5.12 Noise

5.12.1 INTRODUCTION

This section addresses potential noise and vibration impacts that may result from implementation of the Project. The following discussion addresses the existing ambient noise and vibration conditions in the vicinity of the Specific Plan, identifies applicable regulations, evaluates the Project's consistency with applicable goals and policies, identifies and analyzes environmental impacts, and recommends measures to reduce or avoid adverse impacts anticipated from implementation of the Project. The analysis in this section is based on the following resources:

- *City of Perris General Plan 2030,* Adopted 26 April 2005
- *City of Perris General Plan 2030 Environmental Impact Report,* Certified 26 April 2005
- Perris Municipal Code
- *Harvest Landing Retail Center & Business Park Project Noise Impact Analysis,* prepared by Urban Crossroads, January 2025, included as EIR Appendix Q

Noise and Vibration Terminology

Various noise descriptors are utilized in this Draft EIR analysis, and are summarized as follows:

dB: Decibel, the standard unit of measurement for sound pressure level.

dBA: A-weighted decibel, an overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

Leq: The equivalent sound level, which is used to describe noise over a specified period of time, typically 1 hour, in terms of a single numerical value. The Leq of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The Leq may also be referred to as the average sound level.

Lmax: The instantaneous maximum noise level experienced during a given period of time.

CNEL: The Community Noise Equivalent Level is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dBA to measured noise levels between the hours of 7:00 p.m. to 10:00 p.m. and after an addition of 10 dBA to noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

The "ambient noise level" is the background noise level associated with a given environment at a specified time and is usually a composite of sound from many sources from many directions.

Effects of Noise

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance)
- Interference effects (e.g., communication, sleep, and learning interference)
- Physiological effects (e.g., startle response)
- Physical effects (e.g., hearing loss)

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects refer to interruption of daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep. With regard to the subjective effects, the responses of individuals to similar noise events are diverse and are influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be by those hearing it. With regard to increases in A-weighted noise levels, the following relationships generally occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived.
- Outside of the laboratory, a 3-dBA change in noise levels is considered to be a barely perceivable difference.
- A change in noise levels of 5 dBA is considered to be a readily perceivable difference.
- A change in noise levels of 10 dBA is subjectively heard as doubling of the perceived loudness.

Noise Attenuation

Stationary point sources of noise, including mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 dBA per doubling of distance from the source over hard surfaces to 7.5 dBA per doubling of distance from the source over hard surfaces, depending on the topography of the area and environmental conditions (e.g., atmospheric conditions, noise barriers [either vegetative or manufactured]). Thus, a noise measured at 90 dBA 50 feet from the source would attenuate to about 84 dBA at 100 feet, 78 dBA at 200 feet, 72 dBA at 400 feet, and so forth. Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate, approximately 4 to 6 dBA per doubling of distance from the source.

Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.

Fundamentals of Vibration

Vibration is energy transmitted in waves through the ground or man-made structures. These energy waves generally dissipate with distance from the vibration source. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square. The root mean square amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure root mean square. VdB serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive

receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

5.12.2 REGULATORY SETTING

5.12.2.1 Federal Regulations

There are no federal regulations concerning noise impacts that are applicable to the Project.

5.12.2.2 State Regulations

California Green Building Standards Code

The State of California's Green Building Standards Code (CALGreen) contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level of 50 dBA Leq in occupied areas during any hour of operation (Section 5.507.4.2).

5.12.2.3 Local and Regional Regulations

City of Perris General Plan 2030

The City of Perris has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of Perris from excessive exposure to noise. The Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies noise polices and implementation measures designed to protect, create, and maintain an environment free from noise that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life.

The noise standards identified in the City of Perris General Plan are guidelines to evaluate the acceptability of the transportation related noise level impacts. These standards are based on the Governor's Office of Planning and Research and are used to assess the long-term traffic noise impacts on land uses. According to the City's Land Use Compatibility for Community Noise Exposure (Exhibit N-1), noise-sensitive land uses such as single-family residences are normally acceptable with exterior noise levels below 60 dBA CNEL and conditionally acceptable with noise levels below 65 dBA CNEL. Commercial uses are normally acceptable with exterior noise levels below 65 dBA CNEL and conditionally acceptable with noise levels below 75 dBA

CNEL. Industrial uses are considered normally acceptable with exterior noise levels of up to 70 dBA CNEL, and conditionally acceptable with exterior noise levels between 70 to 80 dBA CNEL.

The City of Perris General Plan Noise Element contains the following policies related to noise that are applicable to the Project:

Policy I.A The State of California Noise/Land Use Compatibility Criteria shall be used in determining land use compatibility for new development.

Measure I.A.1 All new development proposals will be evaluated with respect to the State Noise/Land Use Compatibility Criteria. Placement of noise sensitive uses will be discouraged within any area exposed to exterior noise levels that fall into the "Normally Unacceptable" range and prohibited within areas exposed to "Clearly Unacceptable" noise ranges.

Policy IV.A Reduce or avoid the existing and potential future impacts from air traffic on new sensitive noise land uses in areas where air traffic noise is 60 dBA CNEL or higher.

Measure IV.A.2 All new development proposals in the noise contour areas of 60 dBA and above will be evaluated with respect to the State Noise/Land Use Compatibility Criteria.

Policy V.A New large scale commercial or industrial facilities located within 160 feet of sensitive land uses shall mitigate noise impacts to attain an acceptable level as required by the State of California Noise/Land Use Compatibility Criteria.

Measure V.A.1 An acoustical impact analysis shall be prepared for new industrial and large scale commercial facilities to be constructed within 160 feet of the property line of any existing noise sensitive land use. This analysis shall document the nature of the commercial or industrial facility as well as all interior or exterior facility operations that would generate exterior noise.

The analysis shall document the placement of any existing or proposed noise-sensitive land uses situated within the 160-foot distance. The analysis shall determine the potential noise levels that could be received at these sensitive land uses and specify specific measures to be employed by the large scale commercial or industrial facility to ensure that these levels do not exceed 60 dBA CNEL at the property line of the adjoining sensitive land use.

No development permits or approval of land use applications shall be issued until the acoustic analysis is received and approved by the City Staff.

Perris Municipal Code

Section 7.34.050. The Perris Municipal Code, Chapter 7.34 Noise Control, Section 7.34.050, establishes the permissible noise level at any point on the property line of the affected residential receivers. Therefore, for residential properties and other noise sensitive land use, the exterior noise level shall not exceed a maximum noise level of 80 dBA Lmax during daytime hours (7:01 a.m. to 10:00 p.m.) and shall not exceed a maximum noise level of 60 dBA Lmax during the nighttime hours (10:01 p.m. to 7:00 a.m.), as shown on Table 5.12-1.

Table 5.12-1: City of Perris Noise Ordinance General Prohibitions

Land Use	Time Period	Maximum Noise Level
Residential[1]	Daytime (7:01 a.m. - 10:00 p.m.)	80 dBA Lmax
	Nighttime (10:01 p.m. - 7:00 a.m.)	60 dBA Lmax
Within 160 Feet of PL[2]	24-Hours	60 dBA CNEL

[1] Perris Municipal Code, Sections 7.34.040 & 7.34.050

Section 7.34.060. Perris Municipal Code Section 7.34.060 identifies the City's construction noise standards and permitted hours of construction activity (refer to Table 5.12-2). Further, Perris Municipal Code Section 7.34.060 states that a noise level standard of 80 dBA Lmax at residential properties shall apply to the noise-sensitive receiver locations located in the City of Perris.

Table 5.12-2: City of Perris Construction Noise Standards

Permitted Hours of Construction Activity	Maximum Noise Level
7:00 a.m. to 7:00 p.m. on any day except Sundays and legal holidays (with the exception of Columbus Day and Washington's birthday).	80 dBA Lmax

[1] Perris Municipal Code, Section 7.34.060.

City of Perris Good Neighbor Guidelines

The City of Perris Good Neighbor Guidelines for Siting New and/or Modified Industrial Facilities were adopted in September 2022. The purpose of the Good Neighbor Guidelines is to protect residential areas in the City while allowing for the planned development of new or modified industrial facilities. The Guidelines apply to all new warehouse, logistics, and distribution facilities with applications submitted after September 2022. The Good Neighbor Guidelines contain the following policies related to noise that are applicable to future industrial developments within Phase 2 of the Specific Plan:

Goal 1 Protect the neighborhood characteristics of the urban, rural, and suburban communities.

Policy 1.3 When possible, locate driveways, loading docks, and internal circulation routes away from sensitive receptors.

Policy 1.4 Truck loading bays and drive aisles shall be designed to minimize truck noise.

Policy 1.6 If a public address (PA) system is being used in conjunction with a warehouse/distribution facility operation, the PA system shall be oriented away from sensitive receptors and the volume set at a level not readily audible past the property line.

Goal 4 Provide buffers between warehouses and sensitive receptors.

Policy 4.8 An additional wing wall shall be installed perpendicular to the loading dock areas, where feasible, to further attenuate noise related to truck activities and address aesthetics related to loading area when adjacent to sensitive receptors. Vines or other appropriate plant material should be planted in front of the screen walls to soften views from the street.

Goal 6 Implement construction practice requirements in accordance with state requirements to limit emissions and noise impacts from building demolition, renovation, and new construction.

Policy 6.1 In addition to regular construction inspections conducted by City Departments, the applicant shall provide monthly reports to the City demonstrating compliance with all the construction related policies.

Policy 6.3 Construction contractor shall utilize construction equipment with properly operating and maintained mufflers, consistent with the manufacturer's standards.

Policy 6.4 Construction contractors shall locate or park all stationary construction equipment away from sensitive receptors nearest the project site, to the extent practicable.

Policy 6.8 Prepare a construction traffic control plan prior to grading, detailing the locations of equipment staging areas material stockpiles, proposed road closures, and hours of construction operations to minimize impacts to sensitive receptors.

Policy 6.9 Minimize noise from construction activities.

Goal 7 Ensure compliance with the California Environmental Quality Act (CEQA) and state environmental agencies.

Policy 7.4 A Noise Impact Analysis shall be prepared to evaluate potential impacts to the neighboring properties. It shall include construction and operation noise impacts, including stationary and offsite increases to ambient noise levels.

5.12.3 ENVIRONMENTAL SETTING

5.12.3.1 Existing Ambient Noise

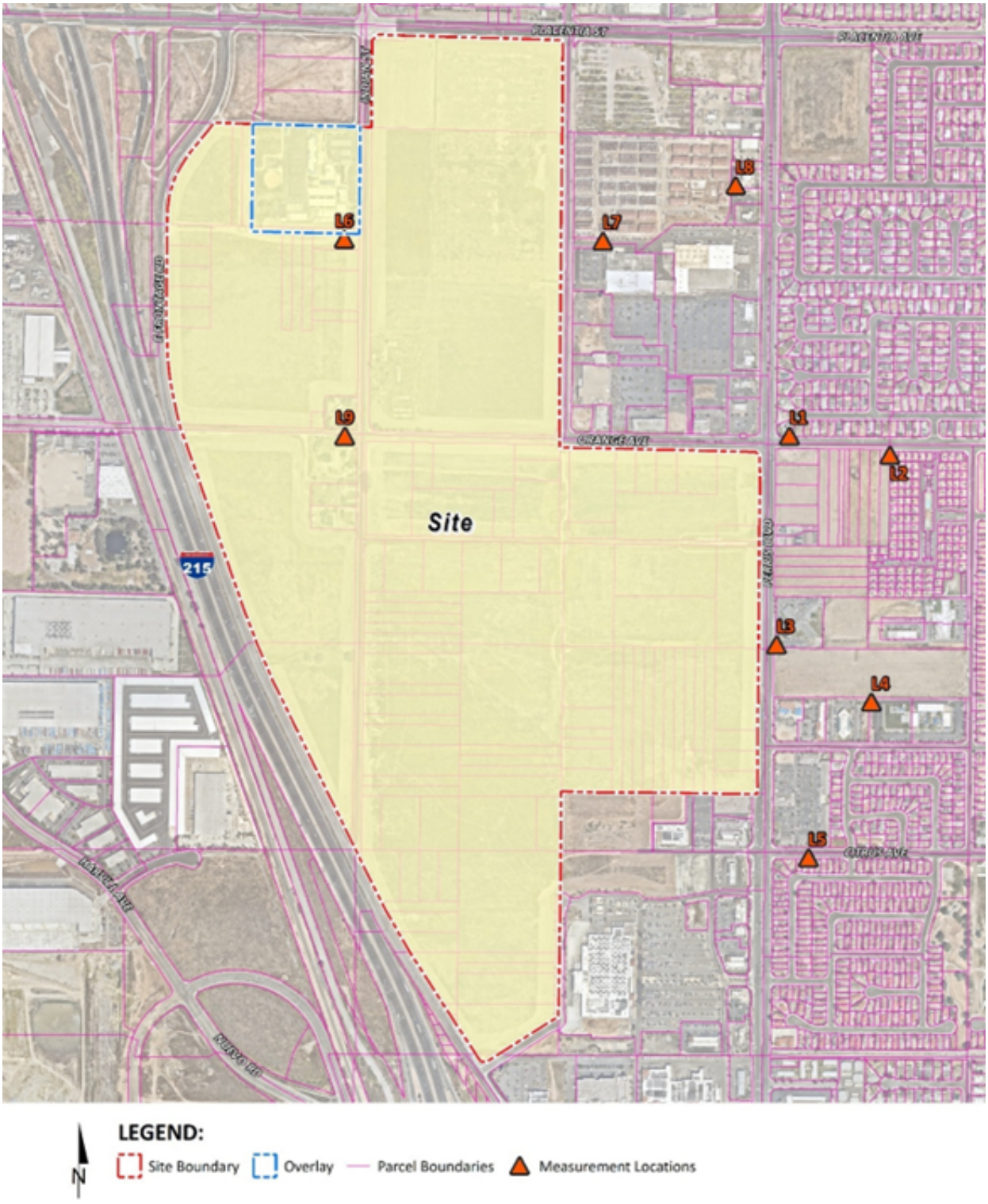
To assess the existing noise level environment within and near the Specific Plan Area, 24-hour noise level measurements were taken on Wednesday, August 28, 2024, at various locations, which are shown in Figure 5.12-3. The noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels. The background ambient noise levels in the Specific Plan Area are dominated by the transportation-related noise associated with surface streets in addition to background aircraft activities. This includes the auto and heavy truck activities on study area roadways. A description of these locations and the existing noise levels are provided in Table 5.12-3. As shown, existing daytime noise levels range from 52.1 to 67.2 dBA.

