5.11 NOISE

This section of the Draft Environmental Impact Report (Draft EIR) evaluates the fundamentals of sound; examines federal, state, and local noise guidelines, policies, and standards; identifies noise levels for existing conditions; and evaluates the potential noise and vibration impacts associated with buildout of the Rancho San Gorgonio Specific Plan (Specific Plan). The analysis in this section is based in part of the following technical report(s):

- *Rancho San Gorgonio Specific Plan Noise Impact Analysis,* LSA Associates, April 20, 2016.

A complete copy of this study is included in the technical appendices to this Draft PEIR (Appendix L).

5.11.1 Environmental Setting

Noise Descriptors

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

The following are brief definitions of terminology used in this chapter:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.

- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

- **Equivalent Continuous Noise Level (L_{eq}).** The mean of the noise level, energy averaged over the measurement period.

- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period), which is half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.

- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with five dB added to the levels occurring during the period from 7:00 PM to 10:00 PM and 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.

  Note: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered equivalent and are treated as interchangeable in this assessment.

Characteristics of Sound

When an object vibrates, it radiates part of its energy as acoustical pressure in the form of a sound wave. Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate the human, frequency-dependent response, the A-weighted filter system is used to adjust measured sound levels. The normal range of human hearing extends from approximately 0 dBA (the threshold of detection) to 140 dBA (the threshold of pain).

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 5.11-1 presents the subjective effect of changes in sound pressure levels.

Table 5.11-1 Change in Apparent Loudness

± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies and Hansen 1988.

Sound is generated from a source and the decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as spreading loss or distance attenuation.

When sound is measured for distinct time intervals, the statistical distribution of the overall sound level during that period can be obtained. For example, L_{50} is the noise level that is exceeded 50 percent of the time: half the time the noise exceeds this level and half the time it is less than this level. This is also the level that is exceeded 30 minutes in an hour. Similarly, the L_{02}, L_{08}, and L_{25} values are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. The energy-equivalent sound level (L_{eq}) is the most common parameter

associated with community noise measurements. The L_{eq} metric is a single-number noise descriptor of the energy-average sound level over a given period of time. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values are the minimum and maximum root-mean-square (RMS) noise levels obtained over the stated measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and nighttime hours, state law requires that, for planning purposes and to account for this increased receptiveness of noise, an artificial decibel increment is to be added to quiet-time noise levels to calculate the 24-hour CNEL noise metric.

Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 5.11-2 shows typical noise levels from familiar sources.

Table 5.11-2 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 2009.

Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities such as railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. Vibration displacement is the distance that a point on a surface moves away from its original static position. The instantaneous speed that a point on a surface moves is the velocity, and the rate of change of the speed is the acceleration. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During project construction, the operation of construction equipment can cause groundborne

vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure. These types of vibration are best measured and described in terms of velocity and acceleration.

The three main types of waves associated with groundborne vibrations are surface or Rayleigh waves, compression or P-waves, and shear or S-waves.

- **Surface or Rayleigh waves** travel along the ground surface. They carry most of their energy along an expanding cylindrical wave front, similar to the ripples produced by throwing a rock into a lake. The particle motion is more or less perpendicular to the direction of propagation.

- **Compression or P-waves** are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal, in a push-pull motion. P-waves are analogous to airborne sound waves.

- **Shear or S-waves** are also body waves, carrying their energy along an expanding spherical wave front. Unlike P-waves, however, the particle motion is transverse, or perpendicular to the direction of propagation.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or RMS velocity. PPV is the maximum instantaneous peak of the vibration signal and RMS is the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response.

The units for PPV and RMS velocity are normally inches per second (in/sec). Often, vibration is presented and discussed in dB units in order to compress the range of numbers required to describe the vibration. In this study, all PPV and RMS velocity levels are in in/sec and all vibration levels are in dB relative to one microinch per second (abbreviated as VdB). Typically, groundborne vibration generated by human activities attenuates rapidly with distance. Even the more persistent Rayleigh waves decrease relatively quickly as they move away from the source of the vibration. Man-made vibration problems are, therefore, usually confined to short distances (500 to 600 feet or less) from the source (FTA 2006).

Construction operations generally include a wide range of activities that can generate groundborne vibration. In general, blasting and demolition of structures generate the highest vibrations. Vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible amounts of vibration at up to 200 feet. Heavy trucks can also generate groundborne vibrations, which can vary depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, differential settlement of pavement, etc., all increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration from normal traffic flows on streets and freeways with smooth pavement conditions. Trains generate substantial quantities of vibration due to their engines, steel wheels, heavy loads, and wheel-rail interactions.

5.11.1.1 REGULATORY FRAMEWORK

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the State of California, the County of Riverside, and the City of Banning have established standards and ordinances to control noise. The following discuss the noise standards applicable to the project.

State of California Noise Requirements

The state regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise insulation standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a general plan that includes a noise element, which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. The purpose of the noise element is to "limit the exposure of the community to excessive noise levels."

In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts. Under CEQA, a project has a significant impact if the project exposes people to noise levels in excess of thresholds, which can include standards established in the local general plan or noise ordinance.

State of California Building Code

The state's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in the state for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

County of Riverside

Noise Element

The noise element of the county's general plan sets forth policies to assess and control environmental noise. Applicable policies are shown in Table 5.11-3. Based on Policy N 1.3, the county's exterior noise standard is 65 dBA CNEL for schools, hospitals, rest homes, long-term care facilities, mental care facilities, residential uses, libraries, passive recreation uses, and places of worship. Policy 2.3 provides stationary-source land use noise standards for residential areas. It shall be noted that the following standards are only preferred standards, and the final decision will be made by the Riverside County Planning Department and Office of Public Health: from the hours of 10:00 p.m. to 7:00 a.m., the 10-minute exterior L_{eq} standard is 45 dBA and the 10-minute interior L_{eq} standard is 40 dBA, while during the hours of 7:00 a.m. to 10:00 p.m., the 10-minute exterior L_{eq} standard is 65 dBA and the 10-minute interior L_{eq} standard is 55 dBA. Also, based on Policy 13.1, the County's interior noise standard is 45 dBA CNEL. Figure 5.11-1 shows the County's Land Use Compatibility for Community Noise Environments.

Table 5.11-3 County of Riverside's General Plan Noise Element Policies

Policy No.	Policies
N 1.1	Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or block walls shall be used.
N 1.2	Guide noise-tolerant land uses into areas irrevocably committed to land uses that are noise-producing, such as transportation corridors or within the projected noise contours of any adjacent airports.
N 1.3	Consider the following uses noise-sensitive and discourage these uses in areas in excess of 65 dBA CNEL: schools, hospitals, rest homes, long-term care facilities, mental care facilities, residential uses, libraries, passive recreation uses; and places of worship. According to the State of California Office of Planning and Research General Plan Guidelines, an acoustical study may be required in cases where these noise-sensitive land uses are located in an area of 60 CNEL or greater. Any land use that is exposed to levels higher than 65 CNEL will require noise attenuation measures. Areas around airports may have different noise standards than those cited above. Each Area Plan affected by a public- use airport includes one or more Airport Influence Areas, one for each airport. The applicable noise compatibility criteria are fully set forth in Appendix L and summarized in the Policy Area section of the affected Area Plan
N 1.4	Determine if existing land uses will present noise compatibility issues with proposed projects by undertaking site surveys.
N 1.5	Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.
N 1.6	Minimize noise spillover or encroachment from commercial and industrial land uses into adjoining residential neighborhoods or noise-sensitive uses.
N 1.7	Require proposed land uses, affected by unacceptably high noise levels, to have an acoustical specialist prepare a study of the noise problems and recommend structural and site design features that will adequately mitigate the noise problem.
N 1.8	Limit the maximum permitted noise levels that cross property lines and impact adjacent land uses, except when dealing with noise emissions from wind turbines.
N 2.3	Mitigate exterior and interior noises occurring at residential land uses during the hours of 7:00 a.m. to 10:00 p.m. to the exterior and interior noise standards of 65 and 55 dBA Leq, respectively, and during the hours of 10:00 p.m. to 7:00 a.m. to the noise standards of 45 and 40 dBA Leq, respectively, to the extent feasible, for stationary sources.
N 8.3	Require development that generates increased traffic and subsequent increases in the ambient noise level adjacent to noise-sensitive land uses to provide for appropriate mitigation measures.
N 8.4	Require that the loading and shipping facilities of commercial and industrial land uses, which abut residential parcels be located and designed to minimize the potential noise impacts upon residential parcels.
N 11.1	Utilize natural barriers such as hills, berms, boulders, and dense vegetation to assist in noise reduction.
N 11.2	Utilize dense landscaping to effectively reduce noise. However, when there is a long initial period where the immaturity of new landscaping makes this approach only marginally effective, utilize a large number of highly dense species planted in a fairly mature state, at close intervals, in conjunction with earthen berms, setbacks, or block walls.
N 12.1	Minimize the impacts of construction noise on adjacent uses within acceptable practices.
N 12.2	Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas.
N 12.3	Condition subdivision approval adjacent to developed/occupied noise-sensitive land uses (see policy N 1.3) by requiring the developer to submit a construction-related noise mitigation plan to the County for review and approval prior to issuance of a grading permit. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of this project, through the use of such methods as: (a) Temporary noise attenuation fences; (b) Preferential location of equipment; and (c) Use of current noise suppression technology and equipment.
N 12.4	Require that all construction equipment utilizes noise reduction features (e.g. mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
N 13.1	Enforce the California Building Standards that sets standards for building construction to mitigate interior noise levels to the tolerable 45 CNEL limit. These standards are utilized in conjunction with the Uniform Building Code by the County's Building Department to ensure that noise protection is provided to the public. Some design features may include extra-dense insulation, double-paned windows, and dense construction materials.

Source: LSA 2016
CNEL = Community Noise Equivalent Level dBA = A-weighted decibels L_{eq} = equivalent continuous noise level

County Code

Section 9.52.020 of the county code prohibits construction within 0.25 mile of an occupied residence unless it occurs between the hours of 6:00 a.m. and 6:00 p.m., June through September, or between the hours of 7:00 a.m. and 6:00 p.m., October through May. Since the County Code does not specify the day of the week for the hours mentioned above, it is assumed these hours apply to weekdays, weekends, and holidays. Exceptions to these standards are only allowed with the written consent of the building official. In addition, Section 9.52.040 of the county code limits maximum noise levels. Table 5.11-4 lists the applicable daytime and nighttime maximum noise levels for each land use in the county.

Table 5.11-4 County of Riverside's Maximum Noise Level Standard

General Plan Foundation Component	General Plan Land Use Designation	General Plan Land Use Designation Name	Density	Maximum Noise Level (dBA L_{max})	
				7:00 AM–10:00 PM	10:00 p.m.–7:00 a.m.
Community Development	EDR	Estate Density Residential	2 ac	55	45
	VLDR	Very Low Density Residential	1 ac	55	45
	LDR	Low Density Residential	0.5 ac	55	45
	MDR	Medium Density Residential	2–5 units	55	45
	MHDR	Medium High Density Residential	5–8 units	55	45
	HDR	High Density Residential	8–14 units	55	45
	VHDR	Very High Density Residential	14–20 units	55	45
Community Development	HTDR	Highest Density Residential	20+ units	55	45
	HTDR	Highest Density Residential	20+ units	55	45
Rural Community	EDR	Estate Density Residential	2 ac	55	45
	VLDR	Very Low Density Residential	1 ac	55	45
	LDR	Low Density Residential	0.5 ac	55	45
Rural	RR	Rural Residential	5 ac	55	45
	RM	Rural Mountainous	10 ac	55	45
	RD	Rural Desert	10 ac	45	45

