{eq}) noise level associated with each construction stage was calculated based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage. These noise levels are typically associated with multiple pieces of equipment operating simultaneously. Site preparation generally involves the use of tractors, backhoes, front-end loaders, and heavy-duty trucks. Site grading typically requires the use of earth moving equipment, such as scrapers, tractors, dozers, graders, excavators, front-end loaders, and heavy-duty trucks. Utility installation would utilize excavators, loaders/backhoes, and trucks. Paving typically requires the use of grader, pavers, rollers, and trucks. Building construction typically involves the use of cranes, forklifts, loader/ backhoe, and delivery trucks. **Table 5.13-11**, Noise Levels Generated During Typical Construction, on page 5.13-35, provides the estimated construction equipment that would be used for the various construction phases and the estimated noise levels at a distance of 50 feet. The noisiest phase of construction would occur during site grading when the largest number of heavy pieces of construction equipment would be used, with an estimated noise level of 93 dBA at a distance of 50 feet.

Table 5.13-12, Noise Impacts Associated with On-Site Construction Activities, on page 5.13-36, provides the estimated construction noise levels for various construction stages at the off-site noise sensitive receptors. The estimated noise levels represent a

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[15] *FHWA Roadway Construction Noise Model User's Guide, 2006, www.fhwa.dot.gov/environment/noise/ construction_noise/rcnm/rcnm.pdf, accessed March 4, 2015.*

Table 5.13-10
Noise Levels Generated by Typical Construction Equipment

Type of Equipment	Acoustical Use Factor (%)	Reference Maximum Noise Levels at 50 Feet, L_{max} (dBA)
Air Compressor	40	78
Backhoe	40	78
Compactor	20	83
Concrete Pump	20	79
Concrete Truck	40	81
Crane	16	81
Crawler Tractor	40	84
Rubber Tired Dozer	40	82
Excavator	40	84
Forklift	20	75
Generator	50	81
Grader	40	85
Paver/Paving Equipment	50	77
Roller	20	80
Scraper	40	84
Loader	40	79
Vibrator	20	80
Dump/ Haul/ Delivery Truck	40	76
On-Highway Pick-up	40	76
Off-Highway Truck	40	88
Water Truck	40	76
Welders	40	74

Source: FHWA Roadway Construction Noise Model User's Guide, Table 1, 2006.

worst-case scenario in which all construction equipment was assumed to operate simultaneously and was assumed to be located at the construction area nearest to the affected receptors. These assumptions are considered worst-case since all construction equipment would not generally be operated simultaneously and since construction activities typically would be spread out throughout various portions of the entire site, distant from the affected receptors. Based on these assumptions, as indicated in **Table 5.13-12**, Noise Impacts Associated with On-Site Construction Activities, the estimated construction noise levels at the nearest existing off-site receptors would exceed the applicable significance threshold at existing receptor R3. In addition, the approved residential uses within Mission Village would be located approximately 200 feet west of the Project construction site. These residential uses (if occupied before Project construction occurs) would be exposed to construction noise levels exceeding the relevant threshold. Therefore, noise impacts

Table 5.13-11
Noise Levels Generated During Typical Construction Phases

Construction Phase	Estimated Construction Equipment	Estimated Noise Levels at 50 Feet, Hourly L_{eq} (dBA)
Site Preparation	(2) Crawler Tractors, (2) On-Highway Trucks, (1) Loader/Backhoe	84
Grading	(8) Scrapers, (4) Crawler Tractors, (3) Rubber Tired Dozer, (6) Material Handling Equipment (water truck), (1) Grader, (1) Loader/Backhoe, (1) Off-Highway Truck, (6) On-Highway Pick-Up, (1) Excavator	93
Utility Installation	(2) Excavators, (2) Loaders/Backhoes, (2) On-Highway Trucks, (2) Off-Highway Trucks, (1) Material Handling Equipment	84
Paving	(1) Grader, (1) Paver, (1) Paving Equipment, (1) On-Highway Pick-Up, (1) Roller	83
Building Construction	(1) Crane, (3) Forklifts, (1) Generator Set, (3) Tractor/Loader/Backhoe, (1) Welder	86

Source: Environ, 2015 and AES, 2015.

associated with Project construction activities affecting off-site sensitive uses would be significant without mitigation measures.

With respect to on-site noise-sensitive uses that would be constructed and occupied while additional construction activity is occurring elsewhere on the Project Site, assuming that peak construction site noise would be 86 dBA at a distance of 50 feet (during the building construction phase), construction activities within 1,000 feet of single-family residences could exceed the long-term 60 dBA threshold for stationary equipment. Construction activities within 500 feet of multi-family residences would have the potential to exceed the 65 dBA threshold. Therefore, on-site construction activities could cause the County Noise Ordinance standards to be exceeded for an extended period of time at on-site residential uses constructed during the earlier phases of Project construction. These construction noise impacts would be significant without mitigation.

As discussed above, County requirements restrict construction activities between the hours of 6:30 A.M. and 8:00 P.M. daily and prohibit work on Sundays and holidays. Moreover, the County Department of Public Health has the authority to further restrict construction activities to between the hours of 7:00 A.M. and 7:00 P.M. and any time on Sundays or holidays if such noise would create a noise disturbance across a residential or

Table 5.13-12
Noise Impacts Associated with On-Site Construction Activities

Noise Receptor Location	Distance to Project Construction Area within VTTM/ External Map Improvements (feet)	Estimated Construction Noise Levels by Construction Stages, L_{eq} (dBA)						Significance Threshold,[a] L_{eq} (dBA)
		External Map Improvements	Site Preparation	Site Grading	Utility Installation	Paving	Building Construction	
R1—Six Flags Magic Mountain	50/50	88.8	84.2	93.0	83.7	83.2	86.2	N/A
R2—Office building at northwest corner of Magic Mountain Parkway and The Old Road	450/320	72.6	65.1	74.0	64.6	64.1	67.1	N/A
R3—Westridge community just south of the Project Site	350/160	78.7	67.3	76.1	63.0	62.5	66.5	60
R4—Residential/School use at Westridge community	2,500/2,100	41.3	35.2	44.1	34.7	34.2	37.2	60
R5—Travel Village RV Park	7,100/3,800	41.1	26.2	35.0	25.6	25.2	28.1	60
Mission Village (future residences west of Westridge Parkway)	200/50	88.8[b]	72.2	81.0	71.6	71.2	74.1	60

[a] *Based on the County Noise Ordinance as set forth in* ***Table 5.13-5****, County of Los Angeles Construction Noise Limits.*

[b] *Estimated noise level at 50 feet is provided for informational purposes only, as the External Map Improvements are located within the Mission Village boundaries. Future residences at Mission Village would not be constructed and/or occupied if Entrada South is built first with the External Map Improvements.*

Source: AES, 2015.

commercial real-property line.[16] These restrictions do not, however, necessarily mitigate all construction noise that would be in excess of the Noise Ordinance. Therefore, temporary construction noise impacts to on-site and off-site sensitive receptors would be significant without the incorporation of mitigation measures.

(b) Off-Site Construction Traffic

In addition to on-site construction noise sources, delivery, concrete mixer, and haul trucks, as well as construction worker vehicles, would require access to the Project Site during construction. The major noise sources associated with off-site construction trucks would be delivery trucks. The Project would not involve any external haul truck trips, as grading would be balanced on-site (i.e., soil export would not be necessary). Delivery trucks are expected to access the site via Magic Mountain Parkway from I-5 to the east. There are no noise-sensitive receptors along Magic Mountain Parkway immediately east of the Project Site. Therefore, off-site construction traffic along this roadway would not result in a significant noise impact.

(2) Operational Noise

As the Project builds out, on- and off-site noise levels would increase due to contributions from Project-generated traffic and from commercial, residential, school, and park-related activities on the Project Site itself. These potential noise impacts are discussed separately below.

(a) Off-Site Roadway Noise

(i) Future plus Project

Future roadway noise levels were calculated along 58 off-site local roadway segments and 12 freeway segments in the Project vicinity. The off-site roadway noise levels were calculated using the traffic data provided in the Traffic Study, provided in **Appendix 5.20A** of this Draft EIR. As discussed therein, the Project is expected to generate 35,547 daily trips. Thus, Project-related traffic would increase the traffic volumes along the analyzed roadway segments when compared with future conditions without the Project. This increase in roadway traffic was analyzed to determine if any traffic-related noise impacts would result from Project operation.

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[16] *Los Angeles County Code, Section 12.08.440. Noise disturbance is not defined in the noise ordinance. The County Health Officer has the authority to define and determine the extent of a noise disturbance on a case-by-case basis.*

Table 5.13-13, Off-Site Roadway Traffic Noise Impacts—Future Plus Project, on page 5.13-39, provides a summary of the off-site roadway noise impacts. The calculated CNEL levels are conservative as they do not account for the presence of any physical sound barriers or intervening structures. As shown in **Table 5.13-13**, Off-Site Roadway Traffic Noise Impacts—Future Plus Project, the Project would result in a maximum 7.7 dBA CNEL increase in traffic noise along Magic Mountain Parkway, between Media Center Drive and The Old Road. Although the Project would increase the existing noise level by more than 5 dBA (and, therefore, likely be perceptible), the existing and planned off-site land uses along this segment of Magic Mountain Parkway are commercial uses that are not considered sensitive to noise. Further, these uses would be buffered from the additional Project-related traffic noise by an existing landscaped berm and surface parking area adjacent to the roadway. Moreover, the Project-related traffic noise increase along this roadway segment would not change the land use compatibility classification for the commercial uses at this location to a "normally unacceptable" or "clearly unacceptable" category. Therefore, off-site traffic noise impacts associated with the Project at this roadway segment would be less than significant. The estimated Project-related noise increases at all other analyzed roadway segments would be less than 1.0 dBA CNEL, and would not result in a change to a "normally unacceptable" or "clearly unacceptable" category. Thus, potential impacts at these roadway segments would also be less than significant.

Table 5.13-13
Off-Site Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		2024 Without Project Conditions		2024 With Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
Local Street Segments							
Avenue Stanford							
– North of Rye Canyon Rd.	Commercial, Religious	61.8	Normally Acceptable	61.8	Normally Acceptable	0.0	No
– South of Rye Canyon Rd.	Commercial	62.6	Normally Acceptable	63.1	Normally Acceptable	0.5	No
Bouquet Canyon Road							
– East of Seco Canyon Rd.	Commercial, Residential	72.6	Normally Unacceptable	72.6	Normally Unacceptable	0.0	No
– Between Seco Canyon Rd. and Newhall Ranch Rd.	Commercial, Residential	73.6	Normally Unacceptable	73.6	Normally Unacceptable	0.0	No
– Between Newhall Ranch Rd. and Soledad Canyon Rd.	Commercial	73.0	Conditionally Acceptable	73.0	Conditionally Acceptable	0.0	No
– Between Soledad Canyon Rd. and Magic Mountain Pkwy.	Commercial	71.4	Conditionally Acceptable	71.4	Conditionally Acceptable	0.0	No
Commerce Center Drive							
– North of SR-126	Commercial	68.5	Conditionally Acceptable	68.9	Conditionally Acceptable	0.4	No
– South of SR-126	Open Space	68.4	Normally Acceptable	68.9	Normally Acceptable	0.5	No
Copper Hill Drive							
– North of Decoro Dr.	Residential	72.8	Normally Unacceptable	72.9	Normally Unacceptable	0.1	No
– Between Decoro Dr. and Newhall Ranch Rd.	Commercial, Residential	73.2	Normally Unacceptable	73.2	Normally Unacceptable	0.0	No

Table 5.13-13 (Continued)
Off-Site Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		2024 Without Project Conditions		2024 With Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
Decoro Drive							
– Between Copper Hill Dr. and McBean Pkwy.	Residential, School	70.4	Normally Unacceptable	70.4	Normally Unacceptable	0.0	No
– Between McBean Pkwy. and Seco Canyon Dr.	Commercial, Residential, School,	69.2	Conditionally Acceptable	69.3	Conditionally Acceptable	0.1	No
Lyons Avenue							
– Between I-5 and Wiley Canyon Rd.	Commercial	71.1	Conditionally Acceptable	71.1	Conditionally Acceptable	0.0	No
– Between Wiley Canyon Rd. and Orchard Village Rd.	Commercial, Residential	71.0	Normally Unacceptable	71.1	Normally Unacceptable	0.1	No
– East of Orchard Village Rd.	Commercial, Library, Religious, Residential	71.6	Normally Unacceptable	71.7	Normally Unacceptable	0.1	No
Magic Mountain Parkway							
– Between Commerce Center Drive and Media Center Drive	Commercial[c]	n/a[d]	n/a[d]	64.3	Normally Acceptable	n/a[d]	n/a[d]
– Between Media Center Drive and The Old Road	Commercial[c]	62.2	Normally Acceptable	69.9	Conditionally Acceptable	7.7	No[e]
– Between The Old Road and Tourney Rd.	Commercial	71.7	Conditionally Acceptable	72.5	Conditionally Acceptable	0.8	No
– Between Tourney Rd. and McBean Pkwy.	Commercial, Residential	71.4	Normally Unacceptable	72.2	Normally Unacceptable	0.8	No
– Between McBean Pkwy. and Valencia Blvd.	Commercial	68.9	Conditionally Acceptable	69.1	Conditionally Acceptable	0.2	No