Table 5.12-3: Summary of 24-Hour Ambient Noise Level Measurements

Location	Description	Energy Average Noise Level (dBA Leq)	
		Daytime	Nighttime
L1	Located northeast of the site near the residence at 25 Whirlaway St.	67.2	63.9
L2	Located east of the site near the residence at 130 Camden Ct.	66.7	61.8
L3	Located east of the site near the Centinela Grand Retirement Home at 2225 Medical Center Dr.	64.2	62.1
L4	Located east of the site near the Perris Early Head Start at 148 Avocado Ave.	54.7	51.3
L5	Located southeast of the site near the residence at 108 Oaktree Dr.	65.0	59.0
L6	Located north of the site near Val Verde Elementary School at 2656 Indian Ave.	52.1	48.1
L7	Located east of the site near the retail building at 2560 N Perris Blvd.	56.5	53.2
L8	Located east of the site near the retail building at 2674 N Perris Blvd	58.6	55.0
L9	Located within the Project site at 2411 Indian Ave.	60.3	58.4

"Daytime" = 7:01 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:00 a.m.
Source: EIR Appendix Q

Noise Measurement Locations



Source: Urban Crossroads. (Updated 2025). Exhibit 5-A: Noise Measurement Locations [Map]. Harvest Landing Specific Plan Noise and Vibration Analysis (Appendix Q to the EIR)

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5.12.3.2 Existing Traffic Noise

Existing traffic noise levels were identified by modeling existing traffic data from the Traffic Impact Analysis that was prepared for the Project (EIR Appendix R). The noise contours represent the distance to noise levels of constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA CNEL noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Table 5.12-4 identifies that the existing traffic noise range from 59.7 to 73.6 dBA CNEL.

Table 5.12-4: Existing Traffic Noise Levels

ID	Road	Segment	CNEL at Receiving Land Use (dBA)[2]	Distance to Contour from Centerline (ft)		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Indian Ave	between Placentia Ave and Orange Ave	65.5	RW	36	77
2	Orange Ave	between Indian Ave and Perris Blvd	67.4	RW	68	146
3	Perris Blvd	between Orange Aven and Citrus Ave	72.5	69	149	322
4	Barrett Ave	between Placentia Ave and Orange Ave	59.7	RW	RW	RW
5	Perris Blvd	between Placentia Ave and Orange Ave	72.2	66	142	307
6	Perris Blvd	between Rider St and Placentia Ave	72.3	66	143	308
7	Nuevo Rd	between Perris Blvd and I-215 NB Ramps	73.6	102	220	475
8	I-215 Frontage Rd	between Placentia Ave and Orange Ave	66.5	RW	42	90
9	I-215 Frontage Rd	between Orange Ave and Nuevo Rd	63.5	RW	RW	57
10	Orange Ave	between I-215 Frontage Rd and Indian Ave	63.7	RW	RW	59
11	Nuevo Rd	between I-215 NB Ramps and I-215 SB Ramps	71.9	63	136	292
12	Perris Blvd	between Citrus Ave and Nuevo Rd	72.6	88	190	409
13	Placentia Ave	between I-215 NB Ramps and I-215 SB Ramps	71.1	56	120	259
14	Placentia Ave	between I-215 NB Ramps and Indian Ave	72.6	70	150	323
15	Placentia Ave	between Indian Ave and Perris Blvd	68.8	RW	106	229

Source: EIR Appendix Q
[2] The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

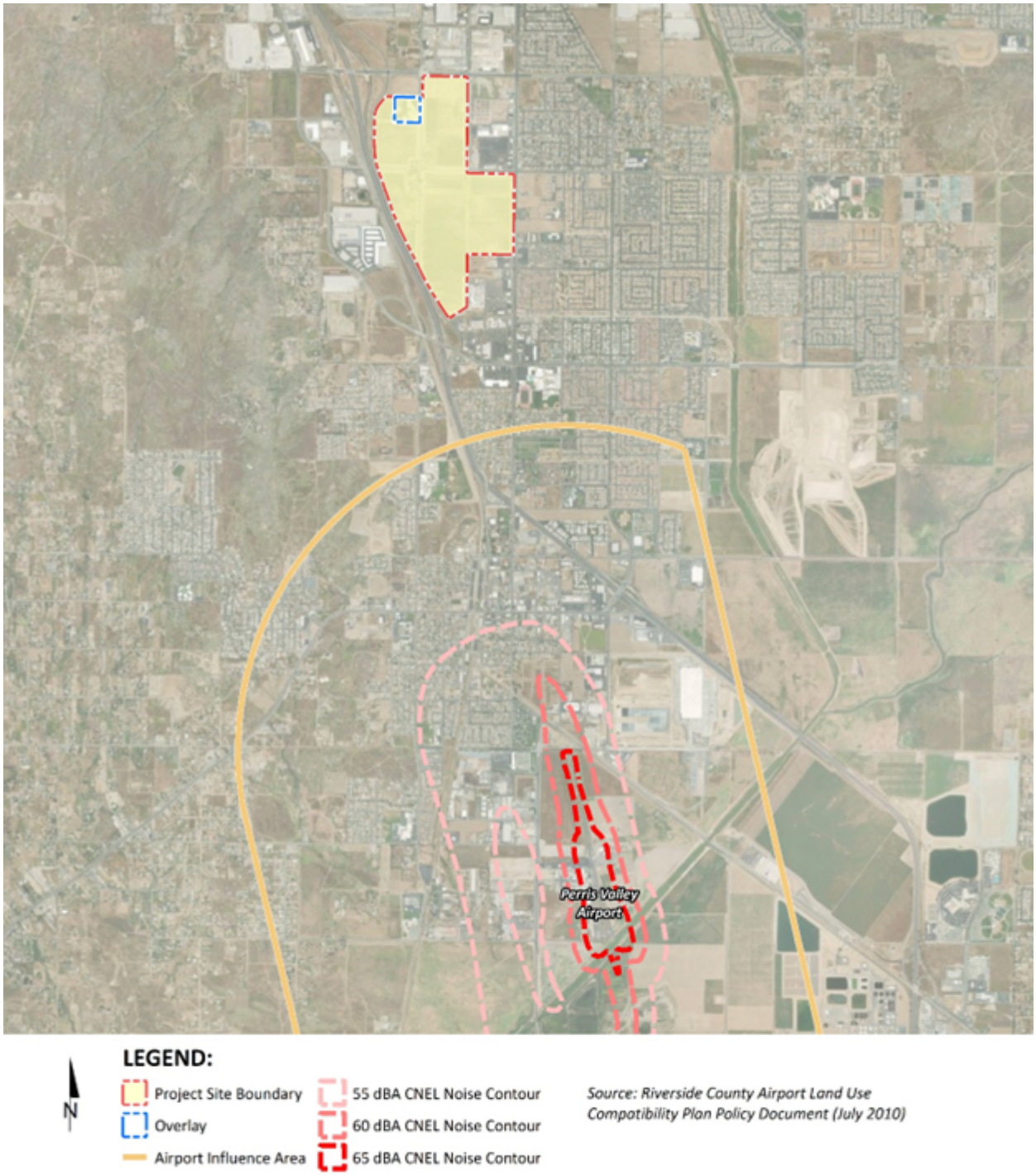
5.12.3.3 Existing Vibration

Aside from periodic construction work that may occur in the vicinity of the Specific Plan Area, other sources of groundborne vibration include heavy-duty vehicular travel (e.g., refuse trucks and delivery trucks) on area roadways. Trucks traveling at a distance of 50 feet typically generate groundborne vibration velocity levels of around 63 VdB (approximately 0.006 inch per second PPV) and could reach 72 VdB (approximately 0.016 inch per second PPV) when trucks pass over bumps in the road (FTA, 2006).

5.12.3.4 Existing Airport Noise

The Perris Valley Airport is located approximately 2.3 miles southwest of the Specific Plan Area. The Specific Plan Area is located outside the 55 dBA CNEL airport noise level contour boundaries, as shown in Figure 5.12-2. In addition, the March Air Reserve Base/Inland Port Airport (March ARB/IPA) is located approximately 2.9 miles northwest of the Specific Plan Area. The Specific Plan Area is located outside of the March ARB/IPA 60 dBA CNEL airport noise level contour boundaries, as shown in Figure 5.12-3.

Project Site and Perris Valley Airport Noise Contours



Source: Urban Crossroads. (Updated 2025). *Exhibit 3-B: Perris Valley Airport (PV) Noise Contours* [Map]. Harvest Landing Specific Plan Noise and Vibration Analysis (Appendix Q to the EIR)

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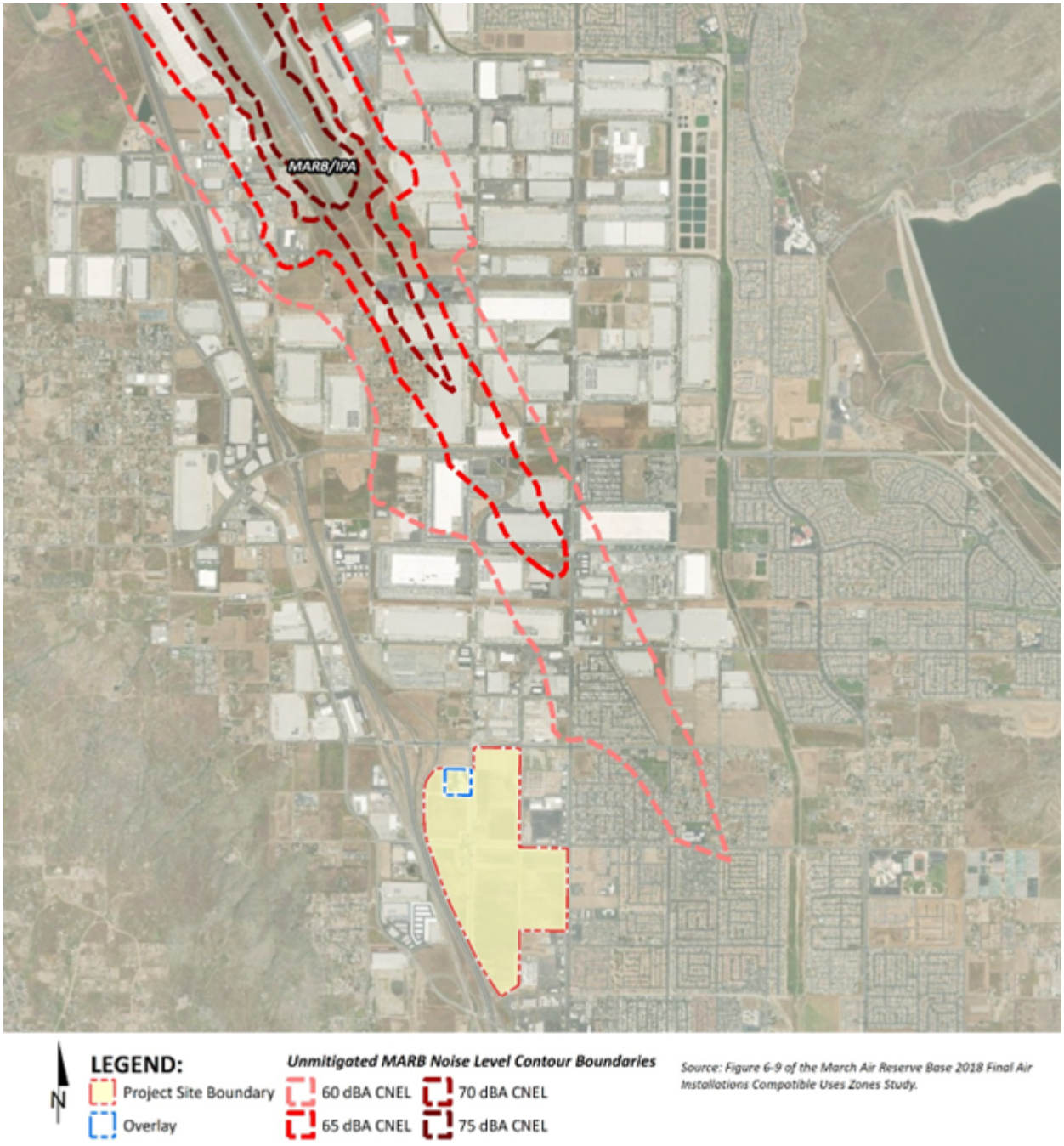
Project Site and the MARB/IPA Noise Contours



Source: Urban Crossroads. (Updated 2025). *Exhibit 3-C: MARB/IPA Future Airport Noise Contours* [Map]. Harvest Landing Specific Plan Noise and Vibration Analysis (Appendix Q to the EIR)

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5.12.3.5 Sensitive Receivers

Noise sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: residences, schools, hospitals, and recreation areas. The noise sensitive receptors that are in the vicinity of the Specific Plan Area are described below and shown in Figure 5.12-4. Other sensitive land uses in the Specific Plan vicinity that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

R1: Location R1 represents the residential property line at 25 Whirlaway Street, approximately 181 feet east of the Specific Plan Area. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents the residential property line at 2266 Windsor Court, approximately 713 feet east of the Specific Plan Area. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the property line of the Centinela Grand senior living facility at 2225 North Perris Boulevard, approximately 112 feet east of the Specific Plan Area. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.