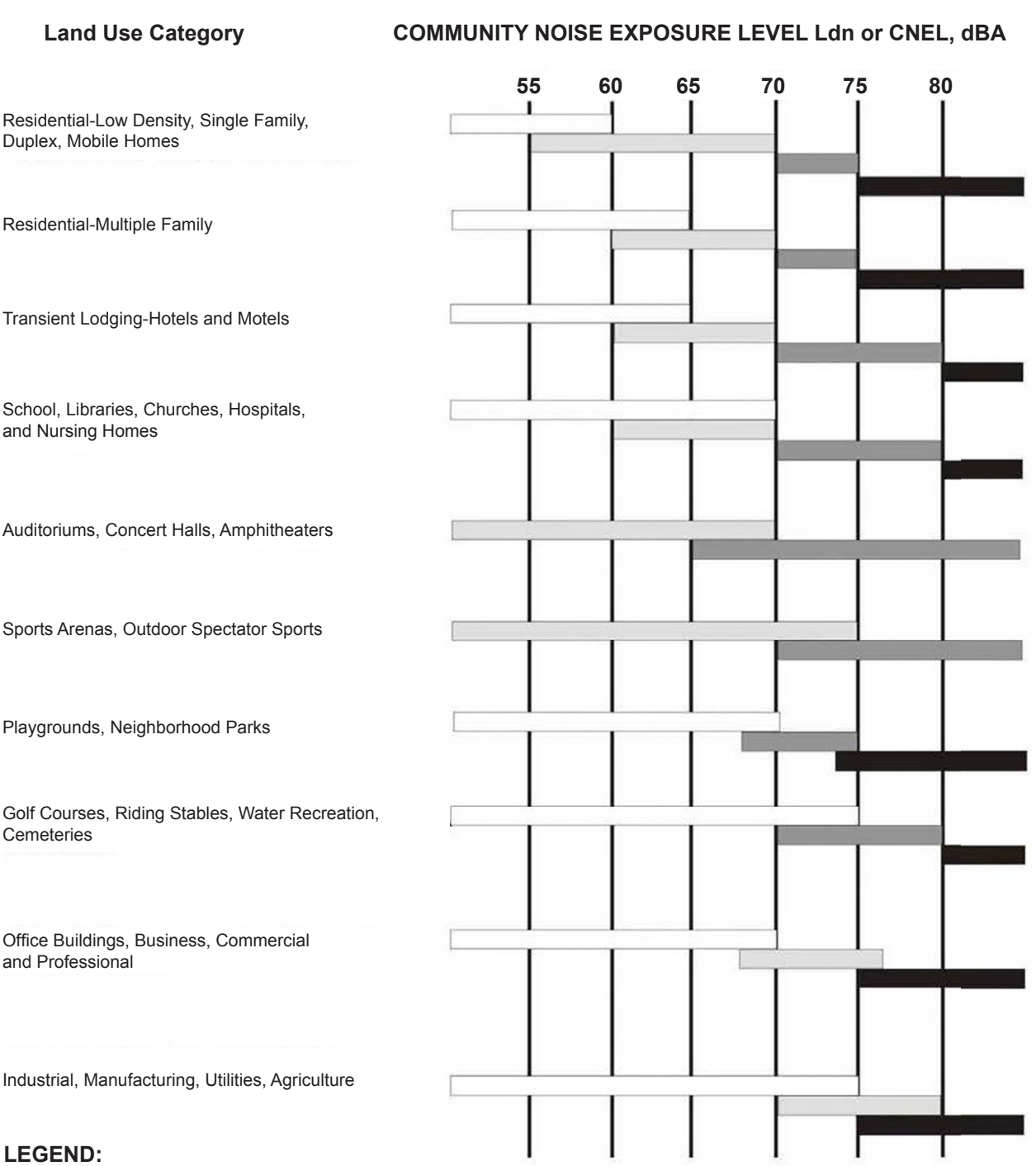
Source: LSA 2016
ac = acres dBA = A-weighted decibels L_{max} = maximum instantaneous noise level

City of Banning

The proposed project is subject to the City of Banning General Plan Noise Element and the Banning Municipal Code.

Figure 5.11-1 - County of Riverside Land Use Compatibility for Community Noise Environments

5. Environmental Analysis



CNEL = Community Noise Equivalent Level dBA = A-weighted decibels

L_{dn} = day-night average noise level

Base Image Source: LSA, 2016

5. Environmental Analysis
NOISE

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Noise Element

The noise element of the city's general plan sets forth goals, policies, and programs. Applicable goals, policies, and programs to assess and control environmental noise are shown in Table 5.11-5.

Table 5.11-5 City of Banning's General Plan Noise Element Goals, Policies, and Programs

Goal/Policy Number	Goal/Policy/Program
Goal	A noise environment that complements the community's residential character and its land uses.
Policy 1	The City shall protect noise sensitive land uses, including residential neighborhoods, schools, hospitals, libraries, churches, resorts and community open space, from potentially significant sources of community noise.
Program 1.A	The City shall require building setbacks, the installation of wall and window insulation, soundwalls, earthen berms, and/or other mitigation measures in areas exceeding the City's noise limit standards for private development projects as theyoccur.
Program 1.C	The City shall use the development review process to assure the use of buffers between sensitive receptors and incompatible landuses.
Program 1.D	The City shall require that commercial compactors, loading zones, and large trash bins be located at a sufficient distance from residential properties to reduce noise impacts to its acceptable standard.
Policy 2	The relationship between land use designations in the Land Use Element and changes in the circulation pattern of the City, as well as individual developments, shall be monitored and mitigated.
Program 2.A	The City shall develop guidelines and minimal criteria requirements for noise analyses for proposed development projects. Studies shall evaluate project impacts and the effectiveness of proposed mitigation measures.
Policy 3	Private sector project proposals shall include measures that assure that noise exposures levels comply with State of California noise insulation standards as defined in Title 25 (California Noise Insulation Standards) and/or Banning Ordinances 1138 and 1234, whichever is more restrictive.
Policy 4	The City shall maintain a General Plan Circulation Map and assure low levels of traffic within neighborhoods by assigning truck routes to major roadways only.
Program 4.A	The City shall review designated primary truck routes and ensure they are clearly marked throughout the community. Except for traffic providing location-specific services and deliveries, construction trucks and delivery trucks shall be limited to designated truck routes, including: Ramsey Street, and those portions of Lincoln Street, Highland Springs Avenue, Hathaway Street, Sunset Avenue, Eighth Street, San Gorgonio Avenue and Hargrave Street so designated.
Program 4.B	The City shall discourage development projects that result in through-traffic in residential neighborhoods.
Policy 6	All development proposals within the noise impact area of the Interstate and the railroad shall mitigate both noise levels and vibration to acceptable levels through the preparation of focused studies and analysis in the development review and environmental reviewprocess.
Policy 7	The City shall coordinate with adjoining jurisdictions to assure noise-compatible land uses across jurisdictional boundaries.
Policy 8	The City shall impose and integrate special design features into proposed development that minimize impacts associated with the operation of air conditioning and heating equipment, onsite traffic, and use of parking, loading and trash storage facilities.

Source: LSA 2016.

The City of Banning Noise Element also sets forth land use compatibility guidelines for noise-sensitive land uses and outdoor activity areas. Figure 5.11-2 shows the City's Land Use Compatibility for Community Noise Environments.

Note that the compatibility charts above for the county and City are fundamentally equivalent, although the presentations are somewhat different.[1] Therefore, both City and county land uses that are relevant to this Project can be summarized as follows:

Single-family residences, duplexes, and mobile homes are normally acceptable in exterior noise environments up to 60 dBA CNEL and conditionally acceptable in exterior noise environments of up to 70 dBA CNEL.

Multi-family residences are normally acceptable in exterior noise environments up to 65 dBA CNEL and conditionally acceptable in exterior noise environments of up to 70 dBA CNEL.

School classrooms are normally acceptable in exterior noise environments of up to 70 dBA CNEL.

Playgrounds and neighborhood parks are normally acceptable in exterior noise environments of up to 70 dBA CNEL and conditionally acceptable in exterior noise environments of up to 75 dBA CNEL. For the purposes of this EIR analysis, single-family and multi-family residences with outdoor active use areas (such as patios or balconies) exposed to noise levels exceeding 70 dBA CNEL would need to be mitigated.

Since interior noise standards for residential land uses were not specified in either the City's or county's noise element, the state's interior noise standard of 45 dBA CNEL was used to evaluate potential interior noise impacts.

Municipal Code Noise Ordinance

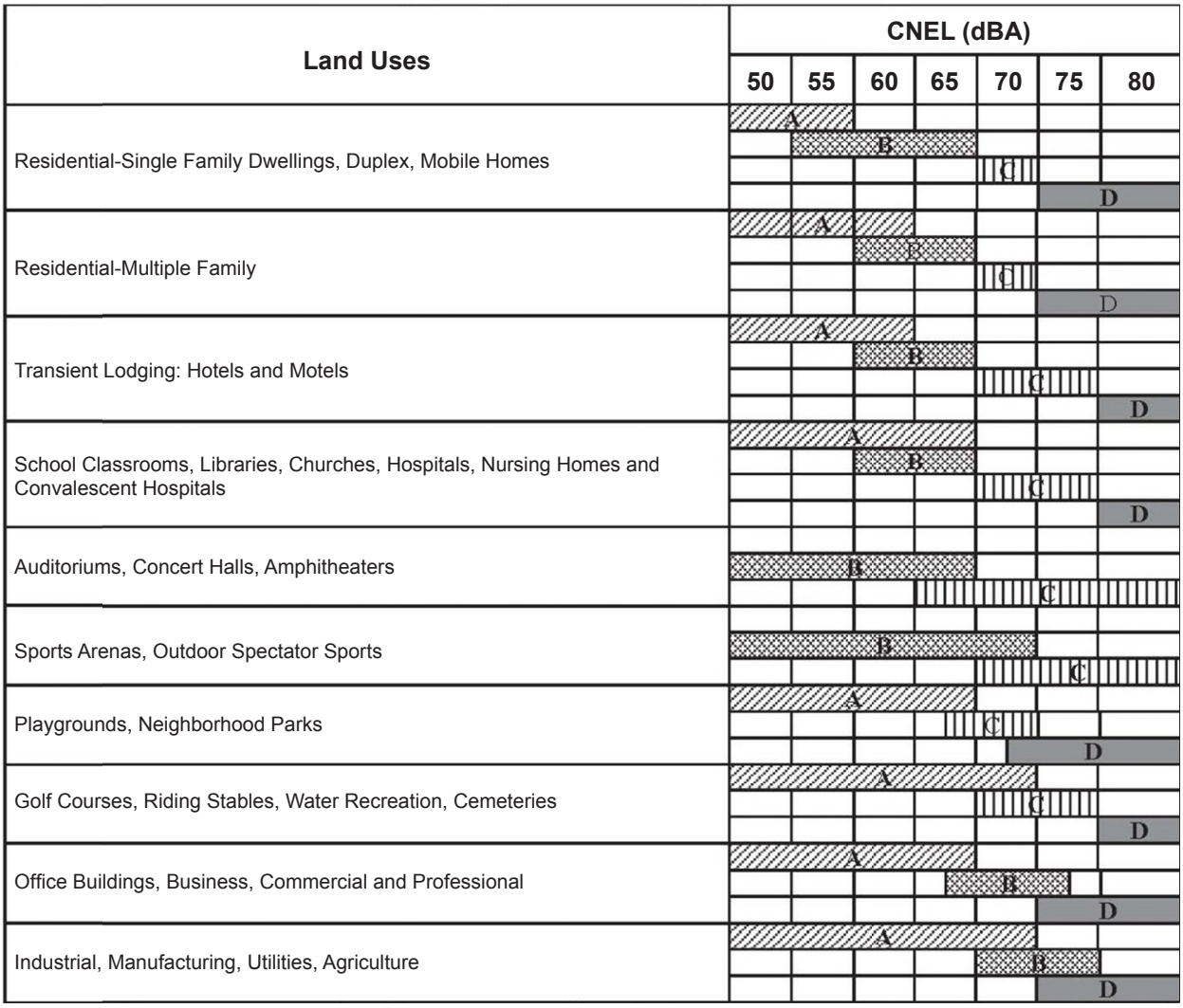
Section 8.44.090(E) of the City's municipal code restricts noise levels related to landscape maintenance and construction, including erection, excavation, demolition, alteration, or repair of any structure or improvement, to the hours between 7:00 a.m. to 6:00 p.m. provided that noise levels do not exceed 55 dBA for intervals of more than 15 minutes per hour at any time as measured in the interior of the nearest occupied residence or school. Since the City's municipal code does not specify the day of the week for these hours, it is assumed they apply to weekdays, weekends, and holidays. Construction activities that occur outside of the hours of 7:00 a.m. to 6:00 p.m. are subject to the noise standards in Section 8.44.070 of the City's municipal code.

Section 8.44.070 of the City's municipal code limits maximum noise levels. The duration periods above the base ambient noise levels for residential properties are listed below. The base ambient noise level is 45 dBA from 10:00 p.m. to 7:00 a.m. and 55 dBA from 7:00 a.m. to 10:00 p.m. for residential properties. The maximum noise level for commercial properties (nonresidential properties) is 75 dBA at any time. Since the City's municipal code does not specify the day of the week for these hours, it is assumed they apply to weekdays, weekends, and holidays.