Table 5.13-13 (Continued)
Off-Site Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		2024 Without Project Conditions		2024 With Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
– Between Valencia Blvd. and Bouquet Canyon Rd.	Commercial, Residential	67.6	Conditionally Acceptable	67.8	Conditionally Acceptable	0.2	No
McBean Parkway							
– Between I-5 and Tournament Rd.	School	71.4	Normally Unacceptable	71.5	Normally Unacceptable	0.1	No
– Between Tournament Rd. and Orchard Village Rd.	Residential, Religious	70.0	Normally Unacceptable	70.0	Normally Unacceptable	0.0	No
– Between Orchard Village Rd. and Valencia Blvd.	Commercial, Residential, Hospital	71.5	Normally Unacceptable	71.5	Normally Unacceptable	0.0	No
– Between Valencia Blvd. and Magic Mountain Pkwy.	Commercial, Hotel	72.4	Normally Unacceptable	72.4	Normally Unacceptable	0.0	No
– Between Magic Mountain Pkwy. and Newhall Ranch Rd.	Commercial, Residential	75.1	Clearly Unacceptable	75.2	Clearly Unacceptable	0.1	No
– Between Newhall Ranch Rd. and Decoro Dr.	Residential	73.5	Normally Unacceptable	73.5	Normally Unacceptable	0.0	No
– North of Decoro Dr.	Residential	70.5	Normally Unacceptable	70.5	Normally Unacceptable	0.0	No
Newhall Ranch Road							
– Between Avenue Stanford and Copper Hill Dr.	Commercial, Hotel	74.4	Normally Unacceptable	74.4	Normally Unacceptable	0.0	No
– Between Copper Hill Dr. and Dickason Dr.	Commercial	72.1	Conditionally Acceptable	72.1	Conditionally Acceptable	0.0	No
– Between Dickason Dr. and McBean Pkwy.	Commercial, Residential	73.2	Normally Unacceptable	73.2	Normally Unacceptable	0.0	No

Table 5.13-13 (Continued)
Off-Site Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		2024 Without Project Conditions		2024 With Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
– Between McBean Pkwy. and Bouquet Canyon Rd.	Commercial, Residential, School, Park	74.3	Normally Unacceptable	74.3	Normally Unacceptable	0.0	No
– East of Bouquet Canyon Rd.	Commercial, Residential	72.8	Normally Unacceptable	72.9	Normally Unacceptable	0.1	No
Orchard Village Road							
– Between McBean Pkwy. and Wiley Canyon Rd.	Residential, School	70.0	Normally Unacceptable	70.0	Normally Unacceptable	0.0	No
– Between Wiley Canyon Rd. and Lyons Ave.	Commercial, Residential, School	68.7	Conditionally Acceptable	68.7	Conditionally Acceptable	0.0	No
Pico Canyon Road							
– West of The Old Road	Commercial, Residential, School	68.8	Conditionally Acceptable	68.8	Conditionally Acceptable	0.0	No
– East of The Old Road	Commercial	70.3	Conditionally Acceptable	70.3	Conditionally Acceptable	0.0	No
Rye Canyon Road							
– Between The Old Road and Avenue Stanford	Commercial	71.7	Conditionally Acceptable	71.9	Conditionally Acceptable	0.2	No
– Between Avenue Stanford and Newhall Ranch Rd.	Commercial	70.6	Conditionally Acceptable	70.8	Conditionally Acceptable	0.2	No
Soledad Canyon Road							
– East of Bouquet Canyon Rd.	Commercial	72.4	Conditionally Acceptable	72.4	Conditionally Acceptable	0.0	No

Table 5.13-13 (Continued)
Off-Site Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		2024 Without Project Conditions		2024 With Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
SR-126							
– West of Wolcott Wy.	Agriculture	74.4	Conditionally Acceptable	74.5	Conditionally Acceptable	0.1	No
– Between Wolcott Wy. and Commerce Center Dr.	Open Space, Residential	74.4	Normally Unacceptable	74.5	Normally Unacceptable	0.1	No
– Between Commerce Center Dr. and The Old Road	Agriculture	76.3	Conditionally Acceptable	76.3	Conditionally Acceptable	0.0	No
The Old Road							
– Between Henry Mayo Dr. and Rye Canyon Rd.	Commercial	72.0	Conditionally Acceptable	72.3	Conditionally Acceptable	0.3	No
– Between Rye Canyon Rd. and Magic Mountain Pkwy.	Commercial, Hotel	72.8	Normally Unacceptable	73.4	Normally Unacceptable	0.6	No
– Between Magic Mountain Pkwy. and Valencia Blvd.	Commercial, Residential	68.8	Conditionally Acceptable	69.5	Conditionally Acceptable	0.7	No
– Between Valencia Blvd. and McBean Pkwy.	Open Space, Golf Course, Residential	70.3	Normally Unacceptable	70.5	Normally Unacceptable	0.2	No
– Between McBean Pkwy. and Pico Canyon Rd.	Commercial, Residential	67.7	Conditionally Acceptable	67.7	Conditionally Acceptable	0.0	No
– South of Pico Canyon Rd.	Commercial, Residential, Hotel	64.8	Conditionally Acceptable	64.9	Conditionally Acceptable	0.1	No
Tourney Road							
– Between Magic Mountain Pkwy. and Valencia Blvd.	Commercial	64.9	Normally Acceptable	64.9	Normally Acceptable	0.0	No

Table 5.13-13 (Continued)
Off-Site Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		2024 Without Project Conditions		2024 With Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
Valencia Boulevard							
– West of Westridge Pkwy.	Residential, School	72.9	Normally Unacceptable	73.0	Normally Unacceptable	0.1	No
– Between Westridge Pkwy. and The Old Road	Residential	70.5	Normally Unacceptable	70.5	Normally Unacceptable	0.0	No
– Between The Old Road and Tourney Rd.	Commercial	73.2	Conditionally Acceptable	73.3	Conditionally Acceptable	0.1	No
– Between Tourney Rd. and McBean Pkwy.	Residential	74.2	Normally Unacceptable	74.2	Normally Unacceptable	0.0	No
– Between McBean Pkwy. and Magic Mountain Pkwy.	Commercial	72.8	Conditionally Acceptable	72.8	Conditionally Acceptable	0.0	No
– Between Magic Mountain Pkwy. and Bouquet Canyon Rd.	Commercial	73.4	Conditionally Acceptable	73.4	Conditionally Acceptable	0.0	No
Westridge Parkway							
– North of Valencia Blvd.[f]	Residential, School	54.1	Normally Acceptable	54.3	Normally Acceptable	0.2	No
– South of Valencia Blvd.	Residential	58.3	Normally Acceptable	58.3	Normally Acceptable	0.0	No
Wiley Canyon Road							
– North of Lyons Ave.	Residential	68.5	Conditionally Acceptable	68.5	Conditionally Acceptable	0.0	No
– South of Lyons Ave.	Commercial, Residential	64.7	Conditionally Acceptable	64.7	Conditionally Acceptable	0.0	No

Table 5.13-13 (Continued)
Off-Site Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		2024 Without Project Conditions		2024 With Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
Freeway Segments							
I-5							
– North of Lake Hughes Rd.	Residential	77.9	Clearly Unacceptable	77.9	Clearly Unacceptable	0.0	No
– Between Lake Hughes Rd. and Parker Rd.	Residential	77.9	Clearly Unacceptable	77.9	Clearly Unacceptable	0.0	No
– Between Parker Rd. and Hasley Canyon Rd.	Residential	78.9	Clearly Unacceptable	78.9	Clearly Unacceptable	0.0	No
– Between Hasley Canyon Rd. and SR-126	Residential, Commercial	79.8	Clearly Unacceptable	79.8	Clearly Unacceptable	0.0	No
– Between SR-126 and Rye Canyon Rd.	Hotel, Commercial	80.4	Clearly Unacceptable	80.5	Clearly Unacceptable	0.1	No
– Between Rye Canyon Rd. and Magic Mountain Pkwy.	Hotel, Commercial	80.7	Clearly Unacceptable	80.8	Clearly Unacceptable	0.1	No
– Between Magic Mountain Pkwy. and Valencia Blvd.	Residential, Hotel, Commercial	81.2	Clearly Unacceptable	81.3	Clearly Unacceptable	0.1	No
– Between Valencia Blvd. and McBean Pkwy.	Golf Course	81.8	Clearly Unacceptable	81.9	Clearly Unacceptable	0.1	No
– Between McBean Pkwy. and Pico Rd./ Lyons Ave.	Residential, Commercial	82.1	Clearly Unacceptable	82.1	Clearly Unacceptable	0.0	No
– Between Pico Rd./Lyons Ave. and Calgrove Blvd.	Residential, Commercial	82.4	Clearly Unacceptable	82.4	Clearly Unacceptable	0.0	No
– Between Calgrove Blvd. and SR-14	Religious, Open Space	82.4	Clearly Unacceptable	82.4	Clearly Unacceptable	0.0	No

Table 5.13-13 (Continued)
Off-Site Roadway Traffic Noise Impacts—Future Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		2024 Without Project Conditions		2024 With Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
– South of SR-14	Open Space, Residential	84.6	Clearly Unacceptable	84.6	Clearly Unacceptable	0.0	No

[a] *Predicted noise levels at 75 feet from the roadway centerline for local streets and 150 feet for I-5.*

[b] *Based on the more stringent noise land use category.*

[c] *See **Table 5.13-15**, Calculated Future 2024 plus Project On-Site Roadway Traffic Noise Levels, for an analysis of potential roadway noise impacts to on-site uses adjacent to this roadway segment.*

[d] *Not applicable, as this roadway segment does not currently exist. Estimated noise level is for the future condition, when it is built.*

[e] *The adjacent off-site uses are not noise-sensitive, and the noise classification at this location would continue to remain within the "conditionally acceptable" land use category for such uses. Thus, the impact would be less than significant.*

[f] *Noise calculations reflect existing concrete block walls at the residences.*

Source: AES, 2015.

(ii) Existing plus Project

Additional analysis was undertaken to determine the potential noise impacts based on the increase in noise levels due to Project-related traffic compared with the existing baseline traffic noise conditions. The existing plus Project analysis is considered conservative, as the baseline ambient mobile source noise is expected to increase by the time the Project is built out.

As shown in **Table 5.13-14**, Off-Site Roadway Traffic Noise Impacts—Existing Plus Project, on page 5.13-48, when compared with the existing conditions, the Project would result in a maximum 5.6 dBA and 9.7 dBA CNEL increase in traffic noise along Commerce Center Drive (south of SR-126) and Magic Mountain Parkway (between Media Center Drive and The Old Road), respectively. The traffic noise impacts affecting future sensitive uses located along Commerce Center Drive (south of SR-126) are within the approved, but unbuilt Mission Village project and would be mitigated through mitigation measures adopted in connection with the County's approvals for that project.[17] In addition, the existing and planned off-site commercial uses along Magic Mountain Parkway between Media Center Drive and The Old Road are not considered noise-sensitive uses. Further, these uses would be buffered from the additional Project-related traffic noise by an existing landscaped berm and surface parking area. Moreover, the Project-related traffic noise increase along this roadway segment would not change the land use compatibility classification for the commercial uses at this location to a "normally unacceptable" or "clearly unacceptable" category. Thus, the noise increase at this roadway segment would be less than significant. The estimated increase in noise levels at all other off-site roadway segments would be below 1.2 dBA CNEL, which would be below the significance threshold.

[17] *See Mitigation Measures MV 4.6-5, MV 4.6-6, MV 4.6-7, MV 4.6-10, MV 4.6-11, and MV 4.6-14 within the Mission Village Mitigation Monitoring Plan, available at http://planning.lacounty.gov/assets/upl/case/tr_061105_mitigation-monitoring-program.pdf, accessed April 20, 2015.*

Table 5.13-14
Off-Site Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		Existing Conditions		Existing + Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
Local Street Segments							
Avenue Stanford							
– North of Rye Canyon Rd.	Commercial, Religious	60.8	Normally Acceptable	60.8	Normally Acceptable	0.0	No
– South of Rye Canyon Rd.	Commercial	61.7	Normally Acceptable	62.6	Normally Acceptable	0.9	No
Bouquet Canyon Road							
– East of Seco Canyon Rd.	Commercial, Residential	71.7	Normally Unacceptable	71.7	Normally Unacceptable	0.0	No
– Between Seco Canyon Rd. and Newhall Ranch Rd.	Commercial, Residential	72.7	Normally Unacceptable	72.7	Normally Unacceptable	0.0	No
– Between Newhall Ranch Rd. and Soledad Canyon Rd.	Commercial	72.0	Conditionally Acceptable	72.0	Conditionally Acceptable	0.0	No
– Between Soledad Canyon Rd. and Magic Mountain Pkwy.	Commercial	70.4	Conditionally Acceptable	70.4	Conditionally Acceptable	0.0	No
Commerce Center Drive							
– North of SR-126	Commercial	67.7	Conditionally Acceptable	67.9	Conditionally Acceptable	0.2	No
– South of SR-126	Open Space	62.2	Normally Acceptable	67.8	Normally Acceptable	5.6	No[c]

Table 5.13-14 (Continued)
Off-Site Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		Existing Conditions		Existing + Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
Copper Hill Drive							
– North of Decoro Dr.	Residential	71.9	Normally Unacceptable	72.0	Normally Unacceptable	0.1	No
– Between Decoro Dr. and Newhall Ranch Rd.	Commercial, Residential	72.2	Normally Unacceptable	72.4	Normally Unacceptable	0.2	No
Decoro Drive							
– Between Copper Hill Dr. and McBean Pkwy.	Residential, School	69.1	Conditionally Acceptable	69.5	Conditionally Acceptable	0.4	No
– Between McBean Pkwy. And Seco Canyon Dr.	Commercial, Residential, School,	68.3	Conditionally Acceptable	68.3	Conditionally Acceptable	0.0	No
Lyons Avenue							
– Between I-5 and Wiley Canyon Rd.	Commercial	70.2	Conditionally Acceptable	70.3	Conditionally Acceptable	0.1	No
– Between Wiley Canyon Rd. and Orchard Village Rd.	Commercial, Residential	70.2	Normally Unacceptable	70.3	Normally Unacceptable	0.1	No
– East of Orchard Village Rd.	Commercial, Library, Religious, Residential	70.7	Normally Unacceptable	70.8	Normally Unacceptable	0.1	No
Magic Mountain Parkway							
– Between Commerce Center Drive and Media Center Drive	Commercial[d]	n/a[e]	n/a[e]	49.5	Normally Acceptable	n/a[e]	n/a[e]