R4: Location R4 represents the property line at the Kindred Hospital at 2224 Medical Center Drive, approximately 709 feet east of the Specific Plan Area. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.

R5: Location R5 represents the property line of the existing school Perris Early Head Start at 148 Avocado Drive, approximately 720 feet east of the Specific Plan Area. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.

R6: Location R6 represents the residential property line at 102 Oaktree Drive, approximately 454 feet south of the Specific Plan Area. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.

R7: Location R7 represents the property line of the residences under construction at Barrett Avenue and West Placentia Avenue, approximately 96 feet east of the Specific Plan Area. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment.

R8: Location R8 represents the property line of the planned residential land use, approximately 726 feet northeast of the Specific Plan Area. A 24-hour noise measurement was taken near this location, L8, to describe the existing ambient noise environment.

R9: Location R9 represents the property line at Val Verde Elementary School at 2656 Indian Avenue, approximately 66 feet north of the Specific Plan Area. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.

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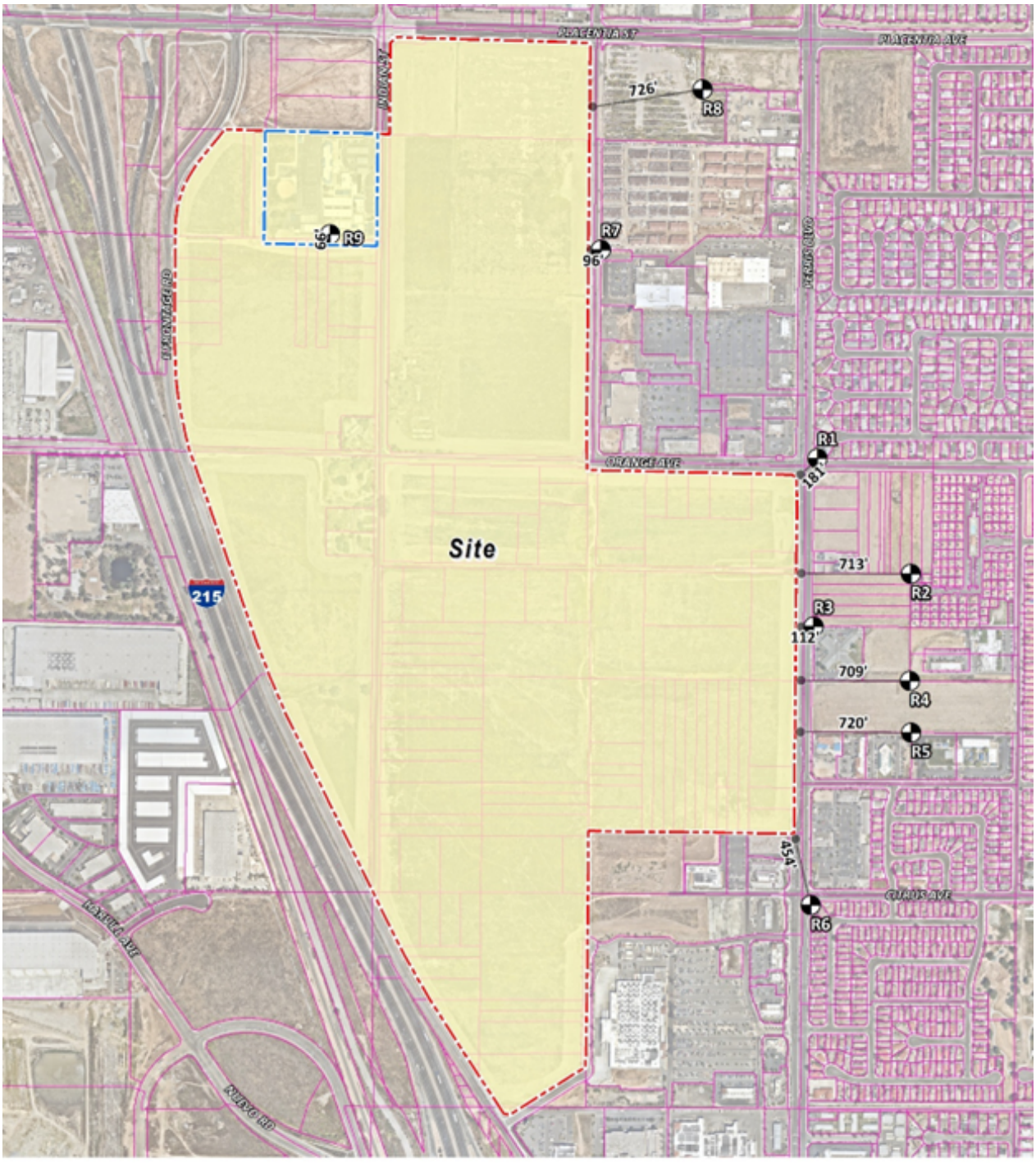
Sensitive Noise Receptor Locations



Source: Urban Crossroads. (Updated 2025). *Exhibit 8-A: Sensitive Receiver Locations* [Map]. Harvest Landing Specific Plan Noise and Vibration Analysis (Appendix Q to the EIR)

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5.12.4 THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines indicates that a Project could have a significant effect if it were to result in:

NOI-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

NOI-2 Generation of excessive groundborne vibration or groundborne noise levels.

NOI-3 For a project located within the vicinity of a private airstrip or 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.

Construction Noise

A Project would have a significant effect if Project related construction activities:

- Occur between the hours of 7:00 p.m. and 7:00 a.m. of the next day, or on Sundays or federal holidays (with the exception of Columbus Day or Washington's birthday) (Perris Municipal Code Section 7.34.060);
- Create noise levels which exceed the 80 dBA Lmax acceptable noise level threshold at the nearby sensitive receiver locations (Perris Municipal Code Section 7.34.060); or
- Generate a temporary noise level increase above the existing ambient noise levels of up to 12 dBA Leq.

Vibration

The City of Perris has not adopted any specific vibration level standards. For the purpose of this analysis, impacts would be potentially significant if Project-related construction activities generate vibration levels which exceed the Caltrans vibration damage threshold of 0.3 PPV inch per second at receiver locations.

Operational Noise

As detailed in the Nosie and Vibration Analysis (EIR Appendix Q), a readily perceptible 5 dBA or greater project-related noise level increase is considered a significant impact when the existing noise levels are below 60 dBA. Per the Federal Interagency Committee on Noise, in areas where the existing noise levels range from 60 to 65 dBA, a 3 dBA barely perceptible noise level increase is appropriate for most people. When the existing noise levels without the project already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. In addition, consistent with guidance from the City of Perris, off-site traffic impacts are limited to noise sensitive residential receivers that are likely to perceive an increase of traffic noise levels over time.

Perris Municipal Code Section 7.34.060 identifies an 80 dBA Lmax daytime and 60 dBA Lmax nighttime noise standard for residential properties. The same 80 dBA Lmax daytime exterior noise level standard has been used to assess the potential noise level impacts at Val Verde Elementary School. Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 5.12-5 shows the significance criteria summary matrix.

Table 5.12-5: Significance Criteria Summary

Analysis	Condition(s)	Significance Criteria	
		Daytime	**Nighttime**
Offsite Traffic	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
	if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
	if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
Operational	At residential and school land uses[2]	80 dBA Lmax	60 dBA Lmax
	Within 160 Feet of noise-sensitive use[3]	60 dBA CNEL (exterior)	
	if ambient is < 60 dBA Leq[1]	≥ 5 dBA Leq Project increase	
	if ambient is 60 - 65 dBA Leq[1]	≥ 3 dBA Leq Project increase	
	if ambient is > 65 dBA Leq[1]	≥ 1.5 dBA Leq Project increase	
Construction	Noise Level Threshold	80 dBA Lmax[4]	60 dBA Lmax[2]
	Exterior Noise Level Increase[5]	12 dBA	
Vibration Level Threshold[6]		0.3 PPV (in/sec)	

[1] Federal Interagency Committee on Noise, 1992.
[2] Perris Municipal Code, Section 7.34.040.
[3] City of Perris General Plan Noise Element, Implementation Measure V.A.1.
[4] Perris Municipal Code, Section 7.34.060.
[5] Caltrans Traffic Noise Analysis Protocol, April 2020
[6] Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19.
"Daytime" = 7:01 a.m. - 10:00 p.m.; "Nighttime" = 10:01 p.m. - 7:00 a.m.

5.12.5 METHODOLOGY

Construction Noise

To identify the temporary construction noise contribution to the existing ambient noise environment, the construction noise levels anticipated from usage of construction equipment needed to implement the proposed Project were combined with the existing ambient noise level measurements at the sensitive receiver locations. The Perris Municipal Code limits construction hours to reduce noise and establishes a numeric maximum acceptable construction source noise levels threshold at potentially affected receivers, which allows for a quantified determination of what CEQA constitutes a *substantial temporary or periodic noise increase*. The City of Perris considers a daytime exterior construction noise level of 80 dBA Lmax as a reasonable threshold for noise sensitive residential land use. The construction noise levels are compared against the City's threshold to assess the level of significance associated with temporary construction noise level impacts.

Operational Noise

The primary source of noise associated with the operation of the proposed Project would be from vehicular and truck trips. The expected roadway noise level increases from vehicular/truck traffic were calculated using the Federal Highway Administration (FHWA) traffic noise prediction model and the average daily traffic volumes from the Traffic Impact Analysis, included as EIR Appendix R, prepared for the proposed Project.

As detailed in Section 5.16, *Transportation,* the proposed Project is anticipated to generate approximately 40,194 two-way trips per day at buildout of both phases, including 37,369 two-way passenger vehicle trips per day and 2,825 two-way truck trips per day. The increase in noise levels generated by the vehicular/truck trips have been quantitatively estimated and compared to the applicable noise standards and thresholds of significance listed previously.

Secondary sources of onsite Project-related noise are expected to include drive thru speakerphones, gas station activity, loading dock activity, truck movements, roof-top air conditioning units, trash enclosure activity and parking lot vehicle movements. The increase in noise levels generated by these activities has been quantitatively estimated and compared to the applicable noise standards listed previously.

Vibration

Aside from noise levels, groundborne vibration would also be generated during construction of the Project by various construction-related activities and equipment; and could be generated by truck traffic traveling to and from the Specific Plan Area. The potential ground-borne vibration levels resulting from construction activities occurring from the proposed Project were estimated by data published by the FTA. Thus, the groundborne vibration levels generated by these sources have also been quantitatively estimated and compared to the applicable thresholds of significance listed previously.

5.12.6 ENVIRONMENTAL IMPACTS

As detailed in Section 3.0, *Project Description*, the proposed Project includes a Specific Plan Amendment to modify the existing land uses and development of the Project site pursuant to the proposed new land uses over two phases that are summarized below.

Phase 1 Development

Within Phase 1, the Project would construct and operate a 139.89-acre business park with seven buildings including a parcel hub, high cube warehouses, and light industrial buildings that would total 1,727,579 square feet; construct and operate a 22.16-acre shopping center with buildings totaling 250,457 square feet; and construct and operate a 167,060 square foot big box store on a 24.33-acre site with a 12-pump gas station and two fast-food restaurant parcels for two restaurants that would each be approximately 5,500 square feet.