[1] The City Compatibility Chart (Table 5.11-7) is best interpreted if each CNEL value is associated with the nearest vertical line to the *left*. This would make the presentation consistent with the California Department of Health Services, "Guidelines for the Preparation and Content of the Noise Element of the General Plan" (1990), upon which the chart is based. It would also make it consistent with the presentation of the County Compatibility Chart (Figure 5.11-1), which associates CNEL values with vertical lines.

Figure 5.11-2 - City of Banning Land Use Compatibility for Community Noise Environments

5. Environmental Analysis



A — Normally Acceptable: With no special noise reduction requirements assuming standard construction.

B — Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design.

C — Normally Unacceptable: New construction is discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design.

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

CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels

Base Image Source: California Department of Health Services, "Guidelines for the Preparation and Content of the Noise Element of the General Plan," 1990

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- The noise standard for a cumulative period of more than 30 minutes in any hour
- The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour
- The noise standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour
- The noise standard plus 15 dBA for a cumulative period of more than 1 minute in any hour
- The noise standard plus 20 dBA for any period of time

Vibration Threshold Criteria

Neither the City code nor the county code provide quantified criteria for vibration. In lieu of local standards, the California Department of Transportation's (Caltrans) "Transportation and Construction Vibration Guidance Manual" (2013) provides vibration levels for various types of structures that would potentially result in structural damage. These vibration levels are summarized in Table 5.11-6.

Table 5.11-6 Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Source: LSA 2016.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
in/sec = inches per second PPV = peak particle velocity

5.11.1.2 EXISTING NOISE ENVIRONMENT

The project site consists of 831 acres of currently undeveloped land and is generally located east of Sunset Avenue, south of Westward Avenue, and west of San Gorgonio Avenue/Old Idyllwild Road in the City of Banning and the County of Riverside. Land uses surrounding the project site include single-family and multifamily residences, Banning High School, the Mt. San Jacinto College San Gorgonio Pass Campus, Banning Stagecoach KOA Campground, and vacant land. Existing single-family and multifamily residences as well as vacant parcels are on all sides of the proposed project. The existing high school is adjacent to the east side of the proposed project. The college campus is adjacent to the west side of the proposed project. Noise-sensitive land uses, such as single- family and multifamily residences, the high school, the college campus, and the Banning Stagecoach KOA Campground, would be affected by the noise generated during construction and long-term operations of the project site.

Overview of the Existing Noise Environment

The primary existing noise sources in the project area are transportation facilities. Traffic on Westward Avenue, Sunset Avenue, 22nd Street, 8th Street, San Gorgonio Avenue, and other local streets is the dominant source of ambient noise. Also, traffic on Interstate 10 (I-10) and rail operations associated with the Union Pacific Railroad (UPRR) railroad tracks contribute to the ambient noise environment in the extended project vicinity. Other noise sources include off-site operations, such as the Mt. San Jacinto College San Gorgonio Pass Campus, Banning High School, and the Banning Stagecoach KOA Campground. Existing noise sources in the project area are further described below.

Aircraft Noise. Banning Municipal Airport is approximately 1.3 miles to the northeast of the project site. Based on the existing airport noise contour map in the noise element of the City's general plan, the project site would be outside of the 55 dBA CNEL impact zone. Ernest Field Airport in Hemet is the closest private airport to the project site, approximately 20 miles to the south. Hemet Valley Hospital is the closest helistop from the project site, approximately 11 miles to the west. Both Ernst Field Airport and the helistop at Hemet Valley Hospital are considered outside of the vicinity of the project site, and the project site is outside of the 55 dBA CNEL impact zone of these facilities.

Off-Site Stationary Noise. Existing off-site stationary noise adjacent to the project site is associated with the Mt. San Jacinto College San Gorgonio Pass Campus, Banning High School, and the Banning Stagecoach KOA Campground. The existing Mt. San Jacinto College San Gorgonio Pass Campus operations include parking lot activities. Noise levels generated from parking activities are considered low, with intermittent high noise levels from car door slams and vehicle engine start-up.

The existing Banning High School operations include parking lot activities and occasional sporting events. Noise levels generated from parking activities are considered low, and occasional sporting events contribute to temporary increases in noise. The existing Banning Stagecoach KOA Campground operations include people conversing, music, and children playing. Noise levels generated from camping activities are considered low.

Rail Noise. The UPRR is on the south side of I-10, approximately 1,970 feet to the north of the project site. Currently, approximately 32 freight trains pass through the area each day. Based on the noise element of the City's general plan, for 60 trains per day that average 7,000 feet in length, noise levels generated from trains passing by is estimated to be 69.3 dBA CNEL at a distance of 400 feet (a line source with a 4.5 dBA drop-off rate per doubling of distance).

Based on 60 trains per day at a distance of 1,970 feet, noise levels generated from train pass-bys along the UPRR line would be 59 dBA CNEL. Because there are currently fewer trains passing by per day, existing noise levels at the project site attributed to train operations would be lower than 59 dBA CNEL.

Vehicular Traffic Noise. The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions in the vicinity of the project site. This model requires various parameters—including traffic volumes, vehicle mix, vehicle speed, and roadway geometry—to compute typical equivalent noise levels during daytime, evening, and nighttime hours.

The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Traffic volumes in the project's traffic impact analysis (Kunzman 2016) were used to assess the existing traffic noise impacts. Table 5.11-7 provides the traffic noise levels along I-10 and along roadways adjacent to the project site. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between the traffic and the location where the noise contours are drawn. Appendix L provides the specific assumptions used in developing these noise levels and model printouts.

Table 5.11-7 Existing Conditions Traffic Noise Levels

Roadway	Segment	Daily Traffic Volumes (ADT)	Noise Level at 50 Feet from Centerline of Outermost Lane (dBA CNEL)	Centerline to Noise Contour (feet)		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Westward Avenue	east of Sunset Avenue	700	51.0	< 50	< 50	< 50
Westward Avenue	west of 22nd Street	1,000	52.6	< 50	< 50	< 50
Westward Avenue	east of 22nd Street	1,000	52.6	< 50	< 50	< 50
Westward Avenue	west of 8th Street	1,000	52.6	< 50	< 50	< 50
Westward Avenue	east of 8th Street	2,000	55.6	< 50	< 50	< 50
Westward Avenue	west of San Gorgonio Avenue	2,000	55.6	< 50	< 50	< 50
Sunset Avenue	south of Westward Avenue	400	50.2	< 50	< 50	< 50
Sunset Avenue	north of Westward Avenue	2,100	57.4	< 50	< 50	< 50
Sunset Avenue	south of Lincoln Street	2,100	57.4	< 50	< 50	< 50
Sunset Avenue	north of Lincoln Street	4,000	60.2	< 50	< 50	58
22nd Street	south of Westward Avenue	100	44.2	< 50	< 50	< 50
22nd Street	north of Westward Avenue	1,300	54.8	< 50	< 50	< 50
22nd Street	south of Lincoln Street	1,300	54.8	< 50	< 50	< 50
22nd Street	north of Lincoln Street	2,400	57.4	< 50	< 50	< 50
8th Street	north of Westward Street	2,100	55.8	< 50	< 50	< 50
8th Street	south of Lincoln Street	2,100	55.8	< 50	< 50	< 50
8th Street	north of Lincoln Street	7,000	61.0	< 50	< 50	66
San Gorgonio Avenue	south of Old Idyllwild Road1	1,700	57.6	< 50	< 50	< 50
San Gorgonio Avenue	north of Old Idyllwild Road1	2,900	59.7	< 50	< 50	59
San Gorgonio Avenue	south of Westward Avenue	2,900	59.7	< 50	< 50	59
San Gorgonio Avenue	north of Westward Avenue	4,600	62.2	< 50	< 50	79
San Gorgonio Avenue	south of Lincoln Avenue	4,600	62.2	< 50	< 50	79
San Gorgonio Avenue	north of Lincoln Avenue	2,400	59.4	< 50	< 50	51
I-10	between Sunset Avenue and 22nd Street	123,000	83.0	651	1,399	3,011
I-10	between 22nd Street and 8th Street	121,000	82.9	644	1,383	2,978
I-10	between 8th Street and San Gorgonio	121,000	82.9	644	1,383	2,978

Source: LSA 2016.

Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. These uses include residences, schools, hospital facilities, houses of worship, and open space/recreation areas where quiet environments are necessary for the enjoyment, public health, and safety of the community. Commercial and industrial uses are not considered noise- and vibration-sensitive uses. The proposed project consists of 42 planning areas. Figure 3-5 illustrates the land use plan. The project site is proposed to be developed with noise-sensitive uses, including single family, multifamily homes, parks, and an elementary school. A detailed description of the proposed land uses locations and intensities is in Section 3.3, *Project Characteristics*.

5.11.1.3 METHODOLOGY

Traffic Noise Modeling

The traffic noise levels for this project were estimated using the FHWA Highway Traffic Noise Prediction Model (RD-77-108). The FHWA model determines a predicted noise level through a series of adjustments to a reference sound level. These adjustments account for traffic flows, speed, truck mix, varying distances from the roadway, length of exposed roadway, and noise shielding. Vehicle speeds on each roadway were assumed to be the posted speed limit, and no reduction in speed was assigned due to congested traffic flows. Current roadway characteristics, such as the number of lanes and speed limits, were determined from field observations and according to roadway classification.

Project Land Use Compatibility

Land use compatibility is determined by the future noise level anticipated on a site and the type of existing or proposed land use on that site. In an urban environment (such as the proposed project area), transportation-related noise is generally the primary concern. Traffic noise contour boundaries are often utilized by local land use planning and zoning authorities to evaluate sound level exposures on land that is being considered for development and is adjacent to highways or major roadways. However, noise contours do not typically take into account the effect of any existing noise barriers that may affect ambient noise levels, and do not take into account the noise contribution from traffic on other roadways, aircraft noise, or noise associated with transit facilities.

5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

N-1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

N-2 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

N-3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

N-4 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

N-5 For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

N-6 For a project within the vicinity of a private airstrip, expose people residing or working the project area to excessive noise levels.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant: Threshold N-6. This impact will not be addressed in the following analysis.

Significance Criteria

In practical implementation of the above guidelines, a project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of the community in which it is located. That is, the application of noise significance thresholds is based on a combination of industry standards, established precedence, and local planning goals.

As shown in Table 5.11-1, most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions; changes of 1 to 3 dBA are detectable under quiet, controlled conditions; and changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. These industry standards are combined with the City and county noise compatibility charts (Figures 5.11-1 and 5.11-2, respectively), City Noise Element Policy 1, and County Noise Element Policy N 8.3, and noise impacts are considered significant if any of the following conditions are met:

- The project's operational noise sources increase ambient levels at the nearest receptor above the maximum allowable noise level, based on the land use classification
- The project's mobile sources of noise increase the ambient Community Noise Equivalent Level (CNEL) more than 5 dBA at the nearest sensitive receptors for areas that are not designated "noise impacted"
- The project's mobile sources of noise increase the ambient CNEL more than 3 dBA at the nearest sensitive receptors for areas that are designated "noise impacted"

For the purposes of this assessment, "noise impacted" is considered to be any noise compatibility category beyond "normally acceptable." Thus, the "conditionally acceptable," "normally unacceptable," and "clearly unacceptable" categories would be considered "noise impacted."

5.11.3 Environmental Impacts

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.11-1: Construction activities would result in temporary noise increases in the vicinity of the project site. [Threshold N-3]

Impact Analysis: The project is generally located east of Sunset Avenue, south of Westward Avenue, and west of San Gorgonio Avenue/Old Idyllwild Road in the City of Banning. Implementation of the Specific Plan would entail the development of approximately 831 acres of currently undeveloped land. Buildout of the Rancho San Gorgonio Specific Plan is estimated to occur over a 20-year period. Assuming construction begins in 2016, the time frame for completion could be from 2016 through 2035. However, construction depends on market conditions, project financing, and development of final construction plans. Short-term noise impacts would be associated with grading and erecting buildings during construction of the proposed project. Construction-related short-term noise levels would be higher than existing ambient noise levels in the project area today, but would no longer occur after construction of the project is completed.

Two types of short-term noise impacts could occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the site for the proposed project would incrementally increase noise levels on access roads leading to the site. Although there would be a relatively high single-event noise exposure potential causing intermittent noise nuisance (passing trucks at 50 feet would generate up to 75 dBA Lmax), the effect on longer-term (hourly or daily) ambient noise levels would be small. Therefore, short-term construction-related impacts associated with worker commutes and equipment transport to the project site would be less than significant.