Table 5.13-14 (Continued)
Off-Site Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		Existing Conditions		Existing + Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
– Between Media Center Drive and The Old Road	Commercial[d]	61.3	Normally Acceptable	71.0	Conditionally Acceptable	9.7	No[f]
– Between The Old Road and Tourney Rd.	Commercial	70.8	Conditionally Acceptable	72.0	Conditionally Acceptable	1.2	No
– Between Tourney Rd. and McBean Pkwy.	Commercial, Residential	70.5	Normally Unacceptable	71.6	Normally Unacceptable	1.1	No
– Between McBean Pkwy. and Valencia Blvd.	Commercial	67.9	Conditionally Acceptable	68.3	Conditionally Acceptable	0.4	No
– Between Valencia Blvd. and Bouquet Canyon Rd.	Commercial, Residential	66.6	Conditionally Acceptable	66.9	Conditionally Acceptable	0.3	No
McBean Parkway							
– Between I-5 and Tournament Rd.	School	70.4	Normally Unacceptable	70.6	Normally Unacceptable	0.2	No
– Between Tournament Rd. and Orchard Village Rd.	Residential, Religious	69.1	Conditionally Acceptable	69.1	Conditionally Acceptable	0.0	No
– Between Orchard Village Rd. and Valencia Blvd.	Commercial, Residential, Hospital	70.6	Normally Unacceptable	70.6	Normally Unacceptable	0.0	No
– Between Valencia Blvd. and Magic Mountain Pkwy.	Commercial, Hotel	71.5	Normally Unacceptable	71.6	Normally Unacceptable	0.1	No
– Between Magic Mountain Pkwy. and Newhall Ranch Rd.	Commercial, Residential	74.2	Normally Unacceptable	74.3	Normally Unacceptable	0.1	No
– Between Newhall Ranch Rd. and Decoro Dr.	Residential	72.5	Normally Unacceptable	72.7	Normally Unacceptable	0.2	No

Table 5.13-14 (Continued)
Off-Site Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		Existing Conditions		Existing + Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
– North of Decoro Dr.	Residential	69.5	Conditionally Acceptable	69.5	Conditionally Acceptable	0.0	No
Newhall Ranch Road							
– Between Avenue Stanford and Copper Hill Dr.	Commercial, Hotel	73.4	Normally Unacceptable	73.5	Normally Unacceptable	0.1	No
– Between Copper Hill Dr. and Dickason Dr.	Commercial	71.1	Conditionally Acceptable	71.1	Conditionally Acceptable	0.0	No
– Between Dickason Dr. and McBean Pkwy.	Commercial, Residential	72.3	Normally Unacceptable	72.3	Normally Unacceptable	0.0	No
– Between McBean Pkwy. and Bouquet Canyon Rd.	Commercial, Residential, School, Park	73.3	Normally Unacceptable	73.4	Normally Unacceptable	0.1	No
– East of Bouquet Canyon Rd.	Commercial, Residential	71.8	Normally Unacceptable	72.0	Normally Unacceptable	0.2	No
Orchard Village Road							
– Between McBean Pkwy. and Wiley Canyon Rd.	Residential, School	69.1	Conditionally Acceptable	69.1	Conditionally Acceptable	0.0	No
– Between Wiley Canyon Rd. and Lyons Ave.	Commercial, Residential, School	67.8	Conditionally Acceptable	67.8	Conditionally Acceptable	0.0	No

Table 5.13-14 (Continued)
Off-Site Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		Existing Conditions		Existing + Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
Pico Canyon Road							
– West of The Old Road	Commercial, Residential, School	68.0	Conditionally Acceptable	68.0	Conditionally Acceptable	0.0	No
– East of The Old Road	Commercial	70.0	Conditionally Acceptable	69.3	Conditionally Acceptable	-0.7	No
Rye Canyon Road							
– Between The Old Road and Avenue Stanford	Commercial	70.7	Conditionally Acceptable	71.3	Conditionally Acceptable	0.6	No
– Between Avenue Stanford and Newhall Ranch Rd.	Commercial	69.6	Conditionally Acceptable	70.0	Conditionally Acceptable	0.4	No
Soledad Canyon Road							
– East of Bouquet Canyon Rd.	Commercial	71.5	Conditionally Acceptable	71.6	Conditionally Acceptable	0.1	No
SR–126							
– West of Wolcott Wy.	Agriculture	73.4	Conditionally Acceptable	73.5	Conditionally Acceptable	0.1	No
– Between Wolcott Wy. and Commerce Center Dr.	Open Space, Residential	73.4	Normally Unacceptable	73.5	Normally Unacceptable	0.1	No
– Between Commerce Center Dr. and The Old Road	Agriculture	75.5	Conditionally Acceptable	75.5	Conditionally Acceptable	0.0	No

Table 5.13-14 (Continued)
Off-Site Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		Existing Conditions		Existing + Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
The Old Road							
– Between Henry Mayo Dr. and Rye Canyon Rd.	Commercial	71.1	Conditionally Acceptable	71.5	Conditionally Acceptable	0.4	No
– Between Rye Canyon Rd. and Magic Mountain Pkwy.	Commercial, Hotel	71.9	Normally Unacceptable	72.9	Normally Unacceptable	1.0	No
– Between Magic Mountain Pkwy. and Valencia Blvd.	Commercial, Residential	68.0	Conditionally Acceptable	68.6	Conditionally Acceptable	0.6	No
– Between Valencia Blvd. and McBean Pkwy.	Open Space, Golf Couse, Residential	69.3	Conditionally Acceptable	69.5	Conditionally Acceptable	0.2	No
– Between McBean Pkwy. and Pico Canyon Rd.	Commercial, Residential	66.7	Conditionally Acceptable	66.7	Conditionally Acceptable	0.0	No
– South of Pico Canyon Rd.	Commercial, Residential, Hotel	63.9	Conditionally Acceptable	64.0	Conditionally Acceptable	0.1	No
Tourney Road							
– Between Magic Mountain Pkwy. and Valencia Blvd.	Commercial	63.9	Normally Acceptable	64.1	Normally Acceptable	0.2	No
Valencia Boulevard							
– West of Westridge Pkwy.	Residential, School	72.0	Normally Unacceptable	72.0	Normally Unacceptable	0.0	No
– Between Westridge Pkwy. and The Old Road	Residential	69.5	Conditionally Acceptable	69.5	Conditionally Acceptable	0.0	No

Table 5.13-14 (Continued)
Off-Site Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		Existing Conditions		Existing + Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
– Between The Old Road and Tourney Rd.	Commercial	72.3	Conditionally Acceptable	72.4	Conditionally Acceptable	0.1	No
– Between Tourney Rd. and McBean Pkwy.	Residential	73.2	Normally Unacceptable	73.2	Normally Unacceptable	0.0	No
– Between McBean Pkwy. and Magic Mountain Pkwy.	Commercial	71.8	Conditionally Acceptable	71.8	Conditionally Acceptable	0.0	No
– Between Magic Mountain Pkwy. and Bouquet Canyon Rd.	Commercial	72.4	Conditionally Acceptable	72.5	Conditionally Acceptable	0.1	No
Westridge Parkway							
– North of Valencia Blvd.[g]	Residential, School	53.2	Normally Acceptable	53.3	Normally Acceptable	0.1	No
– South of Valencia Blvd.	Residential	57.4	Normally Acceptable	57.4	Normally Acceptable	0.0	No
Wiley Canyon Road							
– North of Lyons Ave.	Residential	67.6	Conditionally Acceptable	67.6	Conditionally Acceptable	0.0	No
– South of Lyons Ave.	Commercial, Residential	63.7	Conditionally Acceptable	63.8	Conditionally Acceptable	0.1	No

Table 5.13-14 (Continued)
Off-Site Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		Existing Conditions		Existing + Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
Freeway Segments							
I-5							
– North of Lake Hughes Rd.	Residential	77.0	Clearly Unacceptable	77.0	Clearly Unacceptable	0.0	No
– Between Lake Hughes Rd. and Parker Rd.	Residential	77.0	Clearly Unacceptable	77.0	Clearly Unacceptable	0.0	No
– Between Parker Rd. and Hasley Canyon Rd.	Residential	78.0	Clearly Unacceptable	78.0	Clearly Unacceptable	0.0	No
– Between Hasley Canyon Rd. and SR-126	Residential, Commercial	78.9	Clearly Unacceptable	78.9	Clearly Unacceptable	0.0	No
– Between SR-126 and Rye Canyon Rd.	Hotel, Commercial	79.5	Normally Unacceptable	79.6	Normally Unacceptable	0.1	No
– Between Rye Canyon Rd. and Magic Mountain Pkwy.	Hotel, Commercial	79.8	Normally Unacceptable	79.9	Normally Unacceptable	0.1	No
– Between Magic Mountain Pkwy. and Valencia Blvd.	Residential, Hotel, Commercial	80.3	Clearly Unacceptable	80.4	Clearly Unacceptable	0.1	No
– Between Valencia Blvd. and McBean Pkwy.	Golf Course	80.9	Clearly Unacceptable	81.0	Clearly Unacceptable	0.1	No
– Between McBean Pkwy. and Pico Rd./ Lyons Ave.	Residential, Commercial	81.1	Clearly Unacceptable	81.2	Clearly Unacceptable	0.1	No
– Between Pico Rd./Lyons Ave. and Calgrove Blvd.	Residential, Commercial	81.4	Clearly Unacceptable	81.5	Clearly Unacceptable	0.1	No

Table 5.13-14 (Continued)
Off-Site Roadway Traffic Noise Impacts—Existing Plus Project

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels,[a] CNEL				Increase in Noise Levels due to Project, CNEL	Significant Impacts
		Existing Conditions		Existing + Project Conditions			
		Noise Level	Noise Exposure Compatibility Category[b]	Noise Level	Noise Exposure Compatibility Category[b]		
– Between Calgrove Blvd. and SR-14	Religious, Open Space	81.5	Clearly Unacceptable	81.5	Clearly Unacceptable	0.0	No
– South of SR-14	Open Space, Residential	83.7	Clearly Unacceptable	83.7	Clearly Unacceptable	0.0	No

[a] *Predicted noise levels at 75 feet from the roadway centerline for local streets and 150 feet for I-5.*

[b] *Based on the more stringent noise land use category.*

[c] *No significant impact anticipated, as mitigation measures specified for the Mission Village project would reduce the traffic noise levels at the future off-site sensitive uses along Commerce Center Drive (i.e., within Mission Village) to a less-than-significant level.*

[d] *See **Table 5.13-15**, Calculated Future 2024 plus Project On-Site Roadway Traffic Noise Levels, for an analysis of potential roadway noise impacts to on-site uses adjacent to this roadway segment.*

[e] *Not applicable, as this roadway segment does not currently exist. Estimated noise level is for the future condition, when it is built.*

[f] *The adjacent off-site uses are not noise-sensitive, and the noise classification at this location would continue to remain within the "conditionally acceptable" land use category for such uses. Thus, the impact would be less than significant.*

[g] *Noise calculations reflect existing concrete block walls at the residences.*

Source: AES 2015.

(b) On-Site Roadway Noise Impacts

An analysis of the noise levels that would be produced within the Project's internal roadway system was also prepared. **Table 5.13-15**, Calculated Future 2024 plus Project On-Site Roadway Traffic Noise Levels, on page 5.13-58, provides the estimated noise levels along the internal on-site roadway segments. As indicated therein, the estimated traffic noise levels along A Street, B Street, and Westridge Parkway would be below the normally acceptable land use category for nearby future uses. The future multi-family residential uses adjacent to the Magic Mountain Parkway extension could be exposed to traffic noise levels in excess of the normally acceptable noise level of 65 dBA CNEL for multi-family residences. However, as described below, mitigation measures would reduce this impact to a less than significant level.

Table 5.13-15
Calculated Future 2024 plus Project On-Site Roadway Traffic Noise Levels

Roadway Segment	Adjacent Future Land Uses	Normally Acceptable Noise Level,[a] CNEL	Calculated Traffic Noise Levels at Various Distance from the Edge of the Roadways,[a] CNEL		
			At 25 feet	At 50 feet	At 100 feet
A Street					
– Between Commerce Center and Magic Mountain Pkwy.	Office/Commercial	70	63.4	61.9	59.7
– Between Magic Mountain Pkwy. and B Street	Multi-Family Residential, School	65	61.2	59.7	57.5
– Between B St. and Magic Mountain Pkwy.	Multi-Family Residential	65	60.4	58.9	56.7
B Street					
– East of Westridge Pkwy.	Single-Family Residential	60	59.4	57.9	55.7
– West of A Street	Single-Family Residential, School	60	58.2	56.7	54.5
Westridge Parkway					
– South of B Street	Single-Family Residential	60	56.5	54.9	52.7
Magic Mountain Parkway					
– Between The Old Road and Media Center/A Street	Multi-Family Residential, Office/Commercial	65	68.7	67.5	65.7
– Between Media Center/A Street and A Street	Multi-Family Residential	65	67.2	66.0	64.2
– Between A Street and Commerce Center	Multi-Family Residential, Office/Commercial	65	66.5	65.3	63.5

[a] *Based on the more stringent noise land use category.*

Source: AES, 2015.

(c) Impacts at Off-Site Receptors

The ambient noise levels associated with the addition of Project-related mobile source (i.e., traffic) noise at off-site sensitive receptors were also analyzed. The closest existing off-site sensitive receptors are the existing residential units (55 sensitive receptors) south of the Project Site within the Westridge community. Because of the Project Site's distance to other sensitive receptors and intervening topography, these are the existing noise-sensitive uses in the Project study area that could potentially experience significant ambient noise level increases due to development of the Project.[18] In addition, there are planned residential uses within the approved Mission Village development adjacent to the Project Site to the west.