In addition, during construction of Phase 1 the Project would implement street improvements on Indian Avenue, Orange Avenue, Frontage Road, Perris Boulevard, Barrett Avenue, Harvest Landing Way, and Private Drive A; install drainage infrastructure improvements in Perris Boulevard, Barrett Avenue, Orange Avenue, Indian Avenue, and Private Drive A; implement sewer line improvements in Perris Boulevard; implement water lines improvements in Barrett Avenue, Orange Avenue, Frontage Road, Walmart Supercenter Drive; and install a new water well for landscaping irrigation in the proposed drainage basin. Construction and operation of the Phase 1 development is analyzed at a project-specific level within this section.

Phase 2 Buildout

The proposed amended Specific Plan buildout of the Phase 2 development area without inclusion of the overlay area would allow up to 3,659,693 square feet of warehouse, light industrial, and/or manufacturing uses under the Multiple Business Use designation, at a maximum floor area ratio of 0.75. Development of the 10.66-acre overlay area would include approximately 348,262 square feet of warehouse, light industrial, and/or manufacturing uses under the Multiple Business Use designation. Total development within the Phase 2 area, including the overlay area, would include up to 4,007,955 square feet of building area.[1] The analysis within this section assumes that construction would begin in 2026 and be completed by 2030,

[1] The Phase 2 buildout square footage of 4,007,955 square feet was based on the gross acreage of parcels within the Phase 2 area prior to roadway dedications. After roadway dedications, the maximum allowable development within Phase 2 would actually be 4,001,748 square feet. However, for purposes of providing a conservative analysis, a buildout of 4,007,955 square feet was assumed.

thereby overlapping with operation of Phase 1 developments. Construction and operation of the Phase 2 buildout is analyzed at a programmatic level within this section.

IMPACT NOI-1: THE PROJECT WOULD RESULT IN GENERATION OF A SUBSTANTIAL TEMPORARY OR PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE VICINITY OF THE PROJECT IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES.

Construction

Less than Significant Impact. Noise generated by construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. Construction is expected to occur in the following stages: site preparation, grading, building construction, paving, architectural coating. Noise levels generated by heavy construction equipment range from approximately 78 dBA Lmax to 90 dBA Lmax at 50 feet from the noise source, as shown on Table 5.12-6.

Table 5.12-6: Construction Reference Noise Levels

Construction Stage	Construction Activity	Reference Noise Level @ 50 Feet[1]		Highest Reference Noise Level (dBA Lmax)	Combined Reference Noise Level (dBA Leq)
		(dBA Lmax)	(dBA Leq)		
Demolition/ Crushing	Front End Loader	79	75	90	87
	Excavator	81	77		
	Concrete Saw	90	83		
	Impact Hammer (hoe ram)	90	83		
Site Preparation	Front End Loader	79	75	82	80
	Dozer	82	78		
Grading	Grader	85	81	85	85
	Excavator	81	77		
	Dozer	82	78		
	Scraper	84	80		
	Front End Loader	79	75		
	Drill Rig Truck	79	72		
Building Construction	Gradall Forklift	83	79	84	84
	Generator	81	78		
	Crane	81	73		
	Welder/Torch	74	70		
	Tractor	84	80		
Paving	Paver	77	74	90	84
	Pavement Scarifier	90	83		
	Roller	80	73		
Arch. Coating	Compressor (air)	78	74	78	74

Source: EIR Appendix Q

Per Perris Municipal Code Section 7.34.060, noise sources associated with construction activities shall not take place between the hours of 7:00 p.m. of any one day and to 7:00 a.m. of the next day, or on Sundays or federal holidays (with the exception of Columbus Day and Washington's Birthday). Additionally, construction noise shall not exceed 80 dBA Lmax in residential zones. The proposed Project's construction activities would occur pursuant to these regulations. Thus, the construction activities would be in compliance with the City's construction-related noise standards.

Construction noise would be temporary in nature as the operation of each piece of construction equipment would not be constant throughout the construction day, and equipment would be turned off when not in use. The typical operating cycle for a piece of construction equipment involves one or two minutes of full power operation followed by three or four minutes at lower power settings. The construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators.

Phase 1 Developments

As shown on Table 5.12-7, construction noise from Phase 1 is broken down by each construction phase, at the nearby receiver locations (shown on Figure 5.12-4) would range from 54.2 to 65.5 dBA Lmax, which would not exceed the City's 80 dba Lmax daytime construction noise level threshold at the nearby sensitive receiver locations. Therefore, impacts related to construction noise from Phase 1 would be less than significant.

Table 5.12-7: Phase 1 Construction Equipment Noise Level Summary

Receiver Location	Highest Construction Noise Levels (dBA Lmax)						
	Demolition/ Crushing	Site Preparation	Grading	Building Construction	Paving	Arch. Coating	Highest Levels
R1	62.2	54.2	56.2	56.2	62.2	50.2	62.2
R2	60.2	52.2	54.2	54.2	60.2	48.2	60.2
R3	65.5	57.5	59.5	59.5	65.5	53.5	65.5
R4	60.5	52.5	54.5	54.5	60.5	48.5	60.5
R5	60.3	52.3	54.3	54.3	60.3	48.3	60.3
R6	60.8	52.8	54.8	54.8	60.8	48.8	60.8
R7	58.1	50.1	52.1	52.1	58.1	46.1	58.1
R8	54.2	46.2	48.2	48.2	54.2	42.2	54.2
R9	57.4	49.4	51.4	51.4	57.4	45.4	57.4

Source: EIR Appendix Q

In addition, in order to determine whether the Project's construction noise would result in a significant increase in ambient noise levels, the Project construction noise levels were combined with the existing ambient noise levels measurements at the nearest off-site receiver locations. The difference between the combined Project-construction and ambient noise levels is the construction related noise level increase. A temporary noise level increase of 12 dBA is considered a potentially significant impact based on Caltrans' substantial noise level increase criteria.

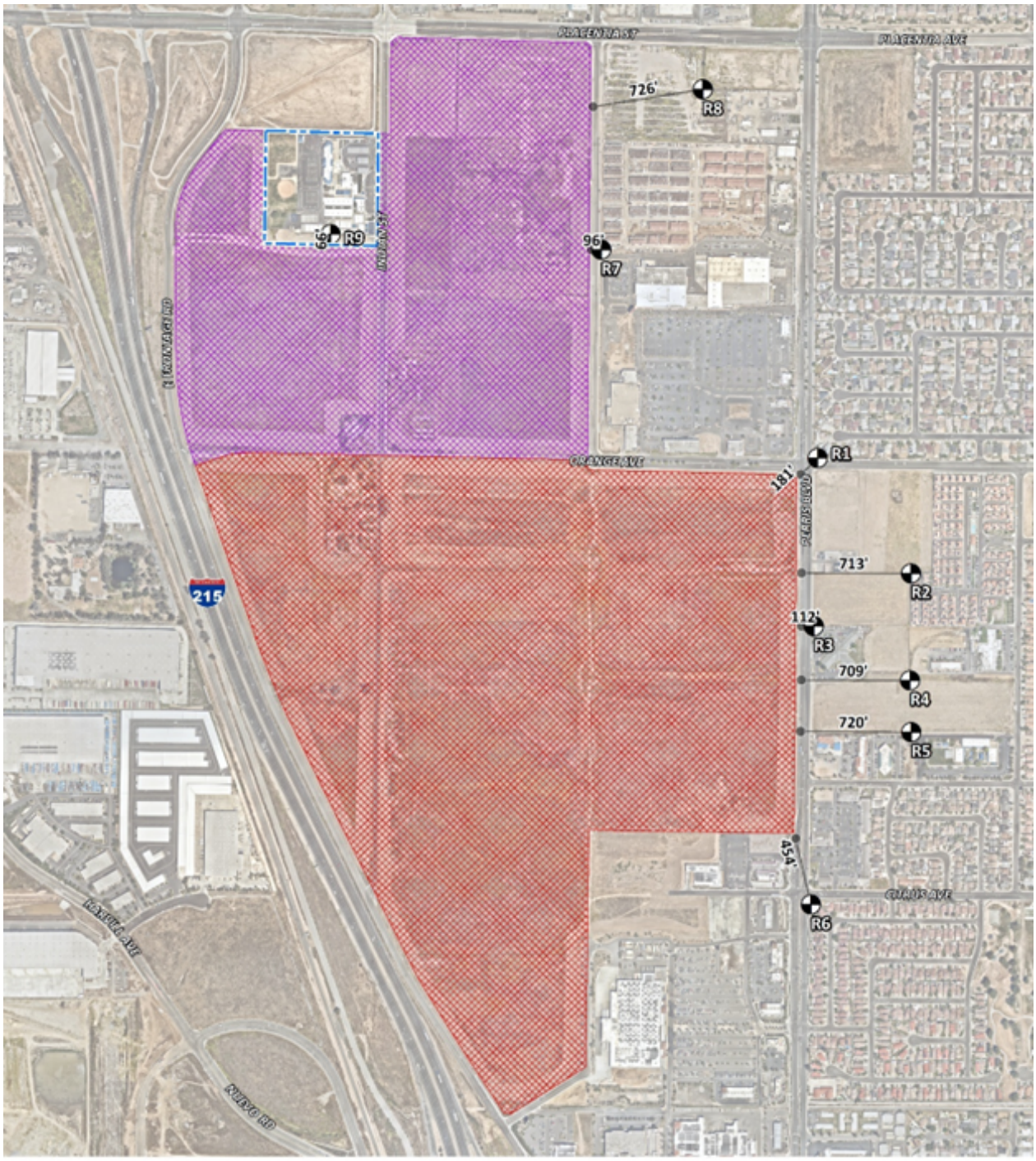
As indicated in Table 5.12-8, Phase 1 would result in construction related increases to ambient noise ranging from 0.5 to 4.6 dBA Leq at the nearest receiver locations, which would not exceed the 12 dBA threshold of significance. Therefore, impacts related to construction noise from Phase 1 would be less than significant.

Table 5.12-8: Phase 1 Construction Equipment Noise Level Increases

Receiver Location	Total Project Construction Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	59.1	L1	67.2	67.8	0.6	12	No
R2	57.1	L2	66.7	67.2	0.5	12	No
R3	62.4	L3	64.2	66.4	2.2	12	No
R4	57.4	L4	54.7	59.3	4.6	12	No
R5	57.2	L4	54.7	59.1	4.4	12	No
R6	57.7	L5	65.0	65.7	0.7	12	No
R7	55.0	L7	56.5	58.8	2.3	12	No
R8	51.1	L8	58.6	59.3	0.7	12	No
R9	54.3	L6	52.1	56.3	4.2	12	No

Source: EIR Appendix Q

Construction Noise and Receptor Locations



Source: Urban Crossroads. (Updated 2025). *Exhibit 10-A: Construction Noise Source Locations* [Map]. Harvest Landing Specific Plan Noise and Vibration Analysis (Appendix Q to the EIR)

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Phase 2 Buildout – With Overlay

As shown on Table 5.12-9, construction noise from Phase 2 buildout with the Overlay is broken down by each construction phase at the nearby receiver locations (shown on Figure 5.12-5) and would range from 58.3 to 64.7 dBA Lmax, which would not exceed the City's 80 dba Lmax daytime construction noise level threshold at the nearby sensitive receiver locations. Therefore, impacts related to construction noise from Phase 2 with the Overlay would be less than significant.

Table 5.12-9: Phase 2 With Overlay Construction Equipment Noise Level Summary

Receiver Location	Highest Construction Noise Levels (dBA Lmax)						
	Demolition/ Crushing	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels
R1	61.0	53.0	55.0	55.0	61.0	49.0	61.0
R2	58.8	50.8	52.8	52.8	58.8	46.8	58.8
R3	63.8	55.8	57.8	57.8	63.8	51.8	63.8
R4	58.9	50.9	52.9	52.9	58.9	46.9	58.9
R5	58.7	50.7	52.7	52.7	58.7	46.7	58.7
R6	59.1	51.1	53.1	53.1	59.1	47.1	59.1
R7	64.7	56.7	58.7	58.7	64.7	52.7	64.7
R8	58.3	50.3	52.3	52.3	58.3	46.3	58.3

Source: EIR Appendix Q

Table 5.12-10 shows that construction of Phase 2 with the Overlay would result in increases to ambient noise ranging from 0.3 to 6.3 dBA Leq at the nearest receiver locations, which would not exceed 12 dBA. Therefore, impacts related to construction noise from Phase 2 with the Overlay would be less than significant.

Table 5.12-10: Phase 2 With Overlay Construction Equipment Noise Level Increases

Receiver Location	Total Project Construction Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	57.9	L1	67.2	67.7	0.5	12	No
R2	55.7	L2	66.7	67.0	0.3	12	No
R3	60.7	L3	64.2	65.8	1.6	12	No
R4	55.8	L4	54.7	58.3	3.6	12	No
R5	55.6	L5	54.7	58.2	3.5	12	No
R6	56.0	L6	65.0	65.5	0.5	12	No
R7	61.6	L7	56.5	62.8	6.3	12	No
R8	55.2	L8	58.6	60.2	1.6	12	No

Source: EIR Appendix Q

Phase 2 Buildout – Without Overlay

As shown on Table 5.12-11, construction noise from Phase 2 without the Overlay is broken down by each construction phase, at the nearby receiver locations (shown on Figure 5.12-5) would range from 58.3 to 65.8 dBA Lmax, which would not exceed the City's 80 dba Lmax daytime construction noise level threshold at nearby sensitive receiver locations. Therefore, impacts related to construction noise from Phase 2 without the Overlay would be less than significant.