The second type of short-term noise impact is related to noise generated during grading and building construction activities on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment, and consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site, and therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 5.11-8 lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor.

As shown, construction equipment generates high levels of noise, with maximums ranging from 74 dBA to 101 dBA. Typical noise levels range up to 87 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation phase, which includes excavation and grading of the site, tends to generate the highest noise levels, because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as back-fillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings.

Table 5.11-8 Construction Equipment Noise Emission Levels

Type of Equipment	Actual Maximum Sound Levels at 50 feet (dBA)
Backhoe	78
Crane	81
Dozer	82
Dump Truck	76
Excavator	81
Flat Bed Truck	74
Front End Loader	79
Generator	81
Impact Pile Driver	101
Jackhammer	89
Pickup Truck	75
Pneumatic Tools	85
Pumps	81
Roller	80
Scraper	84

Source: Roadway Construction Noise Model (FHWA 2006).
From: LSA 2016

Construction of individual developments associated with implementation of the Specific Plan would temporarily increase the ambient noise environment and would have the potential to affect noise-sensitive land uses in the vicinity of an individual project. Construction of the proposed project is expected to require the use of scrapers, bulldozers, water trucks, and pickup trucks. Noise associated with the use of construction equipment is estimated to be between 75 and 84 dBA L_{max} at a distance of 50 feet from the active construction area for the grading phase. As seen in Table 5.11-8, the maximum noise level generated by each scraper is assumed to be approximately 84 dBA L_{max} at 50 feet from the scraper in operation. Each bulldozer would generate approximately 82 dBA L_{max} at 50 feet. The maximum noise level generated by water trucks and pickup trucks is approximately 75 dBA L_{max} at 50 feet from these vehicles. Two pieces of equipment with equal sound levels increase the noise level by 3 dB. Assuming that each piece of construction equipment operates with a usage factor of 40 percent at some distance from the other equipment, the worst-case combined noise level during this phase of construction would be 87 dBA L_{max} at a distance of 50 feet and 82 dBA L_{eq} at a distance of 50 feet from the active construction area. The off-site and on-site short-term construction noise impacts are discussed below.

Off-Site Short-Term Construction Noise Impacts

The following discusses potential noise impacts during construction at off-site sensitive receptors in the City of Banning and unincorporated Riverside County.

City of Banning

The City's municipal code restricts noise levels related to construction to the hours between 7:00 a.m. to 6:00 p.m. The restriction would apply to the noise due to construction activities as measured in the interior of the nearest occupied residences or schools to no more than 55 dBA for intervals of more than 15 minutes per hour. Outside those hours, the more restrictive noise criteria in Section 8.44.070 would apply.

The closest residences and classroom building in the City of Banning are approximately 50 feet and 540 feet, respectively, from the project construction area. The residences are along the north side of West Westward Avenue between 22nd Street and 8th Street, along the west side of Lovell Street (south of West Westward Avenue), and along the east side of 22nd Street (south of West Westward Avenue). The closest classroom building is at Banning High School. The closest residences and classroom building may be subject to short-term noise of 87 and 77 dBA L_{max}, respectively, generated by construction activity in the project area. Also, based on the usage factor of 40 percent for construction equipment, the closest residences and classroom building may be subject to short-term noise of 82 and 72 dBA L_{eq}, respectively.

Standard building construction in Southern California would provide 24 dBA (LSA 2016) or more in noise reduction from exterior to interior with windows and doors closed. With the exterior-to-interior noise attenuation of 24 dBA, the interior noise levels of the closest residences and classroom building would be 58 and 48 dBA L_{eq}, respectively. Construction activities at the closest residences would exceed the City's 55 interior noise standard of 55 dBA for 15 minutes, while the closest classroom building would not exceed the City's interior noise standard. Project construction would have the potential for a substantial noise increase in the ambient noise conditions for an extended period at nearby residential and school uses and interfere with classroom activities. Therefore, without mitigation, noise impacts related to project construction would be considered potentially significant at receptors in the City of Banning.

County of Riverside

The closest residences in the County of Riverside are approximately 50 feet from the project construction area. These residences are on the west side of Turtledove Lane between Bobcat Road and Coyote Trail. The closest residences may be subject to short-term noise of 87 dBA L_{max} generated by construction activities.

As with the City of Banning Municipal Code, the County of Riverside Code generally restricts construction activities to what can be considered as nominal daytime hours, between 6:00 a.m. and 6:00 p.m. from June through September and between 7:00 a.m. and 6:00 p.m. from October through May (Section 9.52.020). However, unlike the City code, there are no specified noise level limits in the county code for construction activities during these hours. For activities outside of the allowed hours, the regular noise emissions limits from Section 9.52.040 would apply. Given the proximity to sensitive off-site receptors that would result in a substantial noise increase over ambient noise and the potential duration of construction activities, project construction may result in potentially significant impacts.

On-Site Short-Term Construction Noise Impacts

Portions of the project that are currently in unincorporated Riverside County would be annexed by the City of Banning; therefore, all future on-site receptors would be subject to the City of Banning noise regulations. After the completion of the first phase, construction activities for the subsequent phases of the project could affect on-site noise-sensitive land uses constructed and occupied in earlier phases. While these later-phase developments are part of the overall Specific Plan project and would not be strictly subject to CEQA assessment (the project cannot produce impacts on itself), the length of time between phases, coupled with the desire for functional consistency in applying noise protection for sensitive receptors that may experience construction noise, a noise reduction approach for onsite receptors should be similar to the above approach for offsite receptors.

While there are no detailed plans showing the specific locations and distances between the construction areas and the potentially affected receptors within the Specific Plan area, it is anticipated that construction would occur within 50 feet of occupied residents. Construction activities between the hours of 7:00 a.m. and 6:00 p.m. for subsequent phases of the project would generate a noise level of 87 dBA L_{max} or 82 dBA L_{eq} at a distance of 50 feet. Assuming 24 dBA exterior-to-interior attenuation from the structure, construction noise levels would exceed the City's interior noise standard of 55 dBA for 15 minutes if on-site residences and schools are within approximately 71 feet of construction activities. Without mitigation, this would be considered a significant impact.

Impact 5.11-2 **Buildout of the individual land uses and projects during implementation of the Ranch San Gorgonio Specific Plan would not expose sensitive uses to strong levels of groundborne vibration. [Threshold N-2]**

Impact Analysis:

Construction Vibration Impacts

Vibration generated by construction equipment can result in varying degrees of ground vibration, depending on the equipment. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings situated on soil near the active construction area respond to these vibrations, which range from imperceptible to low rumbling sounds, with perceptible vibrations and slight damage at the highest vibration levels. Typically, construction-related vibrations do not reach vibration levels that would result in damage to nearby structures.

Table 5.11-6 shows the vibration damage threshold for continuous/frequent intermittent sources. As shown, potential vibration damage would occur at 0.3 PPV in/sec for old residential structures, 0.5 PPV in/sec for new residential structures, and 0.5 PPV in/sec for modern industrial/commercial buildings.

The use of bulldozers and trucks for the construction of the proposed project would generate the highest groundborne vibration levels. Based on the Caltrans "Transportation and Construction Vibration Guidance Manual" (2013), a large bulldozer and loaded trucks would generate vibration levels of 0.089 PPV in/sec and 0.076 PPV in/sec, respectively, when measured at 25 feet.

The closest residential structures to the project site in the City and county are approximately 50 feet away. At this distance, the closest residential structures would experience vibration levels of up to 0.04 PPV. This vibration level would be below the damage threshold of 0.3 PPV for old residential structures. In addition, after the completion of the first phase, construction activities for the subsequent phases of the project could impact on-site noise-sensitive land uses. Construction activities for subsequent phases of the project would generate a vibration level of up to 0.089 PPV at a distance of 25 feet. This vibration level would be well below the damage threshold of 0.5 PPV for new on-site residential structures. Therefore, vibration levels generated during construction of the proposed project would be considered less than significant and no mitigation measures are required.

Ongoing Operations Vibration Impacts

The residential neighborhoods, school, park/open/recreational uses, public facilities, and commercial developments would not include any substantial sources of long-term vibration. Thus, ongoing operations would not generate significant levels of vibration, and such impacts would be less than significant, requiring no mitigation.

The project site is at a distance of over 2,000 feet from the railroad and I-10. Because vibration dissipates rapidly with distance, at that distance traffic on the I-10 and from rail activity would not result in substantial levels of groundborne vibration. No other major sources of vibration are in the vicinity of the site. Transportation routes in the Specific Plan area are not expected to generate excessive vibration. Therefore, no substantial levels of groundborne vibration would occur, and no mitigation would be required.

Impact 5.11-3: Buildout of the Rancho San Gorgonio Specific Plan would cause a substantial noise increase related to traffic on local roadways in the City of Banning. [Thresholds N-1 and N-3]

Impact Analysis: Future development in accordance with the Specific Plan would cause increases in traffic along local roadways. For purposes of evaluating the traffic impacts at different stages of development, the project has been divided into six phases. Traffic noise levels were estimated using the FHWA Highway Traffic Noise Prediction Model, as discussed in page 28 of the noise study (LSA 2016). The distances to the 70, 65, and 60 CNEL contours for selected roadway segments in the vicinity of the proposed project site are included in Appendix L.

Off-Site Traffic Noise Impacts

From the discussion in Section 5.11.2, a significant impact could occur if the proposed project would result in an ambient noise increase of more than 5 dBA CNEL at sensitive receptors for areas that are not designated as "noise impacted," or an ambient noise increase of more than 3 dBA CNEL at sensitive receptors for areas that are designated as "noise impacted."

For example, if a project-related roadway were next to existing, single-family residential (SFR) uses, then the roadway's noise contour would be acceptable going from 54 dBA to 59 dBA CNEL since (a) the resultant level is less than the acceptable threshold of 60 dBA CNEL (for SFR uses) and (b) the increase is not more than +5 dB. Conversely, if the existing roadway noise contour was at 59 dBA CNEL, then the allowable

increase would be limited to +3 dB since the resultant level would be 62 dBA CNEL, which is above the "normally acceptable" category and in the "conditionally acceptable" category.

Existing Conditions, without and with the Project

Table 5.11-9 presents the noise level increases over existing conditions for each roadway segment analyzed in the noise study.

Table 5.11-9 Existing Conditions Traffic Noise Increases

Roadway	Segment	Existing Without Project		Existing With Project		Increase due to Project	Potentially Significant?
		ADT	Noise, CNEL (dBA)	ADT	Noise, CNEL (dBA)		
Westward Ave.	east of Sunset Ave.	700	51.0	10,600	62.8	11.8	Yes
Westward Ave.	west of 22nd St.	1,000	52.6	6,300	60.6	8.0	Yes
Westward Ave.	east of 22nd St.	1,000	52.6	3,900	58.5	5.9	Yes
Westward Ave.	west of 8th St.	1,000	52.6	3,900	58.5	5.9	Yes
Westward Ave.	east of 8th St.	2,000	55.6	2,400	56.4	0.8	No
Westward Ave.	west of San Gorgonio Ave.	2,000	55.6	2,400	56.4	0.8	No
Sunset Ave.	south of Westward Ave.	400	50.2	5,100	61.3	11.1	Yes
Sunset Ave.	north of Westward Ave.	2,100	57.4	15,500	66.1	8.7	Yes
Sunset Ave.	south of Lincoln St.	2,100	57.4	15,500	66.1	8.7	Yes
Sunset Ave.	north of Lincoln St.	4,000	60.2	17,000	66.5	6.3	Yes
22nd St.	south of Westward Ave.	100	44.2	13,100	65.4	21.2	Yes
22nd St.	north of Westward Ave.	1,300	54.8	8,700	63.0	8.2	Yes
22nd St.	south of Lincoln St.	1,300	54.8	8,700	63.0	8.2	Yes
22nd St.	north of Lincoln St.	2,400	57.4	9,800	63.5	6.1	Yes
8th St.	south of Westward St.	n/a	n/a	6,400	60.6	n/a	n/a
8th St.	north of Westward St.	2,100	55.8	8,400	61.8	6.0	Yes
8th St.	south of Lincoln St.	2,100	55.8	8,400	61.8	6.0	Yes
8th St.	north of Lincoln St.	7,000	61.0	12,200	63.4	2.4	No
San Gorgonio Ave.	south of Charles St.[5]	1,700	57.6	2,400	59.1	1.5	No
San Gorgonio Ave.	north of Charles St.[5]	2,900	59.7	3,300	60.2	0.5	No
San Gorgonio Ave.	south of Westward Ave.	2,900	59.7	3,300	60.2	0.5	No
San Gorgonio Ave.	north of Westward Ave.	4,600	62.2	4,800	62.4	0.2	No
San Gorgonio Ave.	south of Lincoln Ave.	4,600	62.2	4,800	62.4	0.2	No

Source: LSA 2016.
ADT= Average Daily Traffic
CNEL=Community Noise Equivalent Level
dBA = A-weighted decibels
"n/a" is not available

The existing conditions traffic noise summary above shows that there are 14 segments around the project area that are impacted due to project-generated increases (between 6.0 and 21.2 dBA). These segments would have potentially significant noise impacts relative to existing conditions.