The existing ambient CNEL noise levels at the first row of residential units directly south of the Project Site were measured and account for noise generated by Six Flags Magic Mountain and traffic on nearby roadways (e.g., Magic Mountain Parkway, The Old Road, and I-5). **Table 5.13-16**, Calculated Existing vs. 2024 plus Project Noise Levels at Nearest Existing Off-Site Sensitive Receptors—CNEL, on page 5.13-60, shows the existing noise levels at each sensitive receptor, the estimated noise level at each sensitive receptor under 2024 plus Project conditions, the difference between the two measurements, and a determination as to whether the change exceeds threshold criteria. As indicated therein, the maximum noise increase would be 2.3 dBA, which would fall below the most stringent 3-dBA significance threshold. Therefore, impacts would be less than significant. **Figure 5.13-3**, Future 2024 With Project Noise Contours, 24-Hour CNEL dBA, on page 5.13-62, depicts the noise contour lines at the 55 sensitive receptors under 2024 plus Project Conditions as measured in dBA CNEL.

The Project would include various on-site stationary noise sources typical of residential, commercial, school, and park uses that would generate noise. These noise sources typically include: outdoor mechanical equipment (e.g., HVAC and air conditioning equipment), parking areas, and loading docks/trash collection (for commercial uses). The residential use air conditioning equipment would be designed to meet applicable requirements in the County Noise Ordinance (Section 12.08.530), which limit noise levels to a maximum of 50 dBA at the adjacent on-site property. Similarly, mechanical equipment associated with the proposed commercial development would be designed so as not to exceed 45 dBA at the nearest residential property or 55 dBA at the nearest commercial property per the County Noise Ordinance (Section 12.08.390). Based on compliance with these requirements, impacts from air conditioning and mechanical equipment affecting

[18] *The geographic limits of the Project study area are defined in the Traffic Study, provided in* ***Appendix 5.20A*** *of this EIR.*

Table 5.13-16
Calculated Existing vs. 2024 plus Project Noise Levels at Nearest Existing Off-Site Sensitive Receptors—CNEL

Sensitive Receptor	Existing CNEL dBA	2024 + Project CNEL dBA	Increase in Noise Levels CNEL dBA	Threshold of Significance dBA	Significant Impact
H1	45.1	47.0	1.9	5	No
H2	45.3	47.2	1.9	5	No
H3	45.5	47.4	1.9	5	No
H4	46.0	48.2	2.2	5	No
H5	46.2	48.5	2.3	5	No
H6	46.7	48.9	2.2	5	No
H7	47.0	49.0	2.0	5	No
H8	47.1	49.1	2.0	5	No
H9	47.1	49.2	2.1	5	No
H10	47.3	49.4	2.1	5	No
H11	47.7	49.6	1.9	5	No
H12	48.2	50.0	1.8	5	No
H13	48.2	49.8	1.6	5	No
H14	48.5	50.1	1.6	5	No
H15	48.8	50.4	1.6	5	No
H16	48.0	49.0	1.0	5	No
H17	48.5	49.4	0.9	5	No
H18	48.8	49.7	0.9	5	No
H19	47.7	48.0	0.3	5	No
H20	48.0	48.2	0.2	5	No
H21	48.3	48.5	0.2	5	No
H22	50.6	51.6	1.0	5	No
H23	51.2	52.2	1.0	5	No
H24	52.2	53.3	1.1	5	No
H25	50.1	51.2	1.1	5	No
H26	50.9	52.0	1.1	5	No
H27	51.1	52.2	1.1	5	No
H28	51.2	52.3	1.1	5	No
H29	52.1	53.2	1.1	5	No
H30	52.9	53.9	1.0	5	No
H31	53.1	54.1	1.0	5	No
H32	53.3	54.3	1.0	5	No
H33	53.6	54.6	1.0	5	No
H34	53.9	54.9	1.0	5	No
H35	54.4	55.5	1.1	5	No
H36	55.0	56.1	1.1	5	No
H37	55.4	56.4	1.0	5	No
H38	56.7	57.8	1.1	5	No
H39	57.7	58.7	1.0	5	No
H40	59.0	60.0	1.0	5	No

Table 5.13-16 (Continued)
Calculated Existing vs. 2024 plus Project Noise Levels at Nearest Existing Off-Site Sensitive Receptors—CNEL

Sensitive Receptor	Existing CNEL dBA	2024 + Project CNEL dBA	Increase in Noise Levels CNEL dBA	Threshold of Significance dBA	Significant Impact
H41	57.7	58.7	1.0	5	No
H42	58.5	59.5	1.0	5	No
H43	58.7	59.8	1.1	5	No
H44	58.9	59.9	1.0	5	No
H45	59.6	60.5	0.9	5	No
H46	60.8	61.8	1.0	5	No
H47	60.2	61.2	1.0	5	No
H48	60.7	61.7	1.0	5	No
H49	61.3	62.3	1.0	5	No
H50	61.9	62.9	1.0	5	No
H51	62.9	63.9	1.0	5	No
H52	63.2	64.3	1.1	5	No
H53	64.1	65.2	1.1	5	No
H54	65.3	66.3	1.0	5	No
H55	66.5	67.5	1.0	5	No

Source: AES, 2015.

off-site sensitive receptors, including the existing residential uses within the Westridge community to the south and the future residential uses within the approved Mission Village community to the west would be less than significant.

Other on-site noise sources associated with the proposed commercial uses include parking areas (i.e., vehicle movement, doors closing, human voices, and intermittent car alarms) and loading/trash collection. However as shown in the Exhibit Map for VTTM 53295, provided within **Appendix 3** of this Draft EIR, nearly all surface and structured parking associated with the commercial development in Planning Areas 1 through 3 would be located behind the associated office and commercial buildings, which would provide shielding to the on-site sensitive uses (i.e., residential uses on the south side of Magic Mountain Parkway), as well as the more distant off-site sensitive uses. Moreover, the proposed commercial uses are a minimum of 1,200 feet from the off-site sensitive uses within the Westridge and approved Mission Village communities and would be further shielded by other intervening buildings. The commercial areas in Planning Area 14 would also be separated from on- and off-site residential uses by hillsides that would shield noise from parking areas. In addition, loading and unloading activities would comply with the County Noise Ordinance, which limits loading activities during the nighttime hours of 10:00 P.M. to 6:00 A.M. so as not to cause disturbance. Therefore, off-site noise impacts

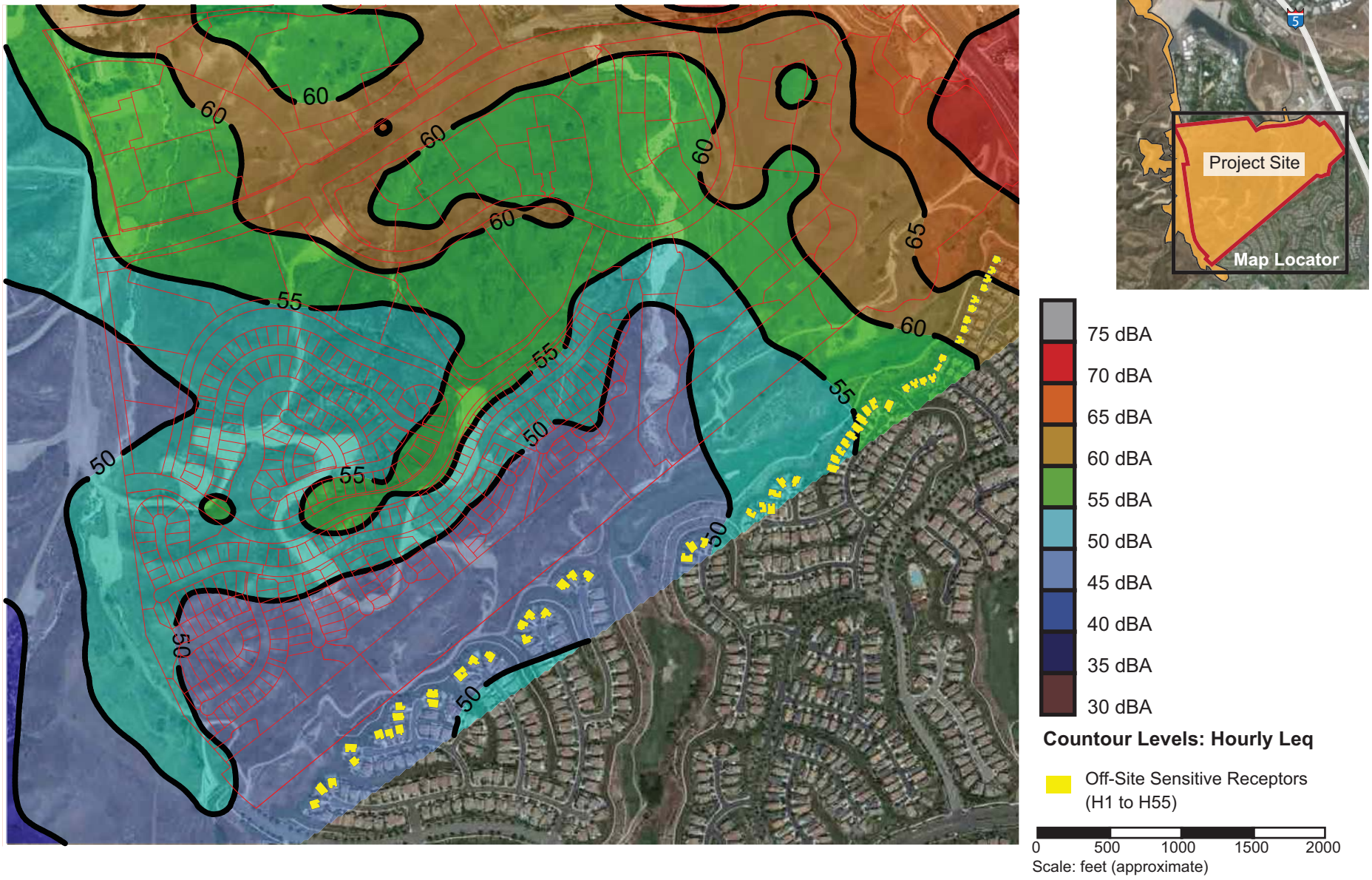

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Figure 5.13-3
Future 2024 With Project Noise Contours, 24-Hour CNEL dBA

Source: Acoustical Engineering Services, 2014.

due to stationary noise sources associated with the proposed commercial development would be less than significant.

Threshold 5.13-7: Would the project site be located near a high-noise source (airports, railroads, freeways, industry)?

As discussed above, the existing noise environment in the Project Site vicinity is primarily comprised of auto traffic on local roadways. Specifically, the Project Site is located adjacent to The Old Road and Magic Mountain Parkway, and is approximately 450 feet from I-5. The Project Site would also experience noise from operations at the adjacent Six Flags Magic Mountain.

The nearest proposed uses to I-5 are office/commercial uses within Planning Area 14, which would be approximately 450 feet from I-5. The nearest proposed residential use to I-5 would be the multi-family residential uses within Planning Area 12, which would be approximately 1,000 feet away. In addition, as discussed above, Six Flags Magic Mountain is located to the immediate north of the Project Site. The nearest proposed uses to the Theme Park are office/commercial uses within Planning Areas 1 through 3 to the immediate south, while the nearest proposed residential use would be approximately 350 feet away.

With respect to noise compatibility, as shown in **Figure 5.13-3**, Future 2024 With Project Noise Contours, 24-Hour CNEL dBA, without mitigation, a small portion of the multi-family uses within Planning Area 12 would be exposed to noise levels that would be just within the normally acceptable noise compatibility category for multi-family uses. However, as discussed above, mitigation is proposed to address roadway noise within this portion of the Project Site. As shown in **Figure 5.13-5**, 2024 Cumulative With Project Noise Contours, 24-Hour CNEL dBA—With Mitigation, on page 5.13-86 later in this section, with the proposed mitigation measures, future noise levels within the Project Site, which include noise from nearby roadways and regular operations at Six Flags Magic Mountain, would not exceed the “normally acceptable” categories for any of the proposed uses.

Threshold 5.13-8: Is the proposed use considered sensitive (school, hospital, senior citizen facility) or are there other sensitive uses in close proximity?

The Project includes residential uses, a school, and a park. These uses are considered sensitive to noise. Operation of the Project would be required to comply with the regulatory requirements set forth above relating to operational noise. Thus, exterior noise levels originating from stationary sources located would not exceed the County Noise Ordinance standards. As discussed above and shown in **Figure 5.13-3**, Future 2024 With

Project Noise Contours, 24-Hour CNEL dBA, future CNEL noise levels within the Project Site would be the highest near Planning Area 12, which includes multi-family residential uses. Without mitigation, noise levels within a small portion of the multi-family uses within Planning Area 12 would be exposed to noise levels that would be just within the normally acceptable noise compatibility category for multi-family uses. These impacts would be less than significant. Nonetheless, as discussed above, mitigation is proposed to address roadway noise within the Project Site. Thus, as shown in **Figure 5.13-5**, 2024 Cumulative With Project Noise Contours, 24-Hour CNEL dBA—With Mitigation, on page 5.13-86 later in this section, with the proposed mitigation measures, future noise levels within the Project Site, which include noise from nearby roadways and regular operations at Six Flags Magic Mountain, would be well within the "normally acceptable" categories for all of the proposed uses. Please refer to the analyses above regarding potential impacts to off-site noise sensitive uses.

Threshold 5.13-9: Would the project result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and type of construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site varies depending on soil type, ground strata, and construction characteristics of the receptor buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Ground-borne vibrations from construction activities rarely reach the levels that damage structures. As described above, the FTA has published standard vibration velocities for construction equipment operations. The reference vibration levels (peak particle velocities, or PPV) for construction equipment types anticipated to be used during Project construction are listed in **Table 5.13-17**, Construction Vibration Impacts, on page 5.13-65.