Table 5.12-11: Phase 2 Without Overlay Construction Equipment Noise Level Summary

Receiver Location	Highest Construction Noise Levels (dBA Lmax)						
	Demolition/ Crushing	Site Preparation	Grading	Building Construction	Paving	Arch. Coating	Highest Levels
R1	61.1	53.1	55.1	55.1	61.1	49.1	61.1
R2	58.9	50.9	52.9	52.9	58.9	46.9	58.9
R3	63.9	55.9	57.9	57.9	63.9	51.9	63.9
R4	59.0	51.0	53.0	53.0	59.0	47.0	59.0
R5	58.8	50.8	52.8	52.8	58.8	46.8	58.8
R6	59.2	51.2	53.2	53.2	59.2	47.2	59.2
R7	64.8	56.8	58.8	58.8	64.8	52.8	64.8
R8	58.3	50.3	52.3	52.3	58.3	46.3	58.3
R9	65.8	57.8	59.8	59.8	65.8	53.8	65.8

Source: EIR Appendix Q

In addition, Table 5.12-12 shows that construction of Phase 2 without the Overlay would result in increases to ambient noise ranging from 0.3 to 11.0 dBA Leq at the nearest receiver locations, which would not exceed 12 dBA. Therefore, impacts related to construction noise from Phase 2 without the Overlay would be less than significant.

Table 5.12-12: Phase 2 Without Overlay Construction Equipment Noise Level Increases

Receiver Location	Total Project Construction Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	58.0	L1	67.2	67.7	0.5	12	No
R2	55.8	L2	66.7	67.0	0.3	12	No
R3	60.8	L3	64.2	65.8	1.6	12	No
R4	55.9	L4	54.7	58.4	3.7	12	No
R5	55.7	L4	54.7	58.2	3.5	12	No
R6	56.1	L5	65.0	65.5	0.5	12	No
R7	61.7	L7	56.5	62.8	6.3	12	No
R8	55.2	L8	58.6	60.2	1.6	12	No
R9	62.7	L6	52.1	63.1	11.0	12	No

Source: EIR Appendix Q

Nighttime Concrete Pour

Nighttime concrete pouring activities would occur as part of the Project construction. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during daytime hours. The pouring activities would be limited to within the actual building footprints. Since the nighttime concrete pours would take place outside the permitted time allowed in in Perris Municipal Code Section 7.34.060 of between the hours of 7:00 a.m. to 7:00 p.m. on any day except Sundays and legal holidays (with the exception of Columbus Day and Washington's birthday), the Project Applicant would be required to obtain authorization for nighttime work from the City of Perris.

As shown on Table 5.12-13, concrete pouring activities would range from 50.9 to 55.9 dBA Lmax at the nearby receiver locations, which would be less than the City's 60 dBA Lmax residential nighttime noise level standard. Therefore, potential impacts from nighttime concrete pouring activities onto nearby receptors would be less than significant.

Table 5.12-13: Nighttime Concrete Pour Noise Level Compliance

Receiver Location	Construction Noise Levels (dBA Lmax)		
	Exterior Noise Levels	Threshold	Threshold Exceeded?
R1	53.1	60	No
R2	50.9	60	No
R3	55.9	60	No
R4	51.0	60	No
R5	50.8	60	No
R6	51.2	60	No
R7	56.8	60	No
R8	50.3	60	No
R9	57.8	-[1]	-[1]

Source: EIR Appendix Q

[1]Val Verde Elementary School does not include any noise sensitive nighttime receivers.

Off-Site Infrastructure Construction

As detailed in Section 3.0, *Project Description*, the Project includes off-site roadway and utility improvements. Table 5.12-14 shows that off-site construction noise levels at distances ranging from 25 to 200 feet would range from 71.2 to 78.4 dBA Lmax, which would not exceed the 80 dBA Lmax daytime construction noise level standard. Therefore, impacts would be less than significant.

Table 5.-14: Off-Site Construction Noise Level Compliance

Distance From Construction (Feet)	Construction Noise Levels (dBA Lmax)		
	Construction Noise Levels	Threshold	Threshold Exceeded?
25'	78.4	80	No
50'	76.3	80	No
100'	74.0	80	No
200'	71.2	80	No

Source: EIR Appendix Q

Operation

Off-Site Traffic Noise

Significant and Unavoidable Impact. The proposed Project would generate traffic-related noise from operation. As detailed in Section 5.16, *Transportation,* the proposed Project is anticipated to generate approximately 40,194 two-way trips per day at buildout, including 37,369 two-way passenger vehicle trips per day and 2,825 two-way truck trips per day.

Phase 1 Developments: In the Opening Year Phase I (2026) without Project condition, exterior noise levels are expected to range from 60.3 to 74.8 dBA CNEL. As detailed in Section 5.16, *Transportation,* operation

of Phase 1 would generate 26,817 trips per day. Table 5.12-15 shows that the traffic noise in 2026 with operation of Phase 1 would range from 64.3 to 75.3 dBA CNEL, which would result in a noise increase of 0.1 to 8.0 dBA CNEL. As shown in Table 5.12-15, the study area roadway segment of Barrett Avenue between Placentia Avenue and Orange Avenue (Segment #4) is adjacent to residential uses and would experience a traffic noise increase of 5.8 dBA, which exceeds the threshold of 3 dBA.

Phase 2 Buildout: In the Opening Year Phase 2 (2030) without Project condition, exterior noise levels are expected to range from 60.7 to 75.1 dBA CNEL. As detailed in Section 5.16, *Transportation,* operation of Phase 2 would generate an additional 13,505 trips per day. Table 5.12-16 shows that in the traffic noise in 2030 with operation of Phase 2 would range from 67.1 to 77.4 dBA CNEL, which would result in a noise increase of 0.1 to 9.9 dBA CNEL. As shown in Table 5.12-16, the study area roadway segment of Barrett Avenue between Placentia Avenue and Orange Avenue (Segment #4) is adjacent to residential uses and would experience a traffic noise increase of 6.4 dBA, which exceeds the threshold of 3 dBA.

General Plan Buildout: In the General Plan buildout (2045) without Project condition, exterior noise levels are expected to range from 60.8 to 75.1 dBA CNEL. Table 5.12-17 shows that in the traffic noise in 2045 with operation of both Phase 1 and Phase 2 (40,321 trips per day) would range from 67.1 to 77.4 dBA CNEL, which would result in a noise increase of 0.1 to 8.7 dBA CNEL. As shown in Table 5.12-17, the study area roadway segment of Barrett Avenue between Placentia Avenue and Orange Avenue (Segment #4) is adjacent to residential uses and would experience a traffic noise increase of 6.3 dBA, which exceeds the threshold of 3 dBA.

Roadway Noise Mitigation Evaluation. Due to the exceedance of traffic noise increase thresholds potentially mitigation measures were evaluated to determine their effectiveness in reducing impacts. Changing the pavement type was evaluated to reduce the amount of tire/pavement noise. As detailed in EIR Appendix Q, a 4 dBA reduction in vehicle tire/pavement noise is attainable using rubberized asphalt under typical operating conditions. However, heavy truck engine and exhaust noise would not be reduced by rubberized pavement due to the height of the truck engine exhaust stack above the pavement. As the Project would result in the use of heavy trucks with a stack height of 11.5 feet off the ground, the tire/pavement noise reduction benefits associated with rubberized asphalt would not reduce primary truck-related noise sources (e.g., truck engine noise and exhaust stack noise). While heavy duty (4+ axle trucks) are prohibited from using Barrett Avenue, it is anticipated that some vendor trucks (2-axle and 3-axle trucks) related to the commercial uses may utilize Barrett Avenue between Placentia Avenue and Orange Avenue (Segment #4) and would generate an increase in noise that would not be mitigated by the rubberized asphalt. Therefore, noise increases from traffic would remain significant.

In addition, noise barriers were evaluated for reduction of vehicular noise impacts. Off-site noise barriers are estimated to provide a *readily perceptible* 5 dBA reduction which, according to the FHWA, is *simple* to attain when blocking the line-of-sight from the noise source to the receiver. Caltrans guidance in the Highway Design Manual, Section 1102.3(3), indicates that for design purposes, *the noise barrier should intercept the line of sight from the exhaust stack of a truck to the receptor*, and an 11.5-foot-high truck stack height is assumed to represent the truck engine and exhaust noise source. As a result, any noise barriers at noise-sensitive land uses affected by Project-related traffic noise increases would need to be sufficiently tall and long to obstruct the line-of-sight between the noise source (11.5 feet high, per Caltrans) and the receiver (5 feet high, per FHWA guidance) to achieve a 5 dBA noise reduction, as recommended by FHWA guidance. The Harvest Landing Specific Plan and Perris Municipal Code do not allow a wall exceeding 11.5 feet in height along Barrett Avenue between Placentia Avenue and Orange Avenue (Segment #4) adjacent to residential uses. Also, the City cannot autonomously require the construction of off-site walls or other features at property owned or controlled by others. As a result, off-site noise barriers are not considered feasible and impacts related to truck traffic noise level increases would be significant and unavoidable.

Table 5.12-15: Project Traffic Noise Increases in the Phase 1 Opening Year (2026) Condition

ID	Road	Segment	Receiving Land Use	CNEL at Receiving Land Use (dBA)			Noise Level Increase Threshold	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Indian Ave	between Placentia Ave and Orange Ave	Non-Sensitive	65.9	66.2	0.3	n/a	No
2	Orange Ave	between Indian Ave and Perris Blvd	Non-Sensitive	67.8	68.4	0.6	n/a	No
3	Perris Blvd	between Orange Aven and Citrus Ave	Sensitive	74.2	74.6	0.4	1.5	No
4	**Barrett Ave**	**between Placentia Ave and Orange Ave**	**Sensitive**	**60.3**	**66.1**	**5.8**	**3.0**	**Yes**
5	Perris Blvd	between Placentia Ave and Orange Ave	Sensitive	74.0	74.3	0.3	1.5	No
6	Perris Blvd	between Rider St and Placentia Ave	Sensitive	74.3	74.5	0.2	1.5	No
7	Nuevo Rd	between Perris Blvd and I-215 NB Ramps	Non-Sensitive	74.5	75.2	0.7	n/a	No
8	I-215 Frontage Rd	between Placentia Ave and Orange Ave	Non-Sensitive	66.8	72.4	5.6	n/a	No
9	I-215 Frontage Rd	between Orange Ave and Nuevo Rd	Non-Sensitive	63.8	71.8	8.0	n/a	No
10	Orange Ave	between I-215 Frontage Rd and Indian Ave	Non-Sensitive	64.0	64.3	0.3	n/a	No
11	Nuevo Rd	between I-215 NB Ramps and I-215 SB Ramps	Non-Sensitive	73.2	73.3	0.1	n/a	No
12	Perris Blvd	between Citrus Ave and Nuevo Rd	Sensitive	74.3	75.3	1.0	1.5	No
13	Placentia Ave	between I-215 NB Ramps and I-215 SB Ramps	Non-Sensitive	73.3	74.7	1.4	n/a	No
14	Placentia Ave	between I-215 NB Ramps and Indian Ave	Non-Sensitive	74.8	75.3	0.5	n/a	No
15	Placentia Ave	between Indian Ave and Perris Blvd	Sensitive	72.3	73.1	0.8	1.5	No

Source: EIR Appendix Q

Table 5.12-16: Project Traffic Noise Increases in the Phase 2 Opening Year (2030) Condition

ID	Road	Segment	Receiving Land Use	CNEL at Receiving Land Use (dBA)			Noise Level Increase Threshold	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Indian Ave	between Placentia Ave and Orange Ave	Non-Sensitive	66.4	67.3	0.9	n/a	No
2	Orange Ave	between Indian Ave and Perris Blvd	Non-Sensitive	68.3	69.0	0.7	n/a	No
3	Perris Blvd	between Orange Aven and Citrus Ave	Sensitive	74.6	75.0	0.4	1.5	No
4	**Barrett Ave**	**between Placentia Ave and Orange Ave**	**Sensitive**	**60.7**	**67.1**	**6.4**	**3.0**	**Yes**
5	Perris Blvd	between Placentia Ave and Orange Ave	Sensitive	74.4	74.6	0.2	1.5	No
6	Perris Blvd	between Rider St and Placentia Ave	Sensitive	74.6	74.9	0.3	1.5	No
7	Nuevo Rd	between Perris Blvd and I-215 NB Ramps	Non-Sensitive	74.9	75.5	0.6	n/a	No
8	I-215 Frontage Rd	between Placentia Ave and Orange Ave	Non-Sensitive	67.2	76.6	9.4	n/a	No
9	I-215 Frontage Rd	between Orange Ave and Nuevo Rd	Non-Sensitive	64.3	72.8	8.5	n/a	No
10	Orange Ave	between I-215 Frontage Rd and Indian Ave	Non-Sensitive	64.5	74.4	9.9	n/a	No
11	Nuevo Rd	between I-215 NB Ramps and I-215 SB Ramps	Non-Sensitive	73.6	73.7	0.1	n/a	No
12	Perris Blvd	between Citrus Ave and Nuevo Rd	Sensitive	74.6	75.6	1.0	1.5	No
13	Placentia Ave	between I-215 NB Ramps and I-215 SB Ramps	Non-Sensitive	73.6	77.4	3.8	n/a	No
14	Placentia Ave	between I-215 NB Ramps and Indian Ave	Non-Sensitive	75.1	75.7	0.6	n/a	No
15	Placentia Ave	between Indian Ave and Perris Blvd	Sensitive	72.5	73.5	1.0	1.5	No