2017 Conditions without and with the Project

Table 5.11-10 presents the noise level increases over 2017 conditions for each roadway segment analyzed in the noise study.

Table 5.11-10 2017 Conditions Traffic Noise Increases

Roadway	Segment2	2017 Without Project		2017 With Project		Increase due to Project	Potentially Significant?
		ADT	Noise, CNEL (dBA)	ADT	Noise, CNEL (dBA)		
Westward Ave.	east of Sunset Ave.	1,300	53.7	1,600	54.6	0.9	No
Westward Ave.	west of 22nd St.	1,500	54.3	1,800	55.1	0.8	No
Westward Ave.	east of 22nd St.	1,700	54.9	2,300	56.2	1.3	No
Westward Ave.	west of 8th St.	1,700	54.9	2,300	56.2	1.3	No
Westward Ave.	east of 8th St.	2,700	56.9	2,700	56.9	0.0	No
Westward Ave.	west of San Gorgonio Ave.	2,700	56.9	2,700	56.9	0.0	No
Sunset Ave.	south of Westward Ave.	500	51.2	500	51.2	0.0	No
Sunset Ave.	north of Westward Ave.	4,200	60.4	4,500	60.7	0.3	No
Sunset Ave.	south of Lincoln St.	4,200	60.4	4,500	60.7	0.3	No
Sunset Ave.	north of Lincoln St.	6,500	62.3	6,800	62.5	0.2	No
22nd St.	south of Westward Ave.	200	47.2	200	47.2	0.0	No
22nd St.	north of Westward Ave.	1,600	55.7	1,600	55.7	0.0	No
22nd St.	south of Lincoln St.	1,600	55.7	1,600	55.7	0.0	No
22nd St.	north of Lincoln St.	2,400	57.4	2,400	57.4	0.0	No
8th St.	south of Westward St.	n/a	n/a	2,800	57.1	n/a	n/a
8th St.	north of Westward St.	2,400	56.4	4,600	59.2	2.8	No
8th St.	south of Lincoln St.	2,400	56.4	4,600	59.2	2.8	No
8th St.	north of Lincoln St.	2,400	56.4	9,600	62.4	1.1	No
San Gorgonio Ave.	south of Charles St.	7,500	61.3	2,000	58.3	0.4	No
San Gorgonio Ave.	north of Charles St.	1,800	57.9	3,100	59.9	0.0	No
San Gorgonio Ave.	south of Westward Ave.	3,100	59.9	3,100	59.9	0.0	No
San Gorgonio Ave.	north of Westward Ave.	3,100	59.9	4,100	61.7	0.0	No
San Gorgonio Ave.	south of Lincoln Ave.	4,100	61.7	4,100	61.7	0.0	No

Source: LSA 2016.
ADT= Average Daily Traffic
CNEL=Community Noise Equivalent Level
dBA = A-weighted decibels
"n/a" is not available

The 2017 conditions traffic noise increases summary above shows that there are no segments around the project area that are impacted due to project-generated increases, which are no more than 2.8 dBA. Thus, all segments would have less than significant noise impacts.

2019 Conditions, without and with the Project

Table 5.11-11 presents the noise level increases over 2019 conditions for each roadway segment analyzed in the noise study.

Table 5.11-11 2019 Conditions Traffic Noise Increases

Roadway	Segment[2]	2019 Without Project		2019 With Project		Increase due to Project	Potentially Significant ?
		ADT	Noise, CNEL (dBA)[3]	ADT	Noise, CNEL (dBA)[3]		
Westward Ave.	east of Sunset Ave.	1,600	54.6	2,700	56.9	2.3	No
Westward Ave.	west of 22nd St.	1,800	55.1	2,900	57.2	2.1	No
Westward Ave.	east of 22nd St.	2,100	55.8	3,900	58.5	2.7	No
Westward Ave.	west of 8th St.	2,100	55.8	3,900	58.5	2.7	No
Westward Ave.	east of 8th St.	3,100	57.5	3,200	57.6	0.1	No
Westward Ave.	west of San Gorgonio Ave.	3,100	57.5	3,200	57.6	0.1	No
Sunset Ave.	south of Westward Ave.	600	52.0	600	52.0	0.0	No
Sunset Ave.	north of Westward Ave.	5,200	61.4	6,300	62.2	0.8	No
Sunset Ave.	south of Lincoln St.	5,200	61.4	6,300	62.2	0.8	No
Sunset Ave.	north of Lincoln St.	7,700	63.1	8,800	63.6	0.5	No
22nd St.	south of Westward Ave.	300	49.0	300	49.0	0.0	No
22nd St.	north of Westward Ave.	1,700	55.9	1,900	56.4	0.5	No
22nd St.	south of Lincoln St.	1,700	55.9	1,900	56.4	0.5	No
22nd St.	north of Lincoln St.	2,500	57.6	2,700	57.9	0.3	No
8th St.	south of Westward St.	100	42.6	5,900	60.3	17.7	Yes
8th St.	north of Westward St.	2,600	56.7	6,600	60.8	4.1	Yes
8th St.	south of Lincoln St.	2,600	56.7	6,600	60.8	4.1	Yes
8th St.	north of Lincoln St.	7,800	61.5	11,000	63.0	1.5	No
San Gorgonio Ave.	south of Charles St.	1,900	58.1	2,100	58.5	0.4	No
San Gorgonio Ave.	north of Charles St.	3,200	60.1	3,200	60.1	0.0	No
San Gorgonio Ave.	south of Westward Ave.	3,200	60.1	3,200	60.1	0.0	No
San Gorgonio Ave.	north of Westward Ave.	4,300	61.9	4,400	62.0	0.1	No
San Gorgonio Ave.	south of Lincoln Ave.	4,300	61.9	4,400	62.0	0.1	No

Source: LSA 2016.
ADT= Average Daily Traffic
CNEL=Community Noise Equivalent Level
dBA = A-weighted decibels
"n/a" is not available

The 2019 conditions traffic noise increases summary above shows that there are three segments around the Specific Plan area that are impacted due to project-generated increases (between 4.1 and 17.7 dB). These segments would have potentially significant noise impacts relative to 2019 conditions.

2022 Conditions, without and with the Project

Table 5.11-12 presents the noise level increases over 2022 conditions for each roadway segment analyzed in the noise study.

Table 5.11-12 2022 Conditions Traffic Noise Increases

Roadway	Segment[2]	2022 Without Project		2022 With Project		Increase due to Project	Potentially Significant?
		ADT	Noise, CNEL (dBA)[3]	ADT	Noise, CNEL (dBA)[3]		
Westward Ave.	east of Sunset Ave.	2,800	57.1	5,300	59.8	2.7	Yes
Westward Ave.	west of 22nd St.	3,000	57.4	5,500	60.0	2.6	No
Westward Ave.	east of 22nd St.	3,600	58.1	4,400	59.0	0.9	No
Westward Ave.	west of 8th St.	3,600	58.1	4,400	59.0	0.9	No
Westward Ave.	east of 8th St.	4,800	59.4	4,900	59.5	0.1	No
Westward Ave.	west of San Gorgonio Ave.	4,800	59.4	4,900	59.5	0.1	No
Sunset Ave.	south of Westward Ave.	700	52.6	700	52.6	0.0	No
Sunset Ave.	north of Westward Ave.	7,000	62.6	9,500	64.0	1.4	No
Sunset Ave.	south of Lincoln St.	7,000	62.6	9,500	64.0	1.4	No
Sunset Ave.	north of Lincoln St.	10,300	64.3	12,700	65.2	0.9	No
22nd St.	south of Westward Ave.	400	50.2	6,200	62.1	11.9	Yes
22nd St.	north of Westward Ave.	1,800	56.2	5,000	60.6	4.4	Yes
22nd St.	south of Lincoln St.	1,800	56.2	5,000	60.6	4.4	Yes
22nd St.	north of Lincoln St.	2,500	57.6	5,700	61.2	3.6	Yes
8th St.	south of Westward St.	300	47.4	4,800	59.4	12.0	Yes
8th St.	north of Westward St.	2,700	56.9	7,400	61.3	4.4	Yes
8th St.	south of Lincoln St.	2,700	56.9	7,400	61.3	4.4	Yes
8th St.	north of Lincoln St.	7,900	61.6	11,200	63.1	1.5	No
San Gorgonio Ave.	south of Charles St.	1,800	57.9	2,100	58.5	0.6	No
San Gorgonio Ave.	north of Charles St.	3,400	60.3	3,500	60.5	0.2	No
San Gorgonio Ave.	south of Westward Ave.	3,400	60.3	3,500	60.5	0.2	No
San Gorgonio Ave.	north of Westward Ave.	4,100	61.7	4,200	61.8	0.1	No
San Gorgonio Ave.	south of Lincoln Ave.	4,100	61.7	4,200	61.8	0.1	No

Source: LSA 2016.
ADT= Average Daily Traffic
CNEL=Community Noise Equivalent Level
dBA = A-weighted decibels
"n/a" is not available.

The 2022 conditions traffic noise increases summary above shows that seven segments around the Specific Plan area would be impacted due to project-generated increases (between 3.6 and 12.0 dB). These segments would have potentially significant noise impacts relative to 2022 conditions.

2025 Conditions, without and with the Project

Table 5.11-13 presents the noise level increases over 2025 conditions for each roadway segment analyzed in the noise study.

Table 5.11-13 2025 Conditions Traffic Noise Increases

Roadway	Segment[2]	2025 Without Project		2025 With Project		Increase due to Project	Potentially Significant?
		ADT	Noise, CNEL (dBA)[3]	ADT	Noise, CNEL (dBA)[3]		
Westward Ave.	east of Sunset Ave.	3,400	57.9	8,200	61.7	3.8	Yes
Westward Ave.	west of 22nd St.	3,600	58.1	7,800	61.5	3.4	Yes
Westward Ave.	east of 22nd St.	4,400	59.0	5,500	60.0	1.0	No
Westward Ave.	west of 8th St.	4,400	59.0	5,500	60.0	1.0	No
Westward Ave.	east of 8th St.	5,700	60.1	5,900	60.3	0.2	No
Westward Ave.	west of San Gorgonio Ave.	5,700	60.1	5,900	60.3	0.2	No
Sunset Ave.	south of Westward Ave.	800	53.2	800	53.2	0.0	No
Sunset Ave.	north of Westward Ave.	8,600	63.5	13,400	65.5	2.0	No
Sunset Ave.	south of Lincoln St.	8,600	63.5	13,400	65.5	2.0	No
Sunset Ave.	north of Lincoln St.	12,500	65.2	17,100	66.5	1.3	No
22nd St.	south of Westward Ave.	400	50.2	9,900	64.1	13.9	Yes
22nd St.	north of Westward Ave.	2,000	56.6	7,100	62.1	5.5	Yes
22nd St.	south of Lincoln St.	2,000	56.6	7,100	62.1	5.5	Yes
22nd St.	north of Lincoln St.	2,500	57.6	7,600	62.4	4.8	Yes
8th St.	south of Westward St.	400	48.6	5,600	60.1	11.5	Yes
8th St.	north of Westward St.	2,900	57.2	7,400	61.3	4.1	Yes
8th St.	south of Lincoln St.	2,900	57.2	7,400	61.3	4.1	Yes
8th St.	north of Lincoln St.	8,300	61.8	12,200	63.4	1.6	No
San Gorgonio Ave.	south of Charles St.	1,800	57.9	2,200	58.7	0.8	No
San Gorgonio Ave.	north of Charles St.	3,500	60.5	3,600	60.6	0.1	No
San Gorgonio Ave.	south of Westward Ave.	3,500	60.5	3,600	60.6	0.1	No
San Gorgonio Ave.	north of Westward Ave.	4,200	61.8	4,300	61.9	0.1	No
San Gorgonio Ave.	south of Lincoln Ave.	4,200	61.8	4,300	61.9	0.1	No

Source: LSA 2016.
ADT= Average Daily Traffic
CNEL=Community Noise Equivalent Level
dBA = A-weighted decibels
"n/a" is not available

The 2025 conditions traffic noise increases summary above shows that nine segments around the Specific Plan area would be impacted due to project-generated increases (between 3.4 and 13.9 dB). These segments would have potentially significant noise impacts relative to 2025 conditions.