As indicated in **Table 5.13-17**, Construction Vibration Impacts, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.003 inch per second (PPV) for a small bulldozer to 0.210 inch per second (PPV) for a vibratory roller at 25 feet from the equipment. Ground-borne vibration decreases rapidly with distance. Estimated vibration levels at the nearest off-site structures are shown in **Table 5.13-17**, Construction Vibration Impacts. As shown therein, the nearest existing off-site structure, a commercial building at the southwest corner of Magic Mountain Parkway and The Old Road, would be exposed to a maximum vibration level of 0.074 inch per second (PPV) from vibratory roller equipment. The nearest existing off-site residential receptors are located approximately 350 feet away and would be exposed to a

Table 5.13-17
Construction Vibration Impacts

Construction Equipment	Reference Vibration Levels at 25 feet, PPV (inch/second)[a]	Estimated Vibration Levels at Indicated Distance from the Project Construction Equipment, PPV (inch/second)[b]		
		50 feet (Nearest Off-Site Building to the North)[c]	180 feet (Nearest Off-Site Building to the East)[d]	350 feet (Nearest Off-Site Building to the South)[e]
Vibratory Roller	0.210	0.074	0.011	0.004
Large Bulldozer	0.089	0.032	0.005	0.002
Caisson Drilling	0.089	0.032	0.005	0.002
Loaded Trucks	0.076	0.027	0.004	0.002
Small Bulldozer	0.003	0.001	<0.001	<0.001

[a] *FTA, Transit Noise and Vibration Impact Assessment, Table 12-2, 2006.*

[b] *PPV at distance D = PPVref x (25/D)$^{1.5}$.*

[c] *Commercial building at the southwest corner of Magic Mountain Parkway and The Old Road.*

[d] *Commercial building on the east side of The Old Road.*

[e] *Residential building within the Westridge community south of the Project Site.*

Source: AES, 2015.

maximum vibration level of 0.004 inch per second (PPV). In addition, the nearest future buildings within the Mission Village project to the west would be approximately 40 feet to the closest Project construction area and would be exposed to maximum vibration level of 0.104 inch per second (PPV). These vibration values are well below the 0.2- and 0.5-inch-per-second (PPV) significance thresholds previously described. Therefore, vibration impacts associated with the Project's on-site construction activities would be less than significant.

The primary sources of vibration associated with operation of the Project would include passenger vehicle circulation on the local roadways, within the proposed parking facilities, and on-site delivery truck activity. In addition, the Project would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, air condenser units, cooling towers, exhaust air fans, and electrical power generators that would produce vibration. As previously discussed, ground-borne vibration typically attenuates rapidly as a function of distance from the vibration source. Furthermore, the majority of the Project's operation-related vibration sources, such as mechanical and electrical equipment, would incorporate vibration attenuation mounts as required by the particular equipment specifications. Thus, Project-related vibration levels at the off-site sensitive receptors would be below the 0.01 inch per second significance threshold. Therefore, operation of the Project would not substantially increase existing vibration levels

in the immediate vicinity of the Project Site, and as such vibration impacts associated with Project operation would be less than significant.

4. CUMULATIVE IMPACTS

The geographic context for the cumulative impact analysis of noise is the immediate Project vicinity, as such impacts are typically localized. Of the related projects identified in **Table 4.2-1**, Related Projects, and **Figure 4.2-1**, Related Projects Map, in **Section 4.2**, Cumulative Impact Analysis Methodology, of this Draft EIR, only four are located in the immediate area, as discussed further below.

(1) Construction Noise

Noise from construction of development projects is typically localized and has the potential to affect areas within 500 feet of the construction site. Thus, noise from construction activities for two projects within 1,000 feet of each other can contribute to a cumulative noise impact for receptors located midway between the two construction sites. While the majority of the related projects are located a substantial distance from the Project Site, the following related projects are within 1,000 feet of the Project Site:

- Related Project No. 1: Mission Village, located adjacent to the Project Site to the west;
- Related Project No. 3: Legacy Village, located adjacent to the southwest corner of the Project Site and further to the west;
- Related Project No. 5: Entrada North, adjacent to the Project Site to the north; and
- Related Project No. 17: Parcel Map 18654, located immediately north of Magic Mountain Parkway and west of The Old Road, adjacent to the Project Site.

Construction activities from these related projects would generate noise at each site, and cumulative construction noise could exceed ambient noise levels at the nearest noise-sensitive uses. Therefore, if construction of these projects were to occur concurrently with the Project, the related projects could contribute to a cumulative impact on residential uses located near or between the related projects and the Project Site. Specifically, if construction of Related Projects No. 1 (Mission Village) and No. 3 (Legacy Village) were to occur concurrently with the Project, the cumulative noise impact would be significant at the residences within the northwestern portion of the Westridge community, which have direct line-of-sight to the Project Site and those related projects. Similarly, if construction of Related Projects No. 5 (Entrada North) and No. 17 (Tract 18654) were to occur concurrently, a significant cumulative noise impact would occur at a nearby hotel use

located on The Old Road just north of Magic Mountain Parkway. However, noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed mitigation measures for each individual related project and compliance with the County Noise Ordinance. Nonetheless, even with proposed mitigation measures, if nearby related projects were to be constructed concurrently with the proposed Project, significant and unavoidable cumulative construction noise impacts could occur.

Potential vibration impacts due to construction activities are generally limited to buildings/structures located in close proximity to the construction site (i.e., within 50 feet). Therefore, due to the rapid attenuation characteristics of ground-borne vibration and the distance to the nearest noise sensitive receptors, cumulative construction impacts with respect to ground-borne vibration would be less than significant.

(2) Operational Noise

(a) Cumulative Off-Site Roadway Noise

The Project and other related development in the area would produce traffic volumes that would generate roadway noise. Future cumulative conditions include traffic volumes associated with future related projects, other forecasted cumulative growth, and the Project.

Cumulative noise impacts due to off-site traffic were analyzed by identifying the projected increase in traffic noise levels under cumulative with Project conditions, as well as the Project's incremental contribution to that condition. As further described below, significant impacts were identified based on the noise sensitivity of the adjacent land uses, consideration of the resulting land use compatibility classification (i.e., acceptable or unacceptable), and the perceptibility of the noise level increase.

Where the cumulative with Project land use compatibility classification is "normally acceptable" or "conditionally acceptable," the Project's incremental contribution to the cumulative noise condition is considered significant if: (1) the cumulative with Project noise level at a noise-sensitive use is 5 dBA or more than the existing noise level, and the Project's contribution is what causes that cumulative with Project noise level to exceed 5 dBA above the existing noise level; or (2) the cumulative without Project noise level at a noise-sensitive use is 5 dBA or more than the existing noise level, and the Project adds 3 dBA or more to that cumulative without Project noise level.

Where the cumulative with Project land use compatibility classification is "normally unacceptable" or "clearly unacceptable," the Project's incremental contribution to the

cumulative noise condition is considered significant if: (1) the cumulative with Project noise level is 3 dBA or more than the existing noise level, and the Project's contribution is what causes that cumulative with Project noise level to exceed 3 dBA over the existing noise level; or (2) the cumulative without Project noise level is 3 dBA or more than the existing noise level, and the Project adds 3 dBA or more to that cumulative without Project noise level.

The Project's incremental contribution to the cumulative noise condition is also considered significant if the Project causes the cumulative with Project noise level to change the land use compatibility classification from "normally acceptable" or "conditionally acceptable" to "conditionally unacceptable" or "clearly unacceptable."

The calculated traffic noise levels under existing and cumulative conditions are presented in **Table 5.13-18**, 2024 Cumulative Off-Site Roadway Noise Impacts, on page 5.13-69. At the roadway segment of Westridge Parkway, north of Valencia Boulevard, related project development (i.e., cumulative without Project conditions) would increase the existing noise level by 4.9 dBA. The Project's incremental increase of 0.4 dBA would cause the cumulative noise level to increase to a total of 5.3 dBA over the existing noise level. Thus, although the Project's incremental noise increase would not be perceptible in the context of the community noise environment, it would cause the cumulative with Project noise level to exceed 5 dBA adjacent to a noise-sensitive use. Therefore, the Project's incremental contribution at this roadway segment would be cumulatively considerable and significant. Note that, notwithstanding this conclusion, cumulative with Project noise levels at this roadway segment would be "normally acceptable" for purposes of the land use compatibility classification. At all other roadway segments, the Project's incremental contribution to the cumulative noise levels would not be cumulatively considerable.

In summary, based on the analysis presented in **Table 5.13-18**, 2024 Cumulative Off-Site Roadway Noise Impacts, while the cumulative with Project condition would exceed the applicable criteria at certain locations, because the Project's incremental noise contribution would not be cumulatively considerable, the Project's cumulative impact would be less than significant at these locations. However, the Project's contribution to the cumulative noise condition at Westridge Parkway, north of Valencia Boulevard would be cumulatively considerable and, therefore, the Project's cumulative impact at this location would be significant.

Table 5.13-18
2024 Cumulative Off-Site Roadway Noise Impacts

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels[a] CNEL						Increase in Noise Levels, CNEL		Significant Impacts
		Existing		2024 Cumulative Without Project Conditions		2024 Cumulative With Project Conditions		2024 Cumulative with Project Compared to Existing Conditions	2024 Cumulative with Project Compared to 2024 Cumulative without Project Conditions	
		Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category			
Local Street Segments										
Avenue Stanford										
– North of Rye Canyon Rd.	Commercial, Religious	60.8	Normally Acceptable	61.9	Normally Acceptable	61.9	Normally Acceptable	1.1	0.0	No
– South of Rye Canyon Rd.	Commercial	61.7	Normally Acceptable	63.0	Normally Acceptable	63.2	Normally Acceptable	1.5	0.2	No
Bouquet Canyon Road										
– East of Seco Canyon Rd.	Commercial, Residential	71.7	Normally Unacceptable	71.8	Normally Unacceptable	71.8	Normally Unacceptable	0.1	0.0	No
– Between Seco Canyon Rd. and Newhall Ranch Rd.	Commercial, Residential	72.7	Normally Unacceptable	73.5	Normally Unacceptable	73.5	Normally Unacceptable	0.8	0.0	No
– Between Newhall Ranch Rd. and Soledad Canyon Rd.	Commercial	72.0	Conditionally Acceptable	74.1	Conditionally Acceptable	74.2	Conditionally Acceptable	2.2	0.1	No
– Between Soledad Canyon Rd. and Magic Mountain Pkwy.	Commercial	70.4	Conditionally Acceptable	71.8	Conditionally Acceptable	71.8	Conditionally Acceptable	1.4	0.0	No
Commerce Center Drive										
– North of SR–126	Commercial	67.7	Conditionally Acceptable	70.6	Conditionally Acceptable	70.7	Conditionally Acceptable	3.0	0.1	No
– South of SR–126	Commercial, Residential	62.2	Conditionally Acceptable	71.7	Normally Unacceptable	71.9	Normally Unacceptable	9.7	0.2	No[e]
Copper Hill Drive										
– North of Decoro Dr.	Residential	71.9	Normally Unacceptable	73.4	Normally Unacceptable	73.4	Normally Unacceptable	1.5	0.0	No
– Between Decoro Dr. and Newhall Ranch Rd.	Commercial, Residential	72.2	Normally Unacceptable	74.4	Normally Unacceptable	74.4	Normally Unacceptable	2.2	0.0	No
Decoro Drive										
– Between Copper Hill Dr. and McBean Pkwy.	Residential, School	69.1	Conditionally Acceptable	70.7	Normally Unacceptable	70.8	Normally Unacceptable	1.7	0.1	No
– Between McBean Pkwy. and Seco Canyon Dr.	Commercial, Residential, School,	68.3	Conditionally Acceptable	68.2	Conditionally Acceptable	68.4	Conditionally Acceptable	0.1	0.2	No
Lyons Avenue										
– Between I-5 and Wiley Canyon Rd.	Commercial	70.2	Conditionally Acceptable	71.3	Conditionally Acceptable	71.3	Conditionally Acceptable	1.1	0.0	No
– Between Wiley Canyon Rd. and Orchard Village Rd.	Commercial, Residential	70.2	Normally Unacceptable	71.5	Normally Unacceptable	71.6	Normally Unacceptable	1.4	0.1	No
– East of Orchard Village Rd.	Commercial, Library, Religious Residential	70.7	Normally Unacceptable	72.1	Normally Unacceptable	72.1	Normally Unacceptable	1.4	0.0	No

Table 5.13-18 (Continued)
2024 Cumulative Off-Site Roadway Noise Impacts

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels[a] CNEL						Increase in Noise Levels, CNEL		Significant Impacts
		Existing		2024 Cumulative Without Project Conditions		2024 Cumulative With Project Conditions		2024 Cumulative with Project Compared to Existing Conditions	2024 Cumulative with Project Compared to 2024 Cumulative without Project Conditions	
		Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category			
Magic Mountain Parkway										
– West of Commerce Center Drive	Commercial, Residential	n/a[b]	n/a[b]	72.3	Normally Unacceptable	72.5	Normally Unacceptable	n/a[b]	0.2	n/a[b]
– Between Commerce Center Drive and Media Center Drive	Commercial[c]	n/a[b]	n/a[b]	72.7	Conditionally Acceptable	73.1	Conditionally Acceptable	n/a[b]	0.4	n/a[b]
– Between Media Center Drive and The Old Road	Commercial[c]	61.3	Normally Acceptable	74.7	Conditionally Acceptable	75.6	Conditionally Acceptable	14.3	0.9	No
– Between The Old Road and Tourney Rd.	Commercial	70.8	Conditionally Acceptable	73.6	Conditionally Acceptable	73.8	Conditionally Acceptable	3.0	0.2	No
– Between Tourney Rd. and McBean Pkwy.	Commercial, Residential	70.5	Normally Unacceptable	74.7	Normally Unacceptable	74.8	Normally Unacceptable	4.3	0.1	No
– Between McBean Pkwy. and Valencia Blvd.	Commercial	67.9	Conditionally Acceptable	70.7	Conditionally Acceptable	70.8	Conditionally Acceptable	2.9	0.1	No
– Between Valencia Blvd. and Bouquet Canyon Rd.	Commercial, Residential	66.6	Conditionally Acceptable	71.9	Normally Unacceptable	72.0	Normally Unacceptable	5.4	0.1	No
McBean Parkway										
– Between I-5 and Tournament Rd.	School	70.4	Normally Unacceptable	71.1	Normally Unacceptable	71.3	Normally Unacceptable	0.9	0.2	No
– Between Tournament Rd. and Orchard Village Rd.	Residential, Religious	69.1	Conditionally Acceptable	70.4	Normally Unacceptable	70.4	Normally Unacceptable	1.3	0.0	No
– Between Orchard Village Rd. and Valencia Blvd.	Commercial, Residential, Hospital	70.6	Normally Unacceptable	70.9	Normally Unacceptable	70.9	Normally Unacceptable	0.3	0.0	No
– Between Valencia Blvd. and Magic Mountain Pkwy.	Commercial, Hotel	71.5	Normally Unacceptable	72.4	Normally Unacceptable	72.4	Normally Unacceptable	0.9	0.0	No
– Between Magic Mountain Pkwy. and Newhall Ranch Rd.	Commercial, Residential	74.2	Normally Unacceptable	75.0	Clearly Unacceptable	75.0	Clearly Unacceptable	0.8	0.0	No
– Between Newhall Ranch Rd. and Decoro Dr.	Residential	72.5	Normally Unacceptable	73.4	Normally Unacceptable	73.4	Normally Unacceptable	0.9	0.0	No
– North of Decoro Dr.	Residential	69.5	Conditionally Acceptable	71.0	Normally Unacceptable	71.0	Normally Unacceptable	1.5	0.0	No
Newhall Ranch Road										
– Between Avenue Stanford and Copper Hill Dr.	Commercial, Hotel	73.4	Normally Unacceptable	75.7	Clearly Unacceptable	75.8	Clearly Unacceptable	2.4	0.1	No
– Between Copper Hill Dr. and Dickason Dr.	Commercial	71.1	Conditionally Acceptable	72.8	Conditionally Acceptable	72.8	Conditionally Acceptable	1.7	0.0	No
– Between Dickason Dr. and McBean Pkwy.	Commercial, Residential	72.3	Normally Unacceptable	73.8	Normally Unacceptable	73.8	Normally Unacceptable	1.5	0.0	No