Source: EIR Appendix Q

Table 5.12-17: Project Traffic Noise Increases in the General Plan Buildout (2045) Condition

ID	Road	Segment	Receiving Land Use	CNEL at Receiving Land Use (dBA)			Noise Level Increase Threshold	
				No Project	With Project	Project Addition	Limit	Exceeded?
1	Indian Ave	between Placentia Ave and Orange Ave	Non-Sensitive	68.5	69.1	0.6	n/a	No
2	Orange Ave	between Indian Ave and Perris Blvd	Non-Sensitive	68.3	69.0	0.7	n/a	No
3	Perris Blvd	between Orange Aven and Citrus Ave	Sensitive	74.6	75.0	0.4	1.5	No
4	**Barrett Ave**	**between Placentia Ave and Orange Ave**	**Sensitive**	**60.8**	**67.1**	**6.3**	**3.0**	**Yes**
5	Perris Blvd	between Placentia Ave and Orange Ave	Sensitive	74.4	74.6	0.2	1.5	No
6	Perris Blvd	between Rider St and Placentia Ave	Sensitive	74.6	74.9	0.3	1.5	No
7	Nuevo Rd	between Perris Blvd and I-215 NB Ramps	Non-Sensitive	74.9	75.5	0.6	n/a	No
8	I-215 Frontage Rd	between Placentia Ave and Orange Ave	Non-Sensitive	68.6	76.8	8.2	n/a	No
9	I-215 Frontage Rd	between Orange Ave and Nuevo Rd	Non-Sensitive	65.7	73.0	7.3	n/a	No
10	Orange Ave	between I-215 Frontage Rd and Indian Ave	Non-Sensitive	65.9	74.6	8.7	n/a	No
11	Nuevo Rd	between I-215 NB Ramps and I-215 SB Ramps	Non-Sensitive	73.6	73.7	0.1	n/a	No
12	Perris Blvd	between Citrus Ave and Nuevo Rd	Sensitive	75.0	75.9	0.9	1.5	No
13	Placentia Ave	between I-215 NB Ramps and I-215 SB Ramps	Non-Sensitive	73.6	77.4	3.8	n/a	No
14	Placentia Ave	between I-215 NB Ramps and Indian Ave	Non-Sensitive	75.1	75.7	0.6	n/a	No
15	Placentia Ave	between Indian Ave and Perris Blvd	Sensitive	72.5	73.5	1.0	1.5	No

Source: EIR Appendix Q

Onsite Operational Noise

Less than Significant Impact. To present the potential worst-case noise conditions, this analysis assumes the proposed commercial, light industrial, and warehouse buildings would be operational 24 hours per day, seven days per week. Consistent with similar uses, the business operations of the proposed Project would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The onsite noise sources are expected to include loading dock activity, truck movements, roof-top air conditioning units, parking lot vehicle movements, fire pump, trash enclosure activity, drive thru speakerphones, and gas station activity. As described previously, the Specific Plan Area is located within the general vicinity of existing residences and a school. The Noise Impact Analysis calculated the operational source noise levels that would be generated by the proposed Project and the noise increases that would be experienced at the closest sensitive receiver locations.

Operational Noise Standard Compliance

Phase 1 Developments. Tables 5.12-18 and 5.12-19 show the estimated operational noise levels of the proposed developments within Phase 1. Table 5.12-18 shows that the daytime hourly noise levels at the off-site receiver locations are expected to range from 50.0 to 54.9 dBA Lmax, which would not exceed the City's daytime residential standard of 80 dBA Lmax at residences or schools. Therefore, daytime operational noise impacts from Phase 1 would be less than significant.

Table 5.12-18: Daytime Project Operational Noise Levels from Phase 1

Noise Source	Operational Noise Levels by Receiver Location (dBA Lmax)								
	R1	R2	R3	R4	R5	R6	R7	R8	R9
Loading Dock Activity	49.9	48.4	50.7	50.4	50.2	53.8	53.4	49.5	53.7
Roof-Top Air Conditioning Units	43.9	39.7	44.2	39.2	38.5	36.2	34.9	31.6	32.6
Courtyard Activity	23.8	26.9	34.4	24.6	22.7	15.5	0.0	3.1	0.0
Drive-Through Speakerphone	34.8	35.3	36.0	36.6	36.2	42.2	41.9	37.7	40.2
Trash Enclosure Activity	42.5	43.7	52.0	43.5	43.4	41.6	37.9	34.2	36.3
Parking Lot Vehicle Movements	20.7	26.1	27.5	26.6	24.1	35.2	15.7	17.5	17.9
Truck Movements	28.2	26.8	28.8	29.4	28.0	30.6	31.8	28.0	33.3
Total (All Noise Sources)	**51.6**	**50.3**	**54.9**	**51.7**	**51.4**	**54.5**	**53.9**	**50.0**	**54.0**
Threshold	80	80	80	80	80	80	80	80	80
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: EIR Appendix Q

Table 5.12-19 shows the Project operational noise levels during the nighttime hours of 10:01 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 49.8 to 54.7 dBA Lmax. Table 5.12-19 shows that all of the receptor locations would be below the threshold of 60 dBA Lmax. Therefore, nighttime operational noise impacts from Phase 1 would be less than significant.

Table 5.12-19: Nighttime Project Operational Noise Levels from Phase 1

Noise Source	Operational Noise Levels by Receiver Location (dBA Lmax)								
	R1	R2	R3	R4	R5	R6	R7	R8	R9
Loading Dock Activity	49.9	48.4	50.7	50.4	50.2	53.8	53.4	49.5	53.7
Roof-Top Air Conditioning Units	41.5	37.3	41.8	36.8	36.1	33.8	32.5	29.2	30.2
Courtyard Activity	19.8	23.0	30.5	20.6	18.7	11.5	0.0	0.0	0.0
Drive-Through Speakerphone	30.8	31.3	32.0	32.6	32.2	38.2	37.9	33.8	36.3
Trash Enclosure Activity	42.5	43.7	52.0	43.5	43.4	41.6	37.9	34.2	36.3
Parking Lot Vehicle Movements	20.7	26.1	27.5	26.6	24.1	35.2	15.7	17.5	17.9
Truck Movements	28.2	26.8	28.8	29.4	28.0	30.6	31.8	28.0	33.3
Total (All Noise Sources)	**51.2**	**50.0**	**54.7**	**51.5**	**51.2**	**54.3**	**53.7**	**49.8**	**53.9**
Threshold	60	60	60	60	60	60	60	60	60
Exceed Threshold	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: EIR Appendix Q

Phase 2 Buildout – With Overlay. The Noise and Vibration Analysis included in EIR Appendix Q calculated the operational source noise levels that are expected to be generated at the Specific Plan Area with operation of both Phase 1 and Phase 2 with the Overlay and the Project-related noise levels that would be experienced at each of the sensitive receiver locations.

Table 5.12-20 shows that the daytime hourly noise levels at the off-site receiver locations are expected to range from 50.6 to 57.3 dBA Lmax, which would not exceed the City's daytime residential standard of 80 dBA Lmax at residences or schools. Therefore, daytime operational noise impacts from Phase 2 with Overlay would be less than significant.

Table 5.12-20: Daytime Project Operational Noise Levels from Phase 2 with Overlay

Noise Source	Operational Noise Levels by Receiver Location (dBA Lmax)							
	R1	R2	R3	R4	R5	R6	R7	R8
Loading Dock Activity	51.1	48.9	50.9	50.6	50.4	53.9	57.1	52.0
Roof-Top Air Conditioning Units	43.9	39.7	44.2	39.2	38.5	36.2	34.9	31.6
Courtyard Activity	23.8	26.9	34.4	24.6	22.7	15.5	0.0	3.1
Drive-Through Speakerphone	34.8	35.3	36.0	36.6	36.2	42.2	41.9	37.7
Trash Enclosure Activity	42.5	43.7	52.0	43.5	43.4	41.6	37.9	34.2
Parking Lot Vehicle Movements	20.7	26.1	27.5	26.6	24.1	35.2	15.7	17.5
Truck Movements	28.7	27.0	28.9	29.5	28.1	30.8	32.9	28.9
Total (All Noise Sources)	**52.4**	**50.6**	**55.0**	**51.8**	**51.6**	**54.6**	**57.3**	**52.3**
Threshold	80	80	80	80	80	80	80	80
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: EIR Appendix Q

Table 5.12-21 shows the Project operational noise levels during the nighttime hours of 10:01 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 50.4 to 57.2 dBA Lmax. Table 5.12-21 shows that all of the receptor locations would be below the threshold of 60 dBA Lmax. Therefore, nighttime operational noise impacts from Phase 2 with Overlay would be less than significant.

Table 5.12-21: Nighttime Project Operational Noise Levels from Phase 2 With Overlay

Noise Source	Operational Noise Levels by Receiver Location (dBA Lmax)							
	R1	R2	R3	R4	R5	R6	R7	R8
Loading Dock Activity	51.1	48.9	50.9	50.6	50.4	53.9	57.1	52.0
Roof-Top Air Conditioning Units	41.5	37.3	41.8	36.8	36.1	33.8	32.5	29.2
Courtyard Activity	19.8	23.0	30.5	20.6	18.7	11.5	0.0	0.0
Drive-Through Speakerphone	30.8	31.3	32.0	32.6	32.2	38.2	37.9	33.8
Trash Enclosure Activity	42.5	43.7	52.0	43.5	43.4	41.6	37.9	34.2
Parking Lot Vehicle Movements	20.7	26.1	27.5	26.6	24.1	35.2	15.7	17.5
Truck Movements	28.7	27.0	28.9	29.5	28.1	30.8	32.9	28.9
Total (All Noise Sources)	**52.1**	**50.4**	**54.8**	**51.6**	**51.4**	**54.4**	**57.2**	**52.2**
Threshold	60	60	60	60	60	60	60	60
Exceed Threshold	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: EIR Appendix Q

Phase 2 Buildout – Without Overlay. Tables 5.12-22 and 5.12-23 show the estimated operational noise levels of Phase 2 without the Overlay. Table 5.12-22 shows that the daytime hourly noise levels at the off-site receiver locations are expected to range from 50.6 to 62.0 dBA Lmax, which would not exceed the City's daytime residential standard of 80 dBA Lmax at residences or schools. Therefore, daytime operational noise impacts from Phase 2 without the Overlay would be less than significant.

Table 5.12-22: Daytime Project Operational Noise Levels from Phase 2 Without Overlay

Noise Source	Operational Noise Levels by Receiver Location (dBA Lmax)								
	R1	R2	R3	R4	R5	R6	R7	R8	R9
Loading Dock Activity	51.1	48.9	50.9	50.6	50.4	53.9	57.1	52.0	61.9
Roof-Top Air Conditioning Units	43.9	39.7	44.2	39.2	38.5	36.2	34.9	31.6	32.6
Courtyard Activity	23.8	26.9	34.4	24.6	22.7	15.5	0.0	3.1	0.0
Drive-Through Speakerphone	34.8	35.3	36.0	36.6	36.2	42.2	41.9	37.7	40.2
Trash Enclosure Activity	42.5	43.7	52.0	43.5	43.4	41.6	37.9	34.2	36.3
Parking Lot Vehicle Movements	20.7	26.1	27.5	26.6	24.1	35.2	15.7	17.5	17.9
Truck Movements	28.7	27.0	28.9	29.5	28.1	30.8	32.9	28.9	37.5
Total (All Noise Sources)	**52.4**	**50.6**	**55.0**	**51.8**	**51.6**	**54.6**	**57.3**	**52.3**	**62.0**
Threshold	80	80	80	80	80	80	80	80	80
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: EIR Appendix Q

Table 5.12-23 shows the Project operational noise levels from Phase 2 without the Overlay during the nighttime hours of 10:01 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site nighttime noise sensitive receiver locations are expected to range from 50.4 to 57.3 dBA Lmax. The nighttime noise would be 61.9 dBA Lmax at Val Verde Elementary School, which is not a nighttime noise sensitive use. Therefore, nighttime operational noise impacts from Phase 2 without the Overlay would be less than significant.