2029 Conditions, without and with the Project

Table 5.11-14 presents the noise level increases over 2029 conditions for each roadway segment analyzed in the noise study.

Table 5.11-14 2029 Conditions Traffic Noise Increases

Roadway	Segment2	2029 Without Project		2029 With Project		Increase due to Project	Potentially Significant?
		ADT	Noise, CNEL (dBA)	ADT	Noise, CNEL (dBA)		
Westward Ave.	east of Sunset Ave.	4,400	59.0	13,900	64.0	5.0	Yes
Westward Ave.	west of 22nd St.	4,500	59.1	10,300	62.7	3.6	Yes
Westward Ave.	east of 22nd St.	5,500	60.0	8,000	61.6	1.6	No
Westward Ave.	west of 8th St.	5,500	60.0	8,000	61.6	1.6	No
Westward Ave.	east of 8th St.	6,900	61.0	7,200	61.2	0.2	No
Westward Ave.	west of San Gorgonio Ave.	6,900	61.0	7,200	61.2	0.2	No
Sunset Ave.	south of Westward Ave.	900	53.7	5,000	61.2	7.5	Yes
Sunset Ave.	north of Westward Ave.	10,700	64.5	22,700	67.8	3.3	Yes
Sunset Ave.	south of Lincoln St.	10,700	64.5	22,700	67.8	3.3	Yes
Sunset Ave.	north of Lincoln St.	15,300	66.0	27,000	68.5	2.5	No
22nd St.	south of Westward Ave.	600	52.0	13,100	65.4	13.4	Yes
22nd St.	north of Westward Ave.	2,200	57.0	9,300	63.3	6.3	Yes
22nd St.	south of Lincoln St.	2,200	57.0	9,300	63.3	6.3	Yes
22nd St.	north of Lincoln St.	2,600	57.8	10,100	63.7	5.9	Yes
8th St.	south of Westward St.	500	49.6	6,000	60.4	10.8	Yes
8th St.	north of Westward St.	3,100	57.5	8,700	62.0	4.5	Yes
8th St.	south of Lincoln St.	3,100	57.5	8,700	62.0	4.5	Yes
8th St.	north of Lincoln St.	8,700	62.0	13,300	63.8	1.8	No
San Gorgonio Ave.	south of Charles St.	1,800	57.9	2,300	58.9	1.0	No
San Gorgonio Ave.	north of Charles St.	3,700	60.7	4,000	61.1	0.4	No
San Gorgonio Ave.	south of Westward Ave.	3,700	60.7	4,000	61.1	0.4	No
San Gorgonio Ave.	north of Westward Ave.	4,400	62.0	4,500	62.1	0.1	No
San Gorgonio Ave.	south of Lincoln Ave.	4,400	62.0	4,500	62.1	0.1	No

Source: LSA 2016.
ADT= Average Daily Traffic
CNEL=Community Noise Equivalent Level
dBA = A-weighted decibels
"n/a" is not available

The 2029 conditions traffic noise increases summary above shows that 12 segments around the Specific Plan area would be impacted due to project-generated increases (between 3.3 and 13.4 dB). These segments would have potentially significant noise impacts relative to 2029 conditions.

2035 Conditions, without and with the Project

Table 5.11-15 presents the noise level increases over 2035 conditions for each roadway segment analyzed in the noise study.

Table 5.11-15 2035 Conditions Traffic Noise Increases

Roadway	Segment[2]	2035 Without Project		2035 With Project		Increase due to Project	Potentially Significant?
		ADT	Noise, CNEL (dBA)	ADT	Noise, CNEL (dBA)		
Westward Ave.	east of Sunset Ave.	5,700	60.1	16,400	64.7	4.6	Yes
Westward Ave.	west of 22nd St.	5,800	60.2	13,000	63.7	3.5	Yes
Westward Ave.	east of 22nd St.	7,200	61.2	10,400	62.8	1.6	No
Westward Ave.	west of 8th St.	7,200	61.2	10,400	62.8	1.6	No
Westward Ave.	east of 8th St.	8,800	62.0	9,600	62.4	0.4	No
Westward Ave.	west of San Gorgonio Ave.	8,800	62.0	9,600	62.4	0.4	No
Sunset Ave.	south of Westward Ave.	1,100	54.6	5,400	61.5	6.9	Yes
Sunset Ave.	north of Westward Ave.	14,000	65.7	22,800	67.8	2.1	No
Sunset Ave.	south of Lincoln St.	14,000	65.7	22,800	67.8	2.1	No
Sunset Ave.	north of Lincoln St.	19,500	67.1	28,000	68.7	1.6	No
22nd St.	south of Westward Ave.	700	52.6	12,700	65.2	12.6	Yes
22nd St.	north of Westward Ave.	2,500	57.6	8,100	62.7	5.1	Yes
22nd St.	south of Lincoln St.	2,500	57.6	8,100	62.7	5.1	Yes
22nd St.	north of Lincoln St.	2,600	57.8	8,000	62.6	4.8	Yes
8th St.	south of Westward St.	700	51.0	6,700	60.8	9.8	Yes
8th St.	north of Westward St.	3,500	58.0	8,500	61.9	3.9	Yes
8th St.	south of Lincoln St.	3,500	58.0	8,500	61.9	3.9	Yes
8th St.	north of Lincoln St.	9,300	62.3	13,600	63.9	1.6	No
San Gorgonio Ave.	south of Charles St.	1,900	58.1	2,400	59.1	1.0	No
San Gorgonio Ave.	north of Charles St.	3,200	60.1	3,500	60.5	0.4	No
San Gorgonio Ave.	south of Westward Ave.	3,200	60.1	3,500	60.5	0.4	No
San Gorgonio Ave.	north of Westward Ave.	4,200	61.8	4,400	62.0	0.2	No
San Gorgonio Ave.	south of Lincoln Ave.	4,200	61.8	4,400	62.0	0.2	No

Source: LSA 2016.
ADT= Average Daily Traffic
CNEL=Community Noise Equivalent Level
dBA = A-weighted decibels
"n/a" is not available

The 2035 conditions traffic noise increases summary above shows that 10 segments around the Specific Plan area would be impacted due to project-generated increases (between 3.5 and 12.6 dB). These segments would have potentially significant noise impacts relative to 2035 conditions.

Traffic Noise Increase Summary

Tables 5.11-9 through 5.11-15 show that in the Existing, Year 2017, Year 2019, Year 2022, Year 2025, Year 2029, and Buildout Year (2035) with project scenarios, project-related traffic noise level increases would be up to 21.2 dBA. Several roadway segments have been identified as locations where sensitive receptors would be potentially affected by traffic noise increases. The following roadway segments would experience traffic increases resulting in a potentially significant traffic noise impact to sensitive receptors along roadways:

- 8th Street from North of Westward Street to South of Lincoln Street.
- 8th Street South of Westward Street.
- Sunset Avenue North and South of Lincoln Street.
- Westward Avenue East of Sunset Avenue and West of 22nd Street.
- Westward Avenue from East of Sunset Avenue to West of 8th Street.
- Sunset Avenue from South of Westward Avenue to North of Lincoln Street.
- 22nd Street North of Westward Avenue.
- 22nd Street North and South of Lincoln Street.
- 22nd Street from South of Westward Avenue to North of Lincoln Street.

Several single-family residential homes along the roadway segments listed above would experience potentially significant noise impacts. For the purpose of this analysis, and consistent with the threshold of significance discussed previously, a potentially significant noise impacts at residential receptors would occur when:

- An ambient noise increase of more than 5 dBA CNEL resulting in a noise level of less than 60 dBA CNEL

- An ambient noise increase of more than 3 dBA CNEL resulting in a noise level equal or greater than 60 dBA CNEL

There are no sideyard or backyard walls at the receptors along the roadway segments listed above, except along Sunset Avenue. The receptors along Sunset Avenue North and South of Lincoln Street have backyard walls that provide a noise reduction from street traffic to the sideyards and backyard areas. The 16 homes along that segment—with side and back yards facing the street—are buffered by a solid cement block wall at least six feet high. This wall can be expected to decrease the final noise levels at the residences by approximately 5 dBA. For the Existing plus Project scenario, noise levels along this segment would range from 66.1 to 66.5 dBA CNEL, and for 2035 conditions, the noise levels would range from 67.8 to 68.7 dBA CNEL. Even with the reduction of 5 dBA provided by the existing backyard walls, noise levels would be anticipated to remain above 60 dBA CNEL. Therefore, noise increases along this segment would remain significant.

In summary, traffic noise increases caused by project-related traffic on sensitive uses along the 9 roadways listed above would occur. Without mitigation this would result in significant impacts.

On-Site Traffic Noise Impacts

A recent California Supreme Court decision regarding the assessment of an environment's impacts on proposed projects (*CBIA v BAAQMD*, issued December 17, 2015)[2] determined that it is no longer a requirement of the CEQA process to evaluate the impact of existing (or future) environmental conditions on

[2] *California Building Industry Association v. Bay Area Air Quality Management District* (2015) [Case No. S213478].

any given project, with limited exceptions.[3] For noise, the application of this ruling means that the analysis of traffic, rail, aircraft, and long-term stationary noise effects at the project site is no longer part of CEQA. Therefore, exterior noise effects from nearby offsite sources on the project is no longer a topic for impact evaluation under CEQA.

Nevertheless, the following information is provided to facilitate prudent planning, layout, and orientation processes during subsequent design phases of the project and to ensure the proposed land uses meet the City's General Plan requirements for noise standards. Typical sound level reductions of standard building construction in Southern California would provide 24 dB (LSA 2016) or more in noise reduction from exterior to interior with windows and doors closed. With windows and doors open, the exterior-to-interior noise reduction drops to 12 dBA or more (the national average is 15 dBA). Buildings that would be exposed to exterior noise exceeding 69 dBA CNEL would exceed the interior noise standard of 45 dBA CNEL with windows and doors closed and would require building façade upgrades such as double-paned windows. Also, buildings that would be exposed to exterior noise exceeding 57 dBA CNEL would exceed the interior noise standard of 45 dBA CNEL with windows and doors open and would require mechanical ventilation systems such as air-conditioning systems.

Based on the project's conceptual site plan and the projected noise levels due to traffic on the project's internal roads, the noise study concluded that proposed sensitive receptors constructed as part of the project would potentially be affected by traffic noise on Westward Avenue, Sunset Avenue, 22nd Street, 8th Street, and San Gorgonio Avenue. Noise from traffic on these roads would have the potential to affect future outdoor active use areas such as parks, backyards, patios or balconies, and interior areas at residences. However, as previously stated, impacts of the environment on a proposed project are not included as part of CEQA analysis.

Impact 5.11-4: Noise-sensitive uses could be exposed to elevated noise levels from stationary sources. [Thresholds N-1 and N-3]

Impact Analysis: Noise is regulated by numerous codes and ordinances across federal, state, and local agencies. In addition, the City regulates stationary-source noise through its municipal code. Buildout of the Specific Plan would result in an increase in very low density, low density, medium density, and medium-high density residential neighborhoods, as well as schools, park/open/recreational uses, public facilities, and commercial developments. The majority of these land uses would be within the City of Banning, with the remainder just beyond the City boundaries in unincorporated Riverside County.[4]

The primary noise sources from these land uses are landscaping/maintenance activities, playground activities, mechanical equipment, and air conditioning systems. In addition, future commercial uses may include loading docks. The City of Banning requires that noise from new stationary sources in the City comply with the City's noise ordinance, which limits the acceptable noise at the property line of the impacted property to reduce

[3] Exceptions to this rule apply to airport (§ 21096), school construction projects (§ 21151.8), and housing development projects (§§ 21159.21, subds. (f), (h), 21159.22, subds. (a), (b)(3), 21159.23, subd. (a)(2)(A), 21159.24, subd. (a)(1), (3), 21155.1, subd. (a)(4), (6)).

[4] Approximately 82 percent of the SP area is within the City of Banning and approximately 18 percent is within the County of Riverside.

nuisances to sensitive land uses (§§ 8.44.070 and 8.44.090(E)). Under the assumption that new developments at the project site would comply with the standards in the municipal code, stationary-source noise from these types of proposed land uses would not substantially increase the noise environment. However, particular types of noise sources may create localized exceedances of one or more aspects of the City municipal code. These particular types of noise sources are discussed in more detail in the following subsections.