Table 5.13-18 (Continued)
2024 Cumulative Off-Site Roadway Noise Impacts

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels[a] CNEL						Increase in Noise Levels, CNEL		Significant Impacts
		Existing		2024 Cumulative Without Project Conditions		2024 Cumulative With Project Conditions		2024 Cumulative with Project Compared to Existing Conditions	2024 Cumulative with Project Compared to 2024 Cumulative without Project Conditions	
		Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category			
– Between McBean Pkwy. and Bouquet Canyon Rd.	Commercial, Residential, School, Park	73.3	Normally Unacceptable	74.5	Normally Unacceptable	74.5	Normally Unacceptable	1.2	0.0	No
– East of Bouquet Canyon Rd.	Commercial, Residential	71.8	Normally Unacceptable	72.7	Normally Unacceptable	72.5	Normally Unacceptable	0.7	-0.2	No
Orchard Village Road										
– Between McBean Pkwy. and Wiley Canyon Rd.	Residential, School	69.1	Conditionally Acceptable	70.8	Normally Unacceptable	70.8	Normally Unacceptable	1.7	0.0	No
– Between Wiley Canyon Rd. and Lyons Ave.	Commercial, Residential, School	67.8	Conditionally Acceptable	68.8	Conditionally Acceptable	68.9	Conditionally Acceptable	1.1	0.1	No
Pico Canyon Road										
– West of The Old Road	Commercial, Residential, School	68.0	Conditionally Acceptable	69.1	Conditionally Acceptable	69.1	Conditionally Acceptable	1.1	0.0	No
– East of The Old Road	Commercial	70.0	Conditionally Acceptable	70.9	Conditionally Acceptable	70.9	Conditionally Acceptable	0.9	0.0	No
Rye Canyon Road										
– Between The Old Road and Avenue Stanford	Commercial	70.7	Conditionally Acceptable	72.7	Conditionally Acceptable	72.8	Conditionally Acceptable	2.1	0.1	No
– Between Avenue Stanford and Newhall Ranch Rd.	Commercial	69.6	Normally Acceptable	72.1	Conditionally Acceptable	72.1	Conditionally Acceptable	2.5	0.0	No
Soledad Canyon Road										
– East of Bouquet Canyon Rd.	Commercial	71.5	Conditionally Acceptable	71.9	Conditionally Acceptable	72.0	Conditionally Acceptable	0.5	0.1	No
SR-126										
– West of Wolcott Wy.	Agriculture, Residential	73.4	Normally Unacceptable	76.4	Clearly Unacceptable	76.4	Clearly Unacceptable	3.0	0.0	No
– Between Wolcott Wy. and Commerce Center Dr.	Open Space, Residential	73.4	Normally Unacceptable	76.4	Clearly Unacceptable	76.4	Clearly Unacceptable	3.0	0.0	No
– Between Commerce Center Dr. and The Old Road	Agriculture, Residential	75.5	Clearly Unacceptable	77.4	Clearly Unacceptable	77.3	Clearly Unacceptable	1.8	-0.1	No
The Old Road										
– Between Henry Mayo Dr. and Rye Canyon Rd.	Commercial	71.1	Conditionally Acceptable	74.2	Conditionally Acceptable	74.3	Conditionally Acceptable	3.2	0.1	No
– Between Rye Canyon Rd. and Magic Mountain Pkwy.	Commercial, Hotel	71.9	Normally Unacceptable	74.3	Normally Unacceptable	74.6	Normally Unacceptable	2.7	0.3	No
– Between Magic Mountain Pkwy. and Valencia Blvd.	Commercial, Residential	68.0	Conditionally Acceptable	69.5	Conditionally Acceptable	69.7	Conditionally Acceptable	1.7	0.2	No

Table 5.13-18 (Continued)
2024 Cumulative Off-Site Roadway Noise Impacts

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels[a] CNEL						Increase in Noise Levels, CNEL		Significant Impacts
		Existing		2024 Cumulative Without Project Conditions		2024 Cumulative With Project Conditions		2024 Cumulative with Project Compared to Existing Conditions	2024 Cumulative with Project Compared to 2024 Cumulative without Project Conditions	
		Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category			
– Between Valencia Blvd. and McBean Pkwy.	Open Space, Golf Course, Residential	69.3	Conditionally Acceptable	71.4	Normally Unacceptable	71.6	Normally Unacceptable	2.3	0.2	No
– Between McBean Pkwy. and Pico Canyon Rd.	Commercial, Residential	66.7	Conditionally Acceptable	67.3	Conditionally Acceptable	67.3	Conditionally Acceptable	0.6	0.0	No
– South of Pico Canyon Rd.	Commercial, Residential, Hotel	63.9	Conditionally Acceptable	64.4	Conditionally Acceptable	64.5	Conditionally Acceptable	0.6	0.1	No
Tourney Road										
– Between Magic Mountain Pkwy. and Valencia Blvd.	Commercial	63.9	Normally Acceptable	63.6	Normally Acceptable	63.8	Normally Acceptable	-0.1	0.2	No
Valencia Boulevard										
– West of Westridge Pkwy.	Residential, School	72.0	Normally Unacceptable	70.8	Normally Unacceptable	70.8	Normally Unacceptable	-1.2	0.0	No
– Between Westridge Pkwy. and The Old Road	Residential	69.5	Conditionally Acceptable	74.5	Normally Unacceptable	74.4	Normally Unacceptable	4.9	-0.1	No
– Between The Old Road and Tourney Rd.	Commercial	72.3	Conditionally Acceptable	74.1	Conditionally Acceptable	74.2	Conditionally Acceptable	1.9	0.1	No
– Between Tourney Rd. and McBean Pkwy.	Residential	73.2	Normally Unacceptable	74.6	Normally Unacceptable	74.7	Normally Unacceptable	1.5	0.1	No
– Between McBean Pkwy. and Magic Mountain Pkwy.	Commercial	71.8	Conditionally Acceptable	73.2	Conditionally Acceptable	73.3	Conditionally Acceptable	1.5	0.1	No
– Between Magic Mountain Pkwy. and Bouquet Canyon Rd.	Commercial	72.4	Conditionally Acceptable	72.8	Conditionally Acceptable	72.8	Conditionally Acceptable	0.4	0.0	No
Westridge Parkway										
– South of Magic Mountain Pkwy.	Commercial, Residential	n/a[b]	n/a[b]	66.5	Conditionally Acceptable	66.7	Conditionally Acceptable	n/a[b]	0.2	n/a[b]
– North of Valencia Blvd.[d]	Residential, School	53.2	Normally Acceptable	58.1	Normally Acceptable	58.5	Normally Acceptable	5.3	0.4	Yes
– South of Valencia Blvd.	Residential	57.4	Normally Acceptable	57.7	Normally Acceptable	57.7	Normally Acceptable	0.3	0.0	No
Wiley Canyon Road										
– North of Lyons Ave.	Residential	67.6	Conditionally Acceptable	68.7	Conditionally Acceptable	68.8	Conditionally Acceptable	1.2	0.1	No
– South of Lyons Ave.	Commercial, Residential	63.7	Conditionally Acceptable	64.3	Conditionally Acceptable	64.2	Conditionally Acceptable	0.5	-0.1	No

Table 5.13-18 (Continued)
2024 Cumulative Off-Site Roadway Noise Impacts

Roadway Segment	Adjacent Land Uses	Calculated Traffic Noise Levels[a] CNEL						Increase in Noise Levels, CNEL		Significant Impacts
		Existing		2024 Cumulative Without Project Conditions		2024 Cumulative With Project Conditions		2024 Cumulative with Project Compared to Existing Conditions	2024 Cumulative with Project Compared to 2024 Cumulative without Project Conditions	
		Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category	Noise Level	Noise Exposure Compatibility Category			
Freeway Segments										
Interstate 5 Freeway										
– North of Lake Hughes Rd.	Residential	77.0	Clearly Unacceptable	77.9	Clearly Unacceptable	77.9	Clearly Unacceptable	0.9	0.0	No
– Between Lake Hughes Rd. and Parker Rd.	Residential	77.0	Clearly Unacceptable	77.9	Clearly Unacceptable	77.9	Clearly Unacceptable	0.9	0.0	No
– Between Parker Rd. and Hasley Canyon Rd.	Residential	78.0	Clearly Unacceptable	78.9	Clearly Unacceptable	78.9	Clearly Unacceptable	0.9	0.0	No
– Between Hasley Canyon Rd. and SR-126	Residential, Commercial	78.9	Clearly Unacceptable	79.8	Clearly Unacceptable	79.8	Clearly Unacceptable	0.9	0.0	No
– Between SR-126 and Rye Canyon Rd.	Hotel, Commercial	79.5	Normally Unacceptable	80.4	Clearly Unacceptable	80.5	Clearly Unacceptable	1.0	0.1	No
– Between Rye Canyon Rd. and Magic Mountain Pkwy.	Hotel, Commercial	79.8	Normally Unacceptable	80.7	Clearly Unacceptable	80.8	Clearly Unacceptable	1.0	0.1	No
– Between Magic Mountain Pkwy. and Valencia Blvd.	Residential, Hotel, Commercial	80.3	Clearly Unacceptable	81.2	Clearly Unacceptable	81.3	Clearly Unacceptable	1.0	0.1	No
– Between Valencia Blvd. and McBean Pkwy.	Golf Course	80.9	Clearly Unacceptable	81.8	Clearly Unacceptable	81.9	Clearly Unacceptable	1.0	0.1	No
– Between McBean Pkwy. and Pico Rd./ Lyons Ave.	Residential, Commercial	81.1	Clearly Unacceptable	82.1	Clearly Unacceptable	82.1	Clearly Unacceptable	1.0	0.0	No
– Between Pico Rd./Lyons Ave. and Calgrove Blvd.	Residential, Commercial	81.4	Clearly Unacceptable	82.4	Clearly Unacceptable	82.4	Clearly Unacceptable	1.0	0.0	No
– Between Calgrove Blvd. and SR-14	Religious, Open Space	81.5	Clearly Unacceptable	82.4	Clearly Unacceptable	82.4	Clearly Unacceptable	0.9	0.0	No
– South of SR-14	Open Space, Residential	83.7	Clearly Unacceptable	84.6	Clearly Unacceptable	84.6	Clearly Unacceptable	0.9	0.0	No

[a] *Predicted noise levels at 75 feet from the roadway centerline for local streets and 150 feet for I-5.*
[b] *Not applicable, as this roadway segment does not currently exist. Estimated noise level is for the future condition, when it is built.*
[c] *See **Table 5.13-19**, Calculated Future 2024 Cumulative On-Site Roadway Noise Levels, for an analysis of potential roadway noise impacts to on-site uses adjacent to this roadway segment.*
[d] *Noise calculations reflect existing concrete block walls at the residences.*
[e] *Mitigation measures specified for the Mission Village project would reduce the traffic noise levels at the future off-site sensitive uses along Commerce Center Drive (i.e., within Mission Village) to acceptable levels.*
Source: AES, 2054.

(b) Cumulative Impacts to On-Site Uses from Internal Roadway Noise

The future cumulative traffic noise levels for roadway segments within the Project Site are shown in **Table 5.13-19**, Calculated Future 2024 Cumulative On-Site Roadway Noise Levels, on page 5.13-75. These noise levels include traffic from known related projects in the Project vicinity. As shown therein, the future multi-family residential uses adjacent to the Magic Mountain Parkway extension could be exposed to traffic noise levels in excess of the "normally acceptable" noise levels in the State Noise Guidelines (65 dBA CNEL for multi-family residential uses). In addition, the future on-site single-family residential uses adjacent to the Westridge Parkway extension could be exposed to traffic noise levels in excess of the "normally acceptable" limit (60 dBA CNEL for single-family residential uses). Thus, a detailed analysis was conducted for the future residential uses facing Magic Mountain Parkway and Westridge Parkway, based on the proposed Vesting Tentative Tract Map (VTTM 53295). **Table 5.13-20**, Calculated 2024 Cumulative Noise Levels at On-Site Residential Uses—CNEL, on page 5.13-76, presents the calculated noise levels from the roadway segments under future 2024 cumulative traffic conditions. As indicated therein, the estimated noise levels at the single-family residential lots within Planning Area 5, which face Westridge Parkway, would exceed the "normally acceptable" noise level of 60 dBA CNEL. In addition, the estimated noise levels at the future multi-family residential buildings along portions of Planning Areas 4 and 11 facing Magic Mountain Parkway would exceed the "normally acceptable" noise level of 65 dBA CNEL. Therefore, mitigation in the form of a sound wall would be required to reduce the noise levels at the exterior uses (e.g., residential backyard and patio areas). In addition, mitigation in the form of sound insulating windows would be required to reduce the interior noise levels to less than 45 dBA CNEL, where exterior noise levels exceed 60 dBA CNEL. With the implementation of the proposed mitigation measures, noise impacts at the future sensitive uses would be reduced to a less-than-significant level.