Table 5.12-23: Nighttime Project Operational Noise Levels from Phase 2 Without Overlay

Noise Source	Operational Noise Levels by Receiver Location (dBA Lmax)								
	R1	R2	R3	R4	R5	R6	R7	R8	R9
Loading Dock Activity	51.1	48.9	50.9	50.6	50.4	53.9	57.1	52.0	61.9
Roof-Top Air Conditioning Units	41.5	37.3	41.8	36.8	36.1	33.8	32.5	29.2	30.2
Courtyard Activity	19.8	23.0	30.5	20.6	18.7	11.5	0.0	0.0	0.0
Drive-Through Speakerphone	30.8	31.3	32.0	32.6	32.2	38.2	37.9	33.8	36.3
Trash Enclosure Activity	42.5	43.7	52.0	43.5	43.4	41.6	37.9	34.2	36.3
Parking Lot Vehicle Movements	20.7	26.1	27.5	26.6	24.1	35.2	15.7	17.5	17.9
Truck Movements	28.7	27.0	28.9	29.5	28.1	30.8	32.9	28.9	37.5
Total (All Noise Sources)	**52.1**	**50.4**	**54.8**	**51.6**	**51.4**	**54.4**	**57.2**	**52.2**	**61.9**
Threshold	60	60	60	60	60	60	60	60	60
Exceed Threshold	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: EIR Appendix Q

Phase 1 Operational CNEL Noise. Consistent with the City of Perris General Plan Noise Element, Project operational noise levels at the nearest sensitive receiver locations cannot exceed 60 dBA CNEL. The CNEL metric is typically used to describe 24-hour transportation-related noise levels; however, the City of Perris General Plan Noise Element requires new industrial facilities and large commercial facilities to demonstrate compliance with noise-sensitive land uses within 160 feet. Since CNEL noise criteria is used to describe the noise sensitive time periods during the evening and night hours when noise can become more intrusive, the CNEL calculations are limited to the noise sensitive residential receiver locations.

The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA Leq sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA Leq sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when noise can become more intrusive, particularly for noise sensitive residential land use. CNEL does not represent the actual sound level heard at any time but rather represents the total sound exposure.

Table 5.12-24: Operational Noise Level Compliance (CNEL) for Phase 1

Receiver Location	Land Use	Project Operational Noise Levels			Exterior Noise Level Standards (CNEL)	Noise Level Standards Exceeded?
		Daytime (dBA Leq)	Nighttime (dBA Leq)	24-Hour (CNEL)		
R1	Residential	46.6	45.5	52.2	60	No
R2	Residential	44.8	44.2	50.8	60	No
R3	Residential	50.5	50.1	56.7	60	No
R4	Residential	45.5	45.0	51.7	60	No
R5	Residential	45.1	44.7	51.4	60	No
R6	Residential	46.9	46.7	53.4	60	No
R7	Residential	46.0	45.9	52.5	60	No
R8	Residential	42.2	42.0	48.7	60	No
R9	School	46.1	-[1]	-[1]	-[1]	No

Source: EIR Appendix Q

[1] R9 is Val Verde Elementary School, which does have any noise sensitive nighttime receivers.

Table 5.12-24 includes the evening and nighttime adjustments made to the Phase 1 operational noise levels during the applicable hours to convert the hourly operational noise levels (Leq) to 24-hour CNELs. Table 5.12-16 indicates that the 24-hour noise levels associated with operation of Phase 1 at the nearest receiver locations are expected to range from 48.7 to 56.7 dBA CNEL, which would not exceed the City of Perris 60 dBA CNEL exterior noise level standards at the nearest residences.

Phase 2 With Overlay Operational CNEL Noise. Table 5.12-25 includes the evening and nighttime adjustments made to the Phase 2 with Overlay operational noise levels during the applicable hours to convert the hourly operational noise levels (Leq) to 24-hour CNELs. Table 5.12-25 indicates that the 24-hour noise levels associated with operation of Phase 2 with Overlay at the nearest receiver locations are expected to range from 50.9 to 56.8 dBA CNEL, which would not exceed the City of Perris 60 dBA CNEL exterior noise level standards at the nearest residences.

Table 5.12-25: Operational Noise Level Compliance (CNEL) for Phase 2 With Overlay

Receiver Location	Land Use	Project Operational Noise Levels			Exterior Noise Level Standards (CNEL)	Noise Level Standards Exceeded?
		Daytime (dBA Leq)	Nighttime (dBA Leq)	24-Hour (CNEL)		
R1	Residential	47.0	46.1	52.7	60	No
R2	Residential	44.9	44.3	51.0	60	No
R3	Residential	50.5	50.1	56.8	60	No
R4	Residential	45.5	45.1	51.8	60	No
R5	Residential	45.2	44.8	51.5	60	No
R6	Residential	46.9	46.8	53.4	60	No
R7	Residential	49.3	49.2	55.9	60	No
R8	Residential	44.4	44.3	50.9	60	No

Source: EIR Appendix Q

Phase 2 Without Overlay Operational CNEL Noise. Table 5.12-26 includes the evening and nighttime adjustments made to the Phase 2 without the Overlay operational noise levels during the applicable hours to convert the hourly operational noise levels (Leq) to 24-hour CNELs. Table 5.12-26 indicates that the 24-hour noise levels associated with operation of Phase 2 without the Overlay at the nearest receiver locations are expected to range from 50.9 to 56.8 dBA CNEL, which would not exceed the City of Perris 60 dBA CNEL exterior noise level standards at the nearest residences.

Table 5.12-26: Operational Noise Level Compliance (CNEL) for Phase 2 Without Overlay

Receiver Location	Land Use	Project Operational Noise Levels			Exterior Noise Level Standards (CNEL)	Noise Level Standards Exceeded?
		Daytime (dBA Leq)	Nighttime (dBA Leq)	24-Hour (CNEL)		
R1	Residential	47.0	46.1	52.7	60	No
R2	Residential	44.9	44.3	51.0	60	No
R3	Residential	50.5	50.1	56.8	60	No
R4	Residential	45.5	45.1	51.8	60	No
R5	Residential	45.2	44.8	51.5	60	No
R6	Residential	46.9	46.8	53.4	60	No
R7	Residential	49.3	49.2	55.9	60	No
R8	Residential	44.4	44.2	50.9	60	No

Source: EIR Appendix Q

Operational Noise Level Increases

Phase 1 Noise Increase. To evaluate if noise from operation of the proposed Project would result in a substantial increase in ambient noise levels, operational noise levels were combined with the existing ambient noise levels measurements at the nearby receiver locations. The difference between the combined Project operational and ambient noise levels describes the noise level increases to the existing ambient noise environment.

As indicated on Table 5.12-27, with operation of Phase 1, the daytime increase in noise would range from 0.0 to 1.0 dBA Leq and Table 5.12-28 shows that the nighttime increase in noise would range from 0.1 to 0.9 dBA Leq, which would not generate a significant daytime or nighttime operational noise level increase at the sensitive receiver locations. Therefore, impacts would be less than significant.

Table 5.12-27: Daytime Phase 1 Operational Noise Level Increases (dBA Leq)

Receiver Location	Total Project Operational Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	46.6	L1	67.2	67.2	0.0	1.5	No
R2	44.8	L2	66.7	66.7	0.0	1.5	No
R3	50.5	L3	64.2	64.4	0.2	5.0	No
R4	45.5	L4	54.7	55.2	0.5	5.0	No
R5	45.1	L4	54.7	55.2	0.5	5.0	No
R6	46.9	L5	65.0	65.1	0.1	1.5	No
R7	46.0	L7	56.5	56.9	0.4	5.0	No
R8	42.2	L8	58.6	58.7	0.1	5.0	No
R9	46.1	L6	52.1	53.1	1.0	5.0	No

Source: EIR Appendix Q

Table 5.12-28: Nighttime Phase 1 Operational Noise Level Increases (dBA Leq)

Receiver Location	Total Project Operational Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	45.5	L1	63.9	64.0	0.1	5.0	No
R2	44.2	L2	61.8	61.9	0.1	5.0	No
R3	50.1	L3	62.1	62.4	0.3	5.0	No
R4	45.0	L4	51.3	52.2	0.9	5.0	No
R5	44.7	L4	51.3	52.2	0.9	5.0	No
R6	46.7	L5	59.0	59.2	0.2	5.0	No
R7	45.9	L7	53.2	53.9	0.7	5.0	No
R8	42.0	L8	55.0	55.2	0.2	5.0	No

Source: EIR Appendix Q

[1] R9 is Val Verde Elementary School, which does have any noise sensitive nighttime receivers.

Phase 2 – With Overlay Noise Increase. As shown in Table 5.12-29, with operation of Phase 2 with Overlay, the daytime increase in noise would range from 0.0 to 0.8 dBA Leq and Table 5.12-29 shows that the nighttime increase in noise would range from 0.1 to 1.5 dBA Leq, which would not generate a significant

daytime or nighttime operational noise level increase at the sensitive receiver locations. Therefore, impacts would be less than significant.

Table 5.12-29: Daytime Phase 2 With Overlay Operational Noise Level Increases (dBA Leq)

Receiver Location	Total Project Operational Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	47.0	L1	67.2	67.2	0.0	1.5	No
R2	44.9	L2	66.7	66.7	0.0	1.5	No
R3	50.5	L3	64.2	64.4	0.2	5.0	No
R4	45.5	L4	54.7	55.2	0.5	5.0	No
R5	45.2	L4	54.7	55.2	0.5	5.0	No
R6	46.9	L5	65.0	65.1	0.1	1.5	No
R7	49.3	L7	56.5	57.3	0.8	5.0	No
R8	44.4	L8	58.6	58.8	0.2	5.0	No

Source: EIR Appendix Q

Table 5.12-30: Nighttime Phase 2 With Overlay Operational Noise Level Increases (dBA Leq)

Receiver Location	Total Project Operational Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	46.1	L1	63.9	64.0	0.1	5.0	No
R2	44.3	L2	61.8	61.9	0.1	5.0	No
R3	50.1	L3	62.1	62.4	0.3	5.0	No
R4	45.1	L4	51.3	52.2	0.9	5.0	No
R5	44.8	L4	51.3	52.2	0.9	5.0	No
R6	46.8	L5	59.0	59.3	0.3	5.0	No
R7	49.2	L7	53.2	54.7	1.5	5.0	No
R8	44.3	L8	55.0	55.4	0.4	5.0	No

Source: EIR Appendix Q

Phase 2 – Without Overlay Noise Increase. As shown in Table 5.12-31, with operation of Phase 2 without the Overlay, the daytime increase in noise would range from 0.0 to 4.0 dBA Leq and Table 5.12-32 shows that the nighttime increase in noise would range from 0.1 to 1.5 dBA Leq, which would not generate a significant daytime or nighttime operational noise level increase at the sensitive receiver locations. Therefore, impacts would be less than significant.

Table 5.12-31: Daytime Phase 2 Without Overlay Operational Noise Level Increases (dBA Leq)

Receiver Location	Total Project Operational Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	47.0	L1	67.2	67.2	0.0	1.5	No
R2	44.9	L2	66.7	66.7	0.0	1.5	No
R3	50.5	L3	64.2	64.4	0.2	5.0	No
R4	45.5	L4	54.7	55.2	0.5	5.0	No
R5	45.2	L4	54.7	55.2	0.5	5.0	No
R6	46.9	L5	65.0	65.1	0.1	1.5	No
R7	49.3	L7	56.5	57.3	0.8	5.0	No
R8	44.4	L8	58.6	58.8	0.2	5.0	No
R9	53.9	L6	52.1	56.1	4.0	5.0	No

Source: EIR Appendix Q

Table 5.12-32: Nighttime Phase 2 Without Overlay Operational Noise Level Increases (dBA Leq)

Receiver Location	Total Project Operational Noise Level	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient	Project Increase	Increase Criteria	Increase Criteria Exceeded?
R1	46.1	L1	63.9	64.0	0.1	5.0	No
R2	44.3	L2	61.8	61.9	0.1	5.0	No
R3	50.1	L3	62.1	62.4	0.3	5.0	No
R4	45.1	L4	51.3	52.2	0.9	5.0	No
R5	44.8	L4	51.3	52.2	0.9	5.0	No
R6	46.8	L5	59.0	59.3	0.3	5.0	No
R7	49.2	L7	53.2	54.7	1.5	5.0	No
R8	44.2	L8	55.0	55.3	0.3	5.0	No

Source: EIR Appendix Q
[1] R9 is Val Verde Elementary School, which does have any noise sensitive nighttime receivers.

IMPACT NOI-2: THE PROJECT WOULD NOT RESULT IN GENERATION OF EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS.

Specific Plan Area

Construction

Less than Significant Impact. Construction activities for development of the Project would include site preparation, grading, building construction, paving, architectural coating, which have the potential to generate low levels of groundborne vibration. People working in close proximity to the construction could be exposed to the generation of excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Site ground vibrations from construction activities very rarely reach the levels that can

damage structures, but they can be perceived in the audible range and be felt in buildings very close to a construction site.

Excavation and grading activities are required for implementation of the Project and can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Based on the reference vibration levels provided by the FTA, a vibratory roller represents the peak source of vibration with a reference velocity of 0.210 inch per second PPV at 25 feet, as shown in Table 5.12-33.