Long-Term Stationary Noise Impacts from On-Site Noise Sources

Potential long-term noise impacts would be associated with on-site stationary sources from the proposed neighborhood commercial uses, elementary school, and parks. These activities are potential point sources of noise that could affect on-site and off-site noise-sensitive receptors such as residences. On-site noise-producing activities include parking lot activities, truck loading and unloading activities, truck deliveries, trash compactors, and park activities.

Neighborhood Commercial

Parking Lot Noise

Parking lot activities associated with the proposed neighborhood commercial uses would potentially impact nearby noise-sensitive land uses. Representative parking activities (e.g., employees or customers conversing, engine startup, slow-moving vehicles, and slamming doors) would generate approximately 60 to 70 dBA L_{max} (at 50 feet from the center of the source). For the purpose of this analysis, a reference noise level of 70 dBA L_{max} at 50 feet was used to evaluate potential noise impacts on existing off-site residences from the proposed neighborhood commercial uses.

Since existing off-site residences in the county are located more than 2,000 feet from the proposed neighborhood commercial uses, no noise impacts from on-site parking lots would occur and no mitigation would be required.

However, on-site and off-site noise-sensitive land uses within the City boundary that would be within approximately 28 feet and 89 feet of the parking lot would be exposed to parking lot noise exceeding the City's daytime and nighttime maximum noise level standards of 75 and 65 dBA L_{max}, respectively. Because on-site and off-site noise-sensitive land uses would not be located within approximately 28 feet of the proposed neighborhood commercial use parking lot, no daytime noise impacts would occur. However, if on-site and off-site noise-sensitive land uses are located within approximately 89 feet of the neighborhood commercial parking lot, noise from parking lot activities could potentially exceed the City's maximum nighttime noise level standards. Without mitigation, this could potentially be a significant impact.

Truck Loading/Unloading Noise

Truck loading and unloading activities associated with the proposed neighborhood commercial uses could also potentially impact nearby noise-sensitive land uses. Based on noise measurements conducted by LSA, delivery trucks generate a noise level of 57.6 dBA L_{eq} at 150 feet, or approximately 67 dBA L_{eq} at 50 feet (LSA 2010). During loading and unloading activities, noise would be generated by the trucks' diesel engines, exhaust systems, and related activities (including the use of brakes during low-speed gear shifting, other

braking activities, backing up toward the docks, dropping down the dock ramps, and maneuvering away from the docks). These peak-event noise sources are measured as a single event from a point source.

Since existing off-site residences in the county are more than 2,000 feet from the proposed neighborhood commercial uses, no noise impacts from truck loading and unloading activities would occur, and no mitigation would be required.

However, on-site and off-site noise-sensitive land uses within the City boundary that would be within approximately 20 feet and 63 feet of the truck loading and unloading areas could be exposed to truck loading/unloading noise levels that may exceed the City's daytime and nighttime maximum noise level standards of 75 and 65 dBA L_{max}, respectively. Therefore, if noise-sensitive land uses are within 20 feet and 63 feet from truck loading and unloading activities, noise from truck loading/unloading activities could potentially exceed the City's daytime and nighttime maximum noise level standards, respectively. Without mitigation, this could potentially be a significant impact.

Truck Delivery Noise

Truck deliveries associated with the proposed neighborhood commercial uses would potentially impact nearby noise-sensitive land uses. Slow-moving delivery trucks traveling within the proposed neighborhood commercial uses at 5 to 10 miles per hour (mph) would generate up to 75 dBA L_{max} when traveling and braking at a distance of 50 feet (LSA 2015).

Because existing off-site residences in the county are more than 2,000 feet from the proposed neighborhood commercial uses, no noise impacts from truck delivery would occur, and no mitigation would be required.

However, on-site and off-site noise-sensitive land uses within the City boundary that would be within approximately 50 feet and 158 feet of the truck delivery route in the proposed neighborhood commercial uses could be exposed to noise levels exceeding the City's daytime and nighttime maximum noise level standards of 75 and 65 dBA L_{max}, respectively. Therefore, if noise-sensitive land uses are located within 50 feet and 158 feet from truck deliver routes, noise from truck delivery activities could potentially exceed the City's daytime and nighttime maximum noise level standards. Without mitigation, this could potentially be a significant impact.

Garbage Compactor Noise

Trash compactor operations associated with the proposed neighborhood commercial uses would potentially impact nearby noise-sensitive land uses. Noise associated with trash or garbage compactors was measured to be 45.9 dBA L_{eq} at 200 feet, or approximately 58 dBA L_{eq} at 50 feet (LSA 2016).

Because existing off-site residences in the county are more than 2,000 feet from the proposed neighborhood commercial uses, no noise impacts from garbage compactors would occur, and no mitigation would be required.

However, on-site and off-site noise-sensitive land uses within the City boundary that would be within approximately 7 feet and 22 feet of a garbage compactor would be exposed to noise levels exceeding the City's daytime and nighttime maximum noise level standards of 75 and 65 dBA L_{max}, respectively. Because on-

site and off-site noise-sensitive land uses would not be within 7 feet of a garbage disposal, no daytime noise impacts would occur. However, if on-site and off-site noise-sensitive land uses are located within approximately 22 feet of the neighborhood commercial garbage compactor, noise from compacting activities could potentially exceed the City's maximum nighttime noise level standards. Without mitigation this could potentially be a significant impact.

Elementary School.

Parking Lot Noise

Parking lot activities associated with the proposed elementary school would potentially impact nearby noise-sensitive land uses. Representative parking activities (e.g., people conversing, engine start-ups, slow-moving vehicles, and slamming doors) would generate approximately 60 to 70 dBA L_{max} at 50 feet. As discussed previously, a reference noise level of 70 dBA L_{max} at 50 feet was used to evaluate potential noise impacts from parking lot activity.

Since existing off-site residences in the county are more than 2,900 feet from the proposed elementary school, no noise impacts from parking lots would occur, and no mitigation would be required.

Noise-sensitive land uses are not expected to be close to where noise from the school parking lot would exceed the City's daytime maximum noise level standard of 75 dBA L_{max}. No noise would be generated at the school parking lot during nighttime hours, and no nighttime noise impacts would occur. Thus, for both daytime and nighttime periods, school parking lot noise would be less than significant and no mitigation would be required.

Playground Noise

Playground activities at specific times during the day for recess on the proposed elementary school would potentially impact nearby noise-sensitive land uses. No noise would occur at the playground during nighttime hours since the school would not be in operation at night.

Since existing off-site residences in the county are more than 2,900 feet from the proposed elementary school, no noise impacts from playgrounds would occur, and no mitigation would be required.

However, noise-sensitive land uses within 84 feet of the playground in the City could be exposed to noise levels exceeding the City's daytime maximum noise level standard of 75 dBA L_{max} due to activity at playgrounds. If on-site and off-site noise-sensitive land uses are within approximately 84 feet of the elementary school playground, noise levels could potentially exceed the City's maximum daytime noise level standards at nearby sensitive uses. This could represent a potentially significant impact.

Parks

Multi-use Trails/Bikeways

Multi-use trails and bikeways would be used by pedestrians and bicyclists. Noise levels from multi-use trails and bikeways include people conversing for short periods of time. Normal human conversations generate a noise level of 65 dBA L_{max} at 3 feet (Galen Carol Audio 2015). Assuming a worst-case scenario of five people

conversing on the multi-use trail/bikeway, noise generated from a group of people would be 72 dBA L_{max} at 3 feet or 60 dBA L_{max} at 50 feet.

Because existing off-site residences in the county are more than 520 feet from the closest proposed park, no noise impacts from multi-use trails or bikeways would occur, and no mitigation would be required.

However, if on-site and off-site noise-sensitive land uses are located within the City boundary that would be within approximately 9 feet of the multi-use trails or bikeways associated with the proposed parks, they could potentially be exposed to noise levels exceeding the City's daytime maximum noise level standard of 75 dBA L_{max}. No noise would occur at multi-use trails or bikeways during nighttime hours. Because noise-sensitive land uses are not expected to be located within 9 feet of multi-use trails or bikeways, no noise impacts would occur and no mitigation measures are required.

Picnic Areas

Noise generated from picnic areas include people conversing, music, and children playing. Assuming a worst-case scenario of 20 people conversing loudly and simultaneously at the picnic area, noise generated from such a group of people would be approximately 78 dBA L_{max} at 3 feet or 66 dBA L_{max} at 50 feet (LSA 2016). To result in a potentially significant impact, an entire group of 20 people would have to be talking simultaneously less than 18 feet from a sensitive receptor.

Because existing off-site residences in the county are more than 520 feet from the closest proposed park, no noise impacts from picnic areas would occur and no mitigation would be required.

No noise would occur at picnic areas during nighttime hours, and the noise levels from picnic areas would be relatively low and normally not exceed the City's 75 dBA L_{max} standard, since sensitive receptors would not be in close proximity. Therefore noise from picnic areas would be less than significant.

Tot Lot Play Areas

Noise generated from approximately 80 children at a typical tot lot play areas at parks would be similar to playground noise at an elementary school. Noise level measurements of playground activities with 80 children at elementary schools and pre-schools resulted in a reference noise level of 79.5 dBA at a distance of 50 feet (LSA 2016). No noise would occur at the tot lot play areas during nighttime hours.

Because existing off-site residences in the county are more than 520 feet from the closest proposed park, no noise impacts from tot lot play areas would occur and no mitigation would be required.

Noise-sensitive land uses that are within approximately 84 feet of a park tot lot play area could potentially be exposed to noise levels greater than the City's maximum daytime standard of 75 dBA L_{max}. Without mitigation, this could be a potentially significant impact.

Sports Areas

Sports areas within the parks would include sports fields and basketball courts for impromptu sports play. No noise would occur at the sports areas during nighttime hours. Noise generated from the sports areas would consist of people conversing or yelling intermittently, but would not include loudspeakers. The reference

noise level of 65 dBA L_{eq} at 75 feet would be a worst-case condition because the size of the crowd would be much smaller and noise levels would generally be lower at a neighborhood park sports field or court setting than at a worst-case condition (i.e., a high school championship football game) (LSA 2016).

Because existing off- site residences in the county are more than 520 feet from the closest proposed park, no noise impacts from sports areas would occur, and no mitigation would be required.

Noise-sensitive land uses in the City that would be within approximately 24 feet of park sports areas could potentially be exposed to noise levels exceeding the City's daytime maximum noise level standard of 75 dBA L_{max}. Because noise-sensitive land uses are not expected to be within 24 feet of a park sports area, no noise impacts would occur, and mitigation would not be required.

Long-Term Stationary Noise Impacts from Off-Site Noise Sources

Long-term stationary noise from off-site sources would generate noise levels that could affect on-site noise-sensitive receptors, such as residences. These land uses include the Mt. San Jacinto College-San Gorgonio Pass Campus, Banning High School, and the Banning Stagecoach KOA Campground.

Noise sources from these land uses include parking lot activities, sporting events, and camping activities. However, it is important to note that with the recent California Supreme Court decision regarding the assessment of the environment's impacts on proposed projects (*CBIA v BAAQMD*, issued December 17, 2015),[5] it is no longer the purview of the CEQA process to evaluate the impact of existing (or future) environmental conditions on any given project, with limited exceptions.[6] For noise, the application of this ruling means that the analysis of traffic, rail, aircraft, and long-term stationary noise effects at the project site is no longer part of CEQA. Therefore, exterior noise effects from nearby offsite sources on the project are no longer a topic for impact evaluation under CEQA and no statement of impact significance is germane. Nonetheless, the following information is provided to facilitate prudent planning, layout, and orientation processes during subsequent design phases of the project and to ensure proposed land uses meet the City's General Plan noise standards.

Mt. San Jacinto College San Gorgonio Pass Campus

Parking Lot Noise

Representative parking activities (e.g., people conversing, engine startup, slow-moving vehicles, and slamming doors) would generate approximately 60 to 70 dBA L_{max} at 50 feet. As discussed previously, a reference noise level of 70 dBA L_{max} at 50 feet is considered to be conservative and was used to evaluate potential noise impacts on existing on-site noise-sensitive land uses. On-site noise-sensitive land uses within 28 feet of the college parking lot would be exposed to noise levels exceeding the City's daytime maximum noise level standard of 75 dBA L_{max}. Because on-site noise-sensitive land uses would not be within 28 feet of the parking lot, no noise impacts from parking lot activities would occur. Also, minimal to no noise would occur at the

[5] *California Building Industry Association v. Bay Area Air Quality Management District* (2015) [Case No. S213478].