Table 5.13-19
Calculated Future 2024 Cumulative On-Site Roadway Noise Levels

Roadway Segment	Adjacent Future Land Uses	Normally Acceptable Noise Level,[a] CNEL	Calculated Traffic Noise Levels at Various Distances from the Edge of the Roadways[a] CNEL		
			At 25 feet	At 50 feet	At 100 feet
A Street					
– Between Commerce Center and Magic Mountain Pkwy.	Office/Commercial	70	63.4	61.9	59.7
– Between Magic Mountain Pkwy. and B Street	Multi-Family Residential, School	65	61.2	59.7	57.5
– Between B St. and Magic Mountain Pkwy.	Multi-Family Residential	65	60.4	58.9	56.7
B Street					
– East of Westridge Pkwy.	Single-Family Residential	60	59.4	57.9	55.7
– West of A Street	Single-Family Residential, School	60	58.2	56.7	54.5
Westridge Parkway					
– South of B Street	Single-Family Residential	60	68.0	66.4	64.2
Magic Mountain Parkway					
– Between The Old Road and Media Center/A Street	Multi-Family Residential, Office/Commercial	65	74.1	72.9	71.1
– Between Media Center/A Street and A Street	Multi-Family Residential	65	72.6	71.4	69.6
– Between A Street and Commerce Center	Multi-Family Residential, Office/Commercial	65	71.4	70.2	68.4

[a] *Based on the more stringent noise land use category.*

Source: AES, 2054.

Table 5.13-20
Calculated 2024 Cumulative Noise Levels at On-Site Residential Uses—CNEL

Future On-Site Location[a]	Proposed Land Use	2024 Cumulative with Project, dBA CNEL	Threshold of Significance, dBA CNEL	Main Traffic Noise Source	Noise Exceedance, dBA CNEL	Recommended Sound Wall Height (relative to pad grade elevation), ft	2024 Cumulative with Project Noise Levels with Sound Wall, dBA CNEL
PA-5 Lot 45	SF Residential	60.3	60	Westridge Pkwy	0.3	5	57.8
PA-5 Lot 46	SF Residential	62.0	60	Westridge Pkwy	2.0	5	56.4
PA-5 Lot 47	SF Residential	63.3	60	Westridge Pkwy	3.3	5	57.2
PA-5 Lot 48	SF Residential	64.0	60	Westridge Pkwy	4.0	5	57.7
PA-5 Lot 49	SF Residential	64.3	60	Westridge Pkwy	4.3	5	57.3
PA-5 Lot 50	SF Residential	64.5	60	Westridge Pkwy	4.5	5	57.5
PA-5 Lot 51	SF Residential	64.3	60	Westridge Pkwy	4.3	6	58.0
PA-5 Lot 52	SF Residential	64.0	60	Westridge Pkwy	4.0	6	58.2
PA-5 Lot 53	SF Residential	63.6	60	Westridge Pkwy	3.6	5	58.1
PA-5 Lot 54	SF Residential	63.4	60	Westridge Pkwy	3.4	5	57.1
PA-5 Lot 72	SF Residential	61.9	60	Westridge Pkwy	1.9	5	57.9
PA-5 Lot 73	SF Residential	63.5	60	Westridge Pkwy	3.5	5	55.4
PA-5 Lot 91	SF Residential	62.7	60	Westridge Pkwy	2.7	5	58.1
PA-5 Lot 92	SF Residential	62.4	60	Westridge Pkwy	2.4	5	55.2
PA-4 Building 1	MF Residential	61.2	65	Magic Mountain Pkwy	—	5[b]	56.2
PA-4 Building 2	MF Residential	62.3	65	Magic Mountain Pkwy	—	5[b]	56.7
PA-4 Building 3	MF Residential	64.5	65	Magic Mountain Pkwy	—	5[b]	57.7
PA-4 Building 4	MF Residential	69.6	65	Magic Mountain Pkwy	4.6	5	59.1
PA-4 Building 5	MF Residential	69.6	65	Magic Mountain Pkwy	4.6	5	60.1
PA-4 Building 6	MF Residential	69.5	65	Magic Mountain Pkwy	4.5	5	60.8
PA-4 Building 7	MF Residential	69.6	65	Magic Mountain Pkwy	4.6	5	62.2

Table 5.13-20 (Continued)
Calculated 2024 Cumulative Noise Levels at On-Site Residential Uses—CNEL

Future On-Site Location[a]	Proposed Land Use	2024 Cumulative with Project, dBA CNEL	Threshold of Significance, dBA CNEL	Main Traffic Noise Source	Noise Exceedance, dBA CNEL	Recommended Sound Wall Height (relative to pad grade elevation), ft	2024 Cumulative with Project Noise Levels with Sound Wall, dBA CNEL
PA-4 Building 8	MF Residential	69.5	65	Magic Mountain Pkwy	4.5	5	61.5
PA-4 Building 9	MF Residential	69.3	65	Magic Mountain Pkwy	4.3	5	61.1
PA-4 Building 10	MF Residential	69.1	65	Magic Mountain Pkwy	4.1	5	59.3
PA-4 Building 11	MF Residential	68.8	65	Magic Mountain Pkwy	3.8	5	59.2
PA-4 Building 12	MF Residential	67.6	65	Magic Mountain Pkwy	2.6	5	58.6
PA-4 Building 13	MF Residential	67.4	65	Magic Mountain Pkwy	2.4	5	58.5
PA-9 Building A	MF Residential	61.7	65	Magic Mountain Pkwy	—	—	61.7
PA-9 Building B	MF Residential	64.6	65	Magic Mountain Pkwy	—	—	64.6
PA-9 Building C	MF Residential	63.7	65	Magic Mountain Pkwy	—	—	63.7
PA-9 Building D	MF Residential	61.7	65	Magic Mountain Pkwy	—	—	61.7
PA-9 Building E	MF Residential	64.2	65	Magic Mountain Pkwy	—	—	64.2
PA-9 Building F	MF Residential	62.1	65	Magic Mountain Pkwy	—	—	62.1
PA-9 Building G	MF Residential	63.0	65	Magic Mountain Pkwy	—	—	63.0
PA-10 Building A	MF Residential	61.9	65	Magic Mountain Pkwy	—	—	61.9
PA-10 Building B	MF Residential	62.3	65	Magic Mountain Pkwy	—	—	62.3
PA-10 Building C	MF Residential	61.0	65	Magic Mountain Pkwy	—	—	61.0
PA-11 Building A	MF Residential	63.2	65	Magic Mountain Pkwy	—	5[b]	58.9
PA-11 Building B	MF Residential	68.6	65	Magic Mountain Pkwy	3.6	5	60.9
PA-11 Building C	MF Residential	60.7	65	Magic Mountain Pkwy	—	5[b]	58.6
PA-12 Building A	MF Residential	61.3	65	Magic Mountain Pkwy	—	—	61.3
PA-12 Building B	MF Residential	64.3	65	Magic Mountain Pkwy	—	—	64.3

Table 5.13-20 (Continued)
Calculated 2024 Cumulative Noise Levels at On-Site Residential Uses—CNEL

Future On-Site Location[a]	Proposed Land Use	2024 Cumulative with Project, dBA CNEL	Threshold of Significance, dBA CNEL	Main Traffic Noise Source	Noise Exceedance, dBA CNEL	Recommended Sound Wall Height (relative to pad grade elevation), ft	2024 Cumulative with Project Noise Levels with Sound Wall, dBA CNEL
PA-12 Building C	MF Residential	61.9	65	Magic Mountain Pkwy	—	—	61.9

[a] *Selected lots and buildings at the perimeter of the Planning Area facing the main roadways (i.e., Magic Mountain Parkway and Westridge Parkway), as these locations represent the worst-case traffic noise conditions.*

[b] *Although the estimated noise levels without sound wall do not meet the threshold, a sound wall is recommended for continuity with the sound wall for adjacent buildings.*

Source: AES, 2015.

(c) Cumulative Noise Levels at Off-Site Sensitive Receptors

The cumulative off-site noise levels were calculated for the first row of residential units directly south of the Project Site within the Westridge community. These noise levels include noise from Six Flags Magic Mountain and the traffic volumes along nearby roadways (Magic Mountain Parkway, The Old Road, and I-5), including the new on-site streets and extensions of Magic Mountain Parkway and Westridge Parkway. **Table 5.13-21**, Calculated Existing vs. 2024 Cumulative Noise Levels at Nearest Existing Sensitive Receptors (Westridge)—CNEL, on page 5.13-80, shows the existing noise levels at each sensitive receptor, the estimated noise level at each sensitive receptor under 2024 cumulative conditions, the difference between the two measurements, and a determination as to whether the difference exceeds threshold standards. As indicated therein, the maximum cumulative noise increase would be 3.4 dBA CNEL at residence H1. This increase in noise level would be below the 5 dBA significance threshold. Furthermore, the Project's contribution to these cumulative noise levels would range from 0.1 to 0.8 dBA. Therefore, cumulative impacts at this location would be less than significant. **Figure 5.13-4**, 2024 Cumulative With Project Noise Contours, 24-Hour CNEL dBA, on page 5.13-82, depicts the noise contour lines at the 55 sensitive receptors under 2024 cumulative conditions, as measured in CNEL dBA.

Cumulative off-site noise levels at the future residential uses within the approved Mission Village community to the west were also evaluated. As indicated in **Table 5.13-18**, 2024 Cumulative Off-Site Roadway Noise Impacts, the estimated traffic noise along Westridge Parkway (south of Magic Mountain Parkway) would increase from 66.5 dBA CNEL under 2024 cumulative without project conditions to 66.7 dBA CNEL under 2024 cumulative with project conditions at 75 feet from the roadway centerline. In addition, the traffic noise levels along Magic Mountain Parkway (west of Commerce Center Drive) would increase from 72.3 dBA CNEL under 2024 cumulative without Project conditions to 72.5 dBA CNEL under 2024 cumulative with Project conditions. These estimated cumulative noise levels would exceed the "normally acceptable" category for single-family residential uses. However, the Project's contribution to these noise levels would be approximately 0.2 dBA along both roadway segments. Furthermore, the noise mitigation measures specified for the Mission Village project discussed above would reduce the exterior noise levels to meet 60 dBA CNEL. As such, cumulative noise impacts at Mission Village would be less than significant.

Table 5.13-21
Calculated Existing vs. 2024 Cumulative Noise Levels at Nearest Existing Sensitive Receptors (Westridge)—CNEL

Sensitive Receptor	Existing. CNEL dBA	2024 Cumulative with Project, CNEL dBA	Increase in Noise Levels, CNEL dBA	Significant Impact
H1	45.1	48.5	3.4	No
H2	45.3	48.5	3.2	No
H3	45.5	48.5	3.0	No
H4	46.0	49.1	3.1	No
H5	46.2	49.3	3.1	No
H6	46.7	49.5	2.8	No
H7	47.0	49.6	2.6	No
H8	47.1	49.6	2.5	No
H9	47.1	49.8	2.7	No
H10	47.3	50.0	2.7	No
H11	47.7	50.1	2.4	No
H12	48.2	50.5	2.3	No
H13	48.2	50.2	2.0	No
H14	48.5	50.5	2.0	No
H15	48.8	50.8	2.0	No
H16	48.0	49.3	1.3	No
H17	48.5	49.7	1.2	No
H18	48.8	50.0	1.2	No
H19	47.7	48.4	0.7	No
H20	48.0	48.6	0.6	No
H21	48.3	48.9	0.6	No
H22	50.6	51.8	1.2	No
H23	51.2	52.4	1.2	No
H24	52.2	53.5	1.3	No
H25	50.1	51.4	1.3	No
H26	50.9	52.1	1.2	No
H27	51.1	52.3	1.2	No
H28	51.2	52.4	1.2	No
H29	52.1	53.3	1.2	No
H30	52.9	54.0	1.1	No
H31	53.1	54.1	1.0	No
H32	53.3	54.4	1.1	No
H33	53.6	54.7	1.1	No
H34	53.9	55.0	1.1	No

Table 5.13-21 (Continued)
Calculated Existing vs. 2024 Cumulative Noise Levels at Nearest Existing Sensitive Receptors (Westridge)—CNEL

Sensitive Receptor	Existing. CNEL dBA	2024 Cumulative with Project, CNEL dBA	Increase in Noise Levels, CNEL dBA	Significant Impact
H35	54.4	55.5	1.1	No
H36	55.0	56.1	1.1	No
H37	55.4	56.5	1.1	No
H38	56.7	57.8	1.1	No
H39	57.7	58.7	1.0	No
H40	59.0	60.0	1.0	No
H41	57.7	58.7	1.0	No
H42	58.5	59.5	1.0	No
H43	58.7	59.7	1.0	No
H44	58.9	59.9	1.0	No
H45	59.6	60.6	1.0	No
H46	60.8	61.9	1.1	No
H47	60.2	61.2	1.0	No
H48	60.7	61.7	1.0	No
H49	61.3	62.3	1.0	No
H50	61.9	62.9	1.0	No
H51	62.9	63.9	1.0	No
H52	63.2	64.3	1.1	No
H53	64.1	65.2	1.1	No
H54	65.3	66.3	1.0	No
H55	66.5	67.5	1.0	No