Table 5.12-33: Vibration Source Levels for Construction Equipment

Equipment	PPV (inch per second) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089
Vibratory Roller	0.210

Source: EIR Appendix Q

Table 5.12-34 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 66 feet to 726 feet from construction activities, construction vibration levels are estimated to be between 0.001 and 0.049 inch per second PPV. As such, construction vibration levels would not exceed the threshold of 0.3 inch per second PPV threshold at any sensitive receiver locations. Therefore, impacts related to construction vibration would be less than significant.

Table 5.12-34: Construction Vibration Levels

Location	Distance to Const. Activity (Feet)	Typical Construction Vibration Levels PPV (in/sec)						Thresholds PPV (in/sec)	Thresholds Exceeded?
		Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	181'	0.000	0.002	0.004	0.005	0.011	0.011	0.3	No
R2	713'	0.000	0.000	0.000	0.001	0.001	0.001	0.3	No
R3	112'	0.000	0.004	0.008	0.009	0.022	0.022	0.3	No
R4	709'	0.000	0.000	0.001	0.001	0.001	0.001	0.3	No
R5	720'	0.000	0.000	0.000	0.001	0.001	0.001	0.3	No
R6	454'	0.000	0.000	0.001	0.001	0.003	0.003	0.3	No
R7	96'	0.000	0.005	0.010	0.012	0.028	0.028	0.3	No
R8	726'	0.000	0.000	0.000	0.001	0.001	0.001	0.3	No
R9	66'	0.001	0.008	0.018	0.021	0.049	0.049	0.3	No

Source: EIR Appendix Q
"PPV" = Peak Particle Velocity

Operation

Less than Significant Impact. Operation of the proposed Project would include heavy trucks for loading dock activities, deliveries, and moving trucks, and garbage trucks for solid waste disposal. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. According to the FTA *Transit Noise Impact and Vibration Assessment* trucks rarely create vibrations that exceed 70 VdB (0.0032 PPV in/sec) (unless there are bumps due to frequent potholes in the road). Since the trucks on nearby

roadways and on site would be travelling at low speeds on smooth surfaces, it is expected that delivery truck vibration impacts at nearby receiver locations would be less than the vibration perceptibility threshold of 0.3 PPV in/sec and therefore, would be less than significant.

IMPACT NOI-3: THE PROJECT WOULD NOT, FOR A PROJECT LOCATED WITHIN THE VICINITY OF A PRIVATE AIRSTRIP OR 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.

Specific Plan Area

Less than Significant Impact. As shown in Figure 5.12-2, the Perris Valley Airport is located approximately 2.3 miles southwest of the Specific Plan Area and the site is located outside of the airport's 55 dBA CNEL noise level contour. In addition, March ARB/IPA is located approximately 2.9 miles northwest of the Specific Plan Area. The Specific Plan Area is located outside of the March ARB/IPA 60 dBA CNEL airport noise level contour boundaries, as shown in Figure 5.12-3. Thus, implementation and development of the Project would not result in a safety hazard or exposure to excessive noise for people residing or working in the area, and impacts would be less than significant.

5.12.7 CUMULATIVE IMPACTS

Cumulative noise assessment considers development of the proposed project in combination with ambient growth and other development projects within the vicinity of the proposed Project. As noise and vibration are localized phenomenon and drastically reduce in magnitude as distance from the source increases, only projects and ambient growth in the nearby area (as listed in Table 5-1 and shown in Figure 5-1) could combine with the proposed Project to result in cumulative noise impacts.

Construction Noise. Development of the proposed Project in combination with the related projects would result in an increase in construction-related and traffic-related noise. However, Perris Municipal Code Section 7.34.060 requires construction activities to not occur between the hours of 7:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or anytime on Sunday or a federal holiday. Also, construction noise and vibration are localized in nature and decrease substantially with distance. Consequently, in order to achieve a substantial cumulative increase in construction noise and vibration levels, more than one source emitting high levels of construction noise would need to be in close proximity to the proposed Project construction. As shown on Figure 5-1, there are several cumulative projects that are adjacent to or within hearing distance of the Project site. The closest cumulative projects include the following:

- P19: Orbis Indus Truck Yard
- P21: Target Store
- P22: Commercial Shopping Plaza
- P23: Habit Restaurant
- P24: Pollo Campero Restaurant
- P30: Tommy's Carwash

Construction of these nearby projects could occur during construction of the proposed Project. However, cumulative projects would also be required to comply with the Perris Municipal Code regarding construction noise impacts and would implement measures as required through City construction permitting to protect sensitive receptors from construction noise impacts, which would limit the potential of the noise to cumulatively combine with noise from nearby projects.

As detailed previously, the highest construction noise from the proposed Project would range from 58.3 to 65.8 dBA Lmax at sensitive receiver locations, which would not exceed the City's 80 dba Lmax daytime construction noise level threshold. Concrete pouring activities would range from 50.9 to 55.9 dBA Lmax at the nearby receiver locations, which would be less than the City's 60 dBA Lmax residential nighttime noise level standard. In addition, the greatest increase in ambient noise from construction would be 11.0 dBA Leq at the nearest receiver locations, which would not exceed 12 dBA. This construction noise is not additive; meaning if more than one construction project occurred at the same time, a higher noise volume would not occur; however, the construction noise would occur over both project locations. Because the proposed Project construction noise would not exceed standards, simultaneous construction would not cause an exceedance that could be cumulatively impactful. Thus, construction noise impacts would be less than cumulatively considerable and less than significant.

Operational Traffic Noise. Cumulative traffic source noise impacts would occur primarily as a result of increased traffic on local roadways due to the proposed Project and related projects within the study area. Therefore, cumulative traffic-generated noise impacts has been assessed based on the contribution of the proposed Project in the opening year cumulative traffic volumes on the roadways in the Project vicinity. As shown in Table 5.12-35, in the General Plan buildout (2045) condition, the cumulative increase in roadway noise volumes would range from 1.6 to 10.9 dBA CNEL. As shown, the study area roadway segment of Barrett Avenue between Placentia Avenue and Orange Avenue (Segment #4) is adjacent to residential uses and would experience a traffic noise increase of 7.4 dBA, which exceeds the threshold of 3 dBA. This would be a cumulatively considerable increase in traffic noise. As described previously, there is no feasible mitigation to reduce roadway noise levels below thresholds. Therefore, noise increases from truck traffic would be cumulatively considerable and would remain significant and unavoidable after implementation of mitigation.

Onsite Operational Noise. As detailed previously, impacts associated with onsite noise sources would be less than significant and no mitigation is required. Other projects would be required to evaluate onsite noise sources and, if necessary, mitigate for such impacts. Because the proposed Project at full buildout would result in a maximum noise volume of 62.0 dBA Lmax, at sensitive receptors in the daytime which would be far below the City's daytime residential standard of 80 Lmax, it would not result in an exceedance that could have a cumulatively considerable contribution to potential exceedances of noise standards. Likewise, the highest nighttime noise volume at a sensitive use would be 57.3 dBA Lmax, which would be less than the 60 dBA Lmax nighttime noise level standard and would not have a cumulatively considerable contribution that could result in potential exceedances of noise standards. In addition, the Project would result in a less than significant 1.5 dBA increase in ambient noise levels, which is far below the threshold of 5.0 dBA; and thus, would be less than cumulatively considerable. Stationary noise is a localized phenomena, and there is very limited potential for cumulative noise impacts to occur. Each related project in the Specific Plan vicinity would require noise assessments and compliance with noise-related municipal codes, as part of permitting requirements that would address potential noise impacts and identify necessary attenuation measures, where appropriate. However, the closest cumulative projects include commercial, restaurant, and light industrial uses, which are consistent with the uses proposed by the Project and are not anticipated to result in cumulative impacts related to operational noise. As such, the Project, in conjunction with other projects, would not have a cumulatively considerable impact related to onsite operational noise. Cumulative onsite operational noise impacts from the Project would be less than significant.

Construction Vibration. Groundborne vibration generated at the Specific Plan Area during construction would not be in exceedance of the 0.3 inches per sec PPV threshold. At distances ranging from 66 feet to 726 feet from construction activities, construction vibration levels are estimated to be between 0.001 and 0.049 inch per second PPV, which are far below 0.3 inch per second PPV.

Table 5.12-35: Cumulative Off-Site Traffic Noise Increases

ID	Roadway	Segment	Receiving Land Use	CNEL at Receiving Land Use (dBA CNEL)					Incremental Noise	
				Existing No Project (a)	GP 2045 Without Project (b)	GP 2045 With Project (c)	Cumulative Increase (c-a)	Cumulative Contribution (c-b)	Limit	Exceeded?
1	Indian Ave	between Placentia Ave and Orange Ave	Non-Sensitive	65.5	68.5	69.1	3.6	0.6	n/a	No
2	Orange Ave	between Indian Ave and Perris Blvd	Non-Sensitive	67.4	68.3	69.0	1.6	0.7	n/a	No
3	Perris Blvd	between Orange Aven and Citrus Ave	Sensitive	72.5	74.6	75.0	2.5	0.4	1.5	No
4	Barrett Ave	between Placentia Ave and Orange Ave	Sensitive	59.7	60.8	67.1	7.4	6.3	1.5	**Yes**
5	Perris Blvd	between Placentia Ave and Orange Ave	Sensitive	72.2	74.4	74.6	2.4	0.2	1.5	No
6	Perris Blvd	between Rider St and Placentia Ave	Sensitive	72.3	74.6	74.9	2.6	0.3	1.5	No
7	Nuevo Rd	between Perris Blvd and I-215 NB Ramps	Non-Sensitive	73.6	74.9	75.5	1.9	0.6	n/a	No
8	I-215 Frontage Rd	between Placentia Ave and Orange Ave	Non-Sensitive	66.5	68.6	76.8	10.3	8.2	n/a	No
9	I-215 Frontage Rd	between Orange Ave and Nuevo Rd	Non-Sensitive	63.5	65.7	73.0	9.5	7.3	n/a	No
10	Orange Ave	between I-215 Frontage Rd and Indian Ave	Non-Sensitive	63.7	65.9	74.6	10.9	8.7	n/a	No
11	Nuevo Rd	between I-215 NB Ramps and I-215 SB Ramps	Non-Sensitive	71.9	73.6	73.7	1.8	0.1	n/a	No
12	Perris Blvd	between Citrus Ave and Nuevo Rd	Sensitive	72.6	75.0	75.9	3.3	0.9	1.5	No
13	Placentia Ave	between I-215 NB Ramps and I-215 SB Ramps	Non-Sensitive	71.1	73.6	77.4	6.3	3.8	n/a	No
14	Placentia Ave	between I-215 NB Ramps and Indian Ave	Non-Sensitive	72.6	75.1	75.7	3.1	0.6	n/a	No
15	Placentia Ave	between Indian Ave and Perris Blvd	Sensitive	68.8	72.5	73.5	4.7	1.0	1.5	No

Source: EIR Appendix Q

Although construction of other projects may occur at the same time as the proposed Project, cumulatively significant construction vibration would only have the potential to occur when construction activities generating high vibration levels occur in close proximity to one another in a way that concentrates the vibration. The farther construction activities occur from one another on each respective project site, the quicker the vibration dissipates by the time it reaches a sensitive receptor. Additionally, because heavy construction equipment moves around a project site and would only occur for limited durations, average vibration levels at the nearest structures would diminish with increasing distance between the structures and construction activities. Both the proposed Project and related projects would be required to comply with the limitations on allowable hours of construction that limit potential construction vibration impacts. Due the limited vibration generated by Project construction that would be in temporary locations throughout the site, the Project's incremental effects associated with the generation of excessive groundborne vibration or groundborne noise levels would be less than cumulatively considerable.

Operational Vibration. As detailed previously, operational vibration from the Project would be limited to trucks on nearby roadways and on site that would be travelling at low speeds on smooth surfaces and would generate vibration below the perceptibility threshold of 0.3 PPV in/sec. Because the vibration would be below perceptibility and would further diminish with distance, the Project vibration would not combine to become cumulatively considerable, and cumulative operational vibration would be less than significant.

5.12.8 EXISTING REGULATIONS

Perris Municipal Code

- Perris Municipal Code Section 7.34: Noise Control

5.12.9 PROJECT DESIGN FEATURES

None.

5.12.10 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Impacts related to Impact NOI-1 would be potentially significant. Impacts related to Impacts NOI-2 and NOI-3 would be less than significant.

5.12.11 MITIGATION MEASURES

None.

5.12.12 LEVEL OF SIGNIFICANCE AFTER MITIGATION

As no feasible mitigation exists to reduce traffic noise, impacts related to Impact NOI-1would be significant and unavoidable. Impacts related to Impacts NOI-2 and NOI-3 would be less than significant.

5.12.13 REFERENCES

City of Perris. (2005). *General Plan Noise Element*.

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Federal Transit Administration. (2006). *Transit Noise and Vibration Impact Assessment*. https://docs.vcrma.org/images/pdf/planning/ceqa/FTA_Noise_and_Vibration_Manual.pdf

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Urban Crossroads. (April 2025). *Harvest Landing Retail Center & Business Park Project Noise and Vibration Analysis*. **(EIR Appendix Q)**

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