[6] Exceptions to this rule apply to airport (§ 21096), school construction projects (§ 21151.8), and housing development projects (§§ 21159.21, subds. (f), (h), 21159.22, subds. (a), (b)(3), 21159.23, subd. (a)(2)(A), 21159.24, subd. (a)(1), (3), 21155.1, subd. (a)(4), (6)).

parking lot during nighttime hours. Therefore, noise generated from parking lot activities would not exceed the City standard.

Banning High School

Parking Lot Noise

Representative parking activities (e.g., people conversing, engine startup, slow-moving vehicles, and slamming doors) would generate approximately 60 to 70 dBA L_{max} at 50 feet. Measured noise levels of parking activities at an existing medical office building resulted in a reference noise level of 69 dBA L_{max} (Wieland 2006). A reference noise level of 70 dBA L_{max} at 50 ft is considered to be conservative and was used to evaluate potential noise impacts on existing on-site noise-sensitive land uses. Parking lot noise at the existing Banning High School would generate approximately 70 dBA L_{max} at 50 ft. On-site noise-sensitive land uses within 28 feet of the parking lot associated with the high school would be exposed to noise levels exceeding the City's daytime maximum noise level standard of 65 dBA L_{max}. However, on-site noise-sensitive land uses would not be within 28 feet of the parking lot, and no noise impacts from parking lot activities would occur. Also, no noise would occur at the parking lot during nighttime hours. Therefore, noise generated from parking lot activities would not exceed the City standard.

Sporting Event Noise

Noise from high school sporting events consists of noise generated from the public address (PA) systems and crowd noise. To comply with the City's noise ordinance, major events do not take place at the sports fields during nighttime hours. The combination of the PA system and crowd noise would generate approximately 73.1 dBA L_{max} at 50 feet (LSA 2016). A review of the Specific Plan shows that no future residences would be within 40 feet of the sports field. The elementary school would not be exposed to high noise levels from major sports events because these normally occur after regular elementary school class periods. Therefore, noise-sensitive receptors would not be exposed to noise levels exceeding the City's daytime maximum noise level standard of 75 dBA L_{max}.

Banning Stagecoach KOA Campground

Camping activities, which include people conversing, music, and children playing, would potentially affect proposed on-site noise-sensitive land uses. Assuming a worst-case scenario of 15 people conversing at the camp site, noise generated from such a group of people would be 77 dBA L_{max} at 3 feet or 65 dBA L_{max} at 50 feet (LSA 2016). Campground regulations on developed sites such as the Banning Stagecoach KOA restrict noise during the nighttime periods, imposing a "quiet time." Given the distance from the proposed residential areas to the campground, and because noise dissipates rapidly with distance, future receptors would not be exposed to noise levels above the 75 dBA L_{max} standard. No long-term stationary noise sources would result in a significant impact and no mitigation measures are required.

Impact 5.11-5: The proximity of the project site to a public or private airport would not result in exposure of future residents and/or workers to airport-related noise. [Threshold N-5]

Impact Analysis: The Banning Municipal Airport is approximately 1.3 miles northeast of the project site. Based on the noise element of the City's general plan, the project site is outside the 55 dBA CNEL impact zone. Also, Ernest Field Airport is approximately 20 miles to the south of the project site, and the helistop at Hemet Valley Hospital is approximately 11 miles west of the project site. Both Ernst Field Airport and the helistop at Hemet Valley Hospital are considered outside the vicinity of the project site, and the project site is well beyond the 55 dBA CNEL impact zone of these facilities. Therefore, the project would not be exposed to noise levels exceeding any relevant noise standards and no mitigation measures would be required.

5.11.4 Existing Regulations and Standard Conditions

State

- California Code of Regulations, Title 21, Part 1, Public Utilities Code (Regulation of Airports)
- California Code of Regulations, Title 24, Part 11, California Green Building Standards Code.

City of Banning Municipal Code

- Section 8.44.070
- Section 8.44.090(E)

City of Banning General Plan Noise Element

- Policies N 1.1 through N 1.8
- Policy N 2.3,
- Policies N 8.3 and N 8.4
- Policies N 11.1 and N 11.2
- Policies N 12.1 through N 12.4 and
- Policy N 13.1

5.11.5 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.11-2 (construction and operations vibration) and 5.11-5 (aircraft noise sources).

Without mitigation, the following impacts would be **potentially significant**:

- **Impact 5.11-1** Noise from construction activities from implementation of projects within the Specific Plan area could result in substantial impacts to sensitive receptors.

- **Impact 5.11-3** Noise-sensitive uses would be exposed to elevated traffic noise levels that would result in substantial impacts.

- **Impact 5.11-4** Noise-sensitive uses could be exposed to noise levels from parking lot activities, truck delivery, truck loading and unloading, and garbage compactor noise within the Neighborhood Commercial Area that may be above the City of Banning's noise level limit.

  Noise-sensitive uses could be exposed to noise levels from Elementary School playground activities that may be above the City of Banning's noise level limits.

5.11.6 Mitigation Measures

Impact 5.11-1

11-1 Prior to issuance of demolition, grading, and/or building permits, a note shall be provided on plans indicating that ongoing during grading, demolition, and construction, the property owner/developer shall be responsible for requiring contractors to implement the following measures to limit construction-related noise:

- The project applicant shall limit construction activities to the daytime hours between 7 AM to 6 PM, as prescribed in Section 8.44.090(E) of the City's Municipal Code.

- For construction activity within 71 feet of any noise-sensitive receptors, a temporary noise barrier shall be installed by the applicant/developer. This temporary noise barrier shall be installed prior to the onset of construction, and located between the construction zone and all receptors. The temporary sound barrier shall have a minimum height of 8 feet and be free of gaps and holes and must achieve a Sound Transmission Class (STC) of 35 or greater. The barrier can be either (a) a ¾-inch-thick plywood wall OR (b) a hanging blanket/curtain with a surface density or at least 2 pounds per square foot (Thalheimer 2000). For either configuration, the construction side of the barrier shall have an exterior lining of sound absorption material with a Noise Reduction Coefficient (NRC) rating of 0.7 or higher.

- For all project construction zones, all internal combustion engines on construction equipment and trucks are fitted with properly maintained mufflers consistent with manufacturer's standards.

- For all project construction zones, stationary equipment such as generators, air compressors shall be located as far as feasible from nearby noise-sensitive uses. If such stationary equipment produces noise emissions that are directional, said equipment shall be oriented so as to direct noise emissions away from sensitive receptors.

- For all project construction zones, stockpiling and staging should be located as far as feasible from nearby noise-sensitive receptors
- For all project construction zones, construction traffic—both worker commuting and all material haul-off, haul-on, and/or delivery—shall be limited to the haul routes established by the City of Banning and/or the County of Riverside.

Impact 5.11-3

11-2 Prior to issuance of building permits for future residential units on-site adjacent to Westward Avenue, Sunset Avenue, 22nd Street, 8th Street, and San Gorgonio Avenue, the Applicant/Developer shall submit an acoustical study to the City of Banning that demonstrates that the proposed building design would provide an interior noise level of 45 dBA CNEL or less and include a means of mechanical ventilation, as required by the California Building Code for occupancy with windows closed.

Without mitigation, existing off-site noise-sensitive uses would be exposed to elevated traffic noise levels that would result in substantial impacts. The following potential mitigation measures were considered.

Mitigation Measures Considered

In compliance with CEQA, "each public agency shall mitigate or avoid the significant effects on the environment of project it carries out or approves whenever it is feasible to do so" (Public Resources Code, § 21002.1(b)). The term "feasible" is defined in CEQA to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (Public Resources Code, § 21061.1). A number of measures were considered for mitigating or avoiding the traffic noise impacts, as discussed below.

Special Roadway Paving

Notable reductions in tire noise have been achieved via the implementation of special paving materials, such as rubberized asphalt or open-grade asphalt concrete overlays. For example, Sacramento County conducted a study of pavement noise along the Alta Arden Expressway (County of Sacramento 1999) and found improvements in an average of 4 dB compared to conventional asphalt overlay.

Given the relatively small reduction provided by rubberized asphalt of 4 dBA compared to the noise increases that would occur due to project traffic, most of the noise-sensitive receptors along roadway segments affected would still experience a substantial noise increase due to project traffic. Considering the approximate costs versus benefits, coupled with the lack of achieving compliance on most roadway segments (some of which need approximately 21 dB of reduction), this mitigation measure is inadequate for reducing the noise impacts to less than significant levels.

Sound Barrier Walls

Some segments may potentially benefit from the installation of sound barrier walls adjacent to the roadways that are predicted to have excessive sound levels due to the project. However, the majority of residences around the Specific Plan area have direct access (via driveways) to the associated roadway. Therefore, barrier

walls would prevent access to their individual properties and would be infeasible. Further, these impacted homes are on private property outside of the control of future Specific Plan developers, so there would be limited admittance (onto these properties) to construct such walls (while neglecting the high cost of such wall systems). Lastly, this approach would not be able to reduce project noise impacts at all receptor areas to levels that are below significance.

All things considered, retrofitting roadway sound barrier walls along one or more of the impacted segments is infeasible, and this method was dropped from further consideration.

No mitigation measures are feasible for the residences located along the remaining roadway segments since the homes front the street. Therefore, noise increases along these segments would be significant and unavoidable (LSA 2016).

Sound Insulation of Off-Site Residences

The highest predicted roadway noise levels were in the range of 68 to 69 dBA CNEL (at 50 feet from the centerline of the closest travel lane). Exterior-to-interior noise reductions depend on the materials utilized, the design of the homes, and their conditions. To determine what upgrades would be needed, a noise study would be required for each house to measure exterior-to-interior noise reduction. Sound insulation may require upgraded windows, upgraded doors, and a means of mechanical ventilation to allow for a "windows closed" condition. There are no funding mechanisms and procedures that would guarantee that the implementation of sound insulation features at each affected home would offset the increase in traffic noise to interior areas and ensure that the 45 dBA CNEL would be achieved. Therefore, this method was dropped from further consideration.

Impact 5.11-4

11-3 Prior to issuance of the first building permit for any project within the PA 9 Neighborhood Commercial Area, the property owner/developer shall submit a final acoustical report prepared to the satisfaction of the Planning Director to address potential noise impacts to nearby residences. The report shall demonstrate that the development within PA 9 incorporates sufficient noise-attenuation features so that the City's exterior and interior standards in Municipal Code Sections 8.44.070 and 8.44.090(E) and in the City's Noise Element are maintained at nearby residences. Compliance can be achieved with (a) sufficient buffering distances so that nearby sensitive receptors are not significantly impacted by future commercial development OR (b) sufficiently high and long sound barrier wall(s) that are placed between commercial noise sources and receptors (for example, in the case of garbage compactor equipment) OR (c) other adequate noise reduction methods that are approved by the Planning Director or their designee. In all cases, the noise reduction measures shall be technically demonstrated to achieve the appropriate target noise level(s) for both exterior and interior environments for nearby residences, as appropriate (e.g., sufficient wall or berm height, sufficient buffering distance, appropriate sound encapsulation/insulation methods, etc.).

The individual project owner/developer shall submit the noise mitigation report to the Planning Director for review and approval. Upon approval by the City, the project acoustical design features shall be incorporated into the future commercial development.

5.11.7 Level of Significance After Mitigation

Impact 5.11-1

Mitigation Measure 11-1 would reduce potential noise impacts during construction to the extent feasible. However, due to the potential for construction to occur in close proximity to sensitive receptors, there would be a substantial noise increase over existing ambient noise levels. Although temporary construction barriers would reduce construction noise levels to the City's interior noise standard (of 55 dBA for 15 minutes or below) for residences and schools located within 71 feet of construction activities, there would still be the potential for a readily perceptible noise increase at sensitive receptors in the vicinity of the project over the years the project is constructed. Therefore, even with mitigation, impacts would be significant and unavoidable.

Impact 5.11-3

No individual mitigation measures and no combination of feasible or practical mitigation measures are available to reduce project-generated traffic noise to less than significant levels. Thus, traffic noise impacts are significant and unavoidable.

Impact 5.11-4

Mitigation Measure 11-3 would reduce potential noise impacts to future noise-sensitive receptors below the thresholds. With implementation of this mitigation measure, no significant noise impacts would remain.

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5. Environmental Analysis
NOISE

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