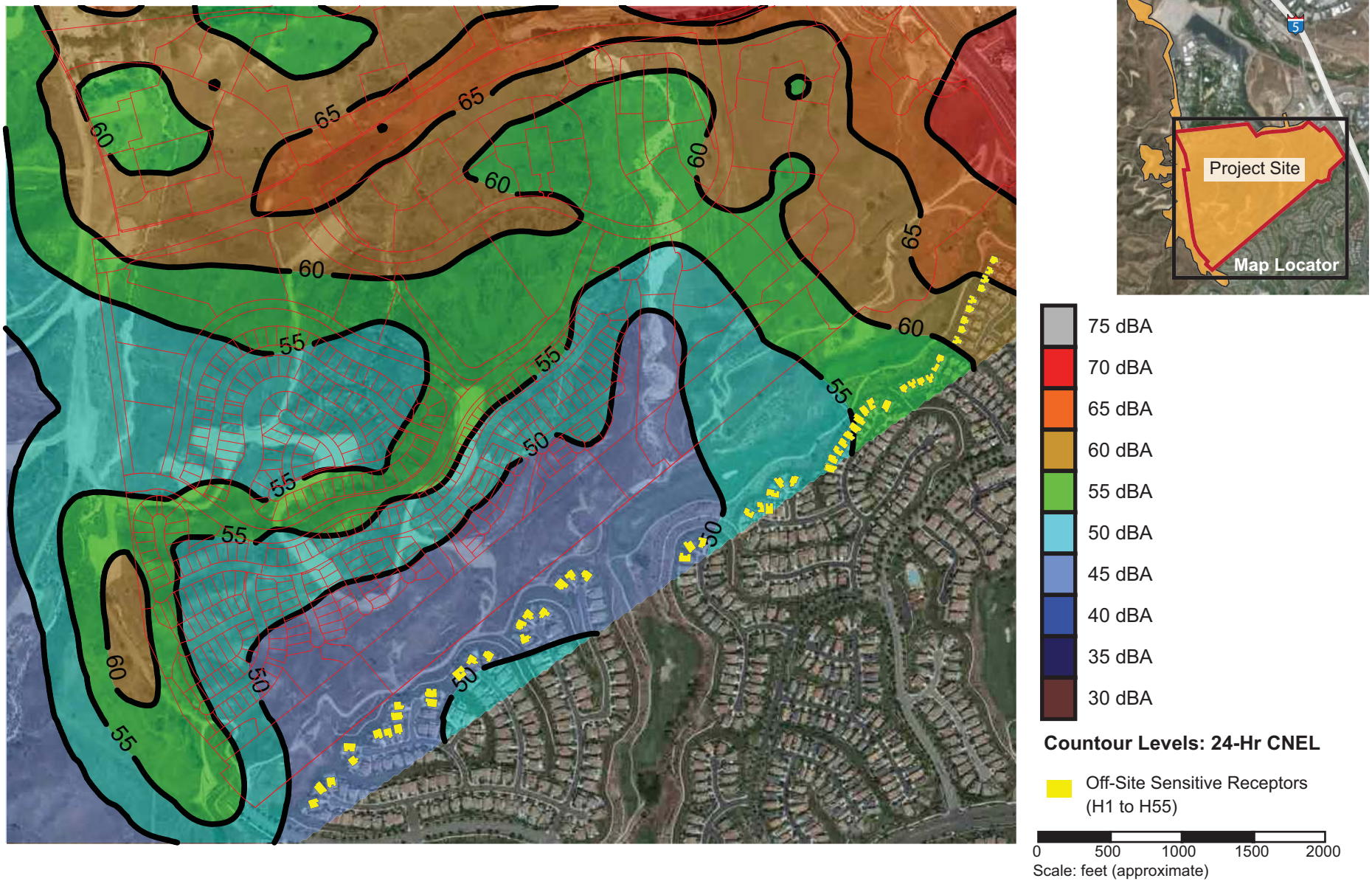

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Figure 5.13-4
2024 Cumulative with Project Noise Contours, 24-hour CNEL dBA

Source: Acoustical Engineering Services, 2014.

5. MITIGATION MEASURES

a. Newhall Ranch RMDP/SCP Mitigation Measures

CDFW previously adopted one mitigation measure to minimize construction noise impacts in connection with its adoption of the Newhall Ranch RMDP/SCP EIS/EIR. However, this RMDP/SCP mitigation measure does not apply to the Project and is therefore listed in **Appendix 2B** with an explanation as to why it does not apply.

b. Project-Specific Mitigation Measures

The following mitigation measures are proposed as part of Entrada South (ES) to address the Project-specific impacts identified above:

(1) Construction Mitigation Measures

MM ES 5.13-1: The Applicant shall utilize construction equipment equipped with noise shielding and muffling devices. All equipment shall be properly maintained in accordance with manufacturers' specifications to assure that no additional noise due to worn or improperly maintained parts is generated.

MM ES 5.13-2: The Applicant shall locate construction staging areas on-site to maximize the distance between staging areas and occupied residential areas.

MM ES 5.13-3: When construction operations occur within 500 feet of residential uses, the Applicant shall: (1) locate stationary construction equipment as far away as feasible from such uses; (2) prohibit idling of construction equipment; (3) notify adjacent residences in advance of construction work; (4) install signage at the construction site with appropriate contact phone numbers posted for information; and (5) install temporary acoustic barriers around stationary construction noise sources.

(2) Operational Mitigation Measures

MM ES 5.13-4: A 5-foot-high solid wall shall be provided along the rear and/or side lot lines of proposed single-family residential Lots 45 to 50, 53, 54, 72, 73, 91, and 92 (within Planning Area 5), which have direct line-of-site to Westridge Parkway. The wall may be constructed of concrete masonry units, or other material of similar acoustic performance and shall be continuous with no breaks or gaps.

MM ES 5.13-5: A 6-foot-high solid wall shall be provided along the rear and/or side lot lines of proposed single-family residential Lots 51 and 52 (within Planning Area 5), which have direct line-of-site to Westridge Parkway.

The wall may be constructed of concrete masonry units or other material of similar acoustic performance and shall be continuous with no breaks or gaps.

MM ES 5.13-6: A 5-foot-high solid wall shall be provided along the rear and/or side lot lines of proposed multi-family residential buildings within Planning Area 4, which have direct line-of-site to Magic Mountain Parkway. The wall may be constructed of concrete masonry units or other material of similar acoustic performance and shall be continuous with no breaks or gaps.

MM ES 5.13-7: A 5-foot-high solid wall shall be provided along the rear and/or side lot lines of proposed multi-family residential buildings located within the northern portion of the Planning Area 11, which have direct line-of-site to Magic Mountain Parkway. The wall may be constructed of concrete masonry units or other material of similar acoustic performance and shall be continuous with no breaks or gaps.

MM ES 5.13-8: To ensure that interior noise levels do not exceed 45 dBA CNEL, all residential buildings located within 200 feet of the centerline of Westridge Parkway or Magic Mountain Parkway shall incorporate the following measures:

a) All windows and patio doors shall be double-paned insulated window assembly with a minimum 25 dBA OITC (Outdoor to Indoor Transmission Class).

b) Exterior doors (if facing the roadways) shall be solid core with a full set of acoustic seals.

c) If necessitated by the architectural design of a structure, special insulation or design features shall be installed to meet the required interior ambient noise level.

The specifications in this measure may be refined when the final plans showing locations and orientations of the residences within the Lots along Westridge Parkway and Magic Mountain Parkway are completed, as long as the 45 dBA interior noise level is met.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Project-Specific Impacts

Implementation of the mitigation measures set forth above would ensure the Project's potential operational noise impacts would be less than significant. Specifically, implementation of Mitigation Measures MM ES 5.13-4 and MM ES 5.13-5 would reduce traffic noise at the single-family residences within Planning Area 5 facing Westridge Parkway from a maximum of 65 dBA CNEL to 58 dBA CNEL, which would reduce the impact to a less-than-significant level (i.e., less than 60 dBA CNEL for single-family

residences). Implementation of Mitigation Measures MM ES 5.13-6 and MM ES 5.13-7 would reduce the traffic noise at the multi-family residences facing Magic Mountain Parkway within Planning Areas 4 and 11 from a maximum of 70 dBA CNEL to 62 dBA CNEL, which would reduce the impact to a less-than-significant level (i.e., less than 65 dBA CNEL for multi-family residential uses). Implementation of Mitigation Measure MM ES 5.13-8 would also ensure that the interior noise environment of the residences facing Westridge Parkway or Magic Mountain Parkway would meet the interior building noise standard of 45 dBA CNEL. All other Project impacts would be less than significant.

Implementation of the proposed mitigation measures would reduce construction-related noise impacts to the extent feasible. However, construction activities within approximately 1,000 feet of single-family residences located on- or off-site could exceed the 60 dBA stationary equipment long-term construction threshold. Construction activities within 500 feet of multi-family residences located on- or off-site would exceed the 65 dBA threshold. Therefore, construction site activities could exceed the County Noise Ordinance standards for an extended period of time at on- or off-site residential uses during Project construction. These construction noise impacts are considered significant and unavoidable.

b. Cumulative Impacts

As set forth above, the cumulative traffic noise impacts at the on-site residential uses along Magic Mountain Parkway (between The Old Road and Commerce Center Drive) would be mitigated by Project Mitigation Measures MM ES 5.13-6, MM ES 5.13-7, and MM ES 5.13-8, which would reduce the traffic noise at these future on-site residential uses along Magic Mountain Parkway to meet the 65 dBA CNEL threshold ("normally acceptable" for multi-family residential uses). Please refer to **Figure 5.13-5**, 2024 Cumulative With Project Noise Contours, 24-Hour CNEL dBA—With Mitigation, on page 5.13-86, for the resulting CNEL noise levels with the implementation of mitigation measures.

There are no feasible mitigation measures to reduce the significant off-site cumulative operational noise impact along Westridge Parkway, north of Valencia Boulevard, since a noise barrier wall already exists at the residences facing Westridge Parkway and the impacted property is privately owned, thereby creating access constraints and limitations relative to additional mitigation. Therefore, cumulative off-site traffic noise at this roadway segment would be significant and unavoidable. In addition, cumulative construction impacts would be significant and unavoidable.

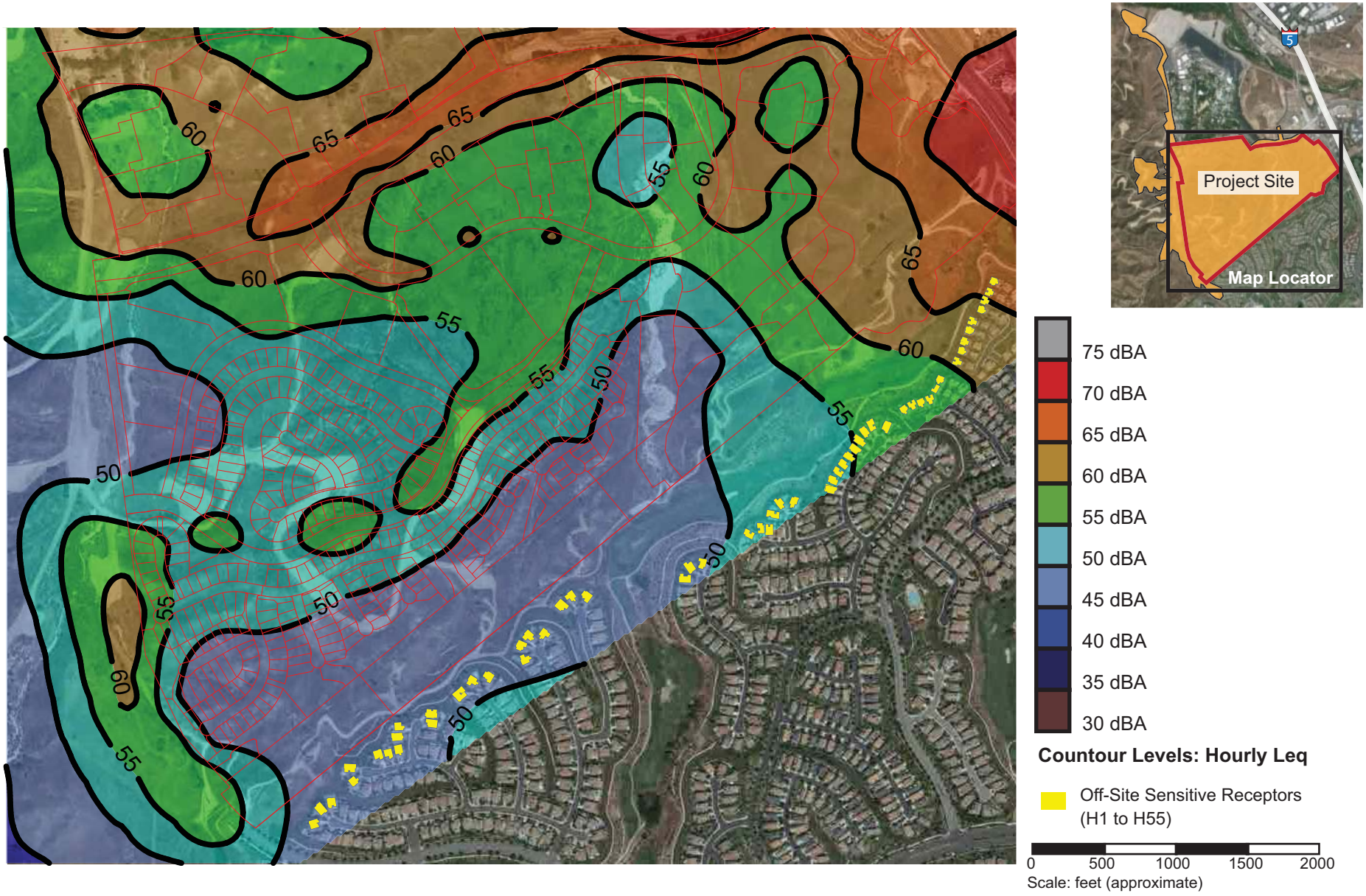

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Figure 5.13-5
2024 Cumulative With Project Noise Contours, 24-Hour CNEL dBA—With Mitigation

Source: Acoustical Engineering Services, 2014.