

5.11.1 INTRODUCTION

This section describes the existing noise conditions on and near the project site, applicable regulatory requirements, potential environmental impacts, recommended mitigation measures to reduce or avoid noise impacts, and the level of significant after mitigation.

5.11.2 EXISTING CONDITIONS

5.11.2.1 Description of Noise Metrics

Sound is generally undesirable when it interferes with normal activities, causes actual physical harm, or has an adverse effect on health. The definition of noise as unwanted sound implies that it has an adverse effect on, or causes a substantial annoyance to, people and their environment.

Sound pressure level alone is not a reliable indicator of loudness because the human ear does not respond uniformly to sounds at all frequencies. For example, the human ear is less sensitive to low and high frequencies than to the medium frequencies that more closely correspond to human speech. In response to the human ear's sensitivity, or lack thereof, to different frequencies, the A-weighted noise level, referenced in units of dB(A), was developed to better correspond with peoples' subjective judgment of sound levels. In general, changes in a noise level of less than 3 dB(A) are not noticed by the human ear.¹

Changes from 3 to 5 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise. An increase of greater than 5 dB(A) is readily noticeable, while the human ear perceives a 10 dB(A) increase in sound level to be a doubling of sound volume. A doubling of sound energy results in a 3 dB(A) increase in sound, which means that a doubling of sound wave energy (e.g., doubling the volume of traffic on a roadway) would result in a barely perceptible change in sound level. Common noise levels associated with certain activities are shown on **Figure 5.11-1, Common Noise Levels**.

Noise sources occur in two forms: (1) point sources, such as stationary equipment or individual motor vehicles; and (2) line sources, such as a roadway with a large number of mobile point sources (motor vehicles). Sound generated by a stationary point source typically diminishes (attenuates) at a rate of 6 dB(A) for each doubling of distance from the source to the receptor at acoustically hard sites and at a rate

1 U.S. Department of Transportation, Federal Highway Administration, Fundamentals and Abatement of Highway Traffic Noise, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 81.

of 7.5 dB(A) at acoustically soft sites.² A hard, or reflective, site does not provide any excess ground-effect attenuation and is characteristic of asphalt, concrete, and very hard-packed soil. An acoustically soft or absorptive site is characteristic of normal earth and most ground with vegetation. As an example, a 60 dB(A) noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dB(A) at 100 feet from the source and it would be 48 dB(A) at 200 feet from the source. Noise from the same point source at an acoustically soft site would be 52.5 dB(A) at 100 feet and 45 dB(A) at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3 dB(A) and 4.5 dB(A) per doubling of distance from the source to the receptor for hard and soft sites, respectively.³ Man-made or natural barriers can also attenuate sound levels, as illustrated in **Figure 5.11-2, Noise Attenuation by Barriers**. Solid walls and berms may reduce noise levels by 5 to 10 dB(A).⁴

The minimum attenuation of exterior to interior noise provided by typical structures in California is provided in **Table 5.11-1, Outside to Inside Noise Attenuation (dB(A))**.

**Table 5.11-1
Outside to Inside Noise Attenuation (dB(A))**

Building Type	Open Windows	Closed Windows ¹
Residences	17	25
Schools	17	25
Churches	20	30
Hospitals/Convalescent Homes	17	25
Offices	17	25
Theaters	20	30
Hotels/Motels	17	25

Source: *Transportation Research Board, National Research Council, Highway Noise: A Design Guide for Highway Engineers, National Cooperative Highway Research Program Report 117.*

¹ As shown, structures with closed windows can attenuate exterior noise by a minimum of 25 to 30 dB(A).

- 2 U.S. Department of Transportation, Federal Highway Administration (FHA), *Fundamentals and Abatement of Highway Traffic Noise*, (Springfield, Virginia: U.S. Department of Transportation, Federal Highway Administration, September 1980), p. 97.
- 3 FHA, *Fundamentals and Abatement of Highway Traffic Noise*, 1980, p. 97.
- 4 *Ibid*, 1980, p. 18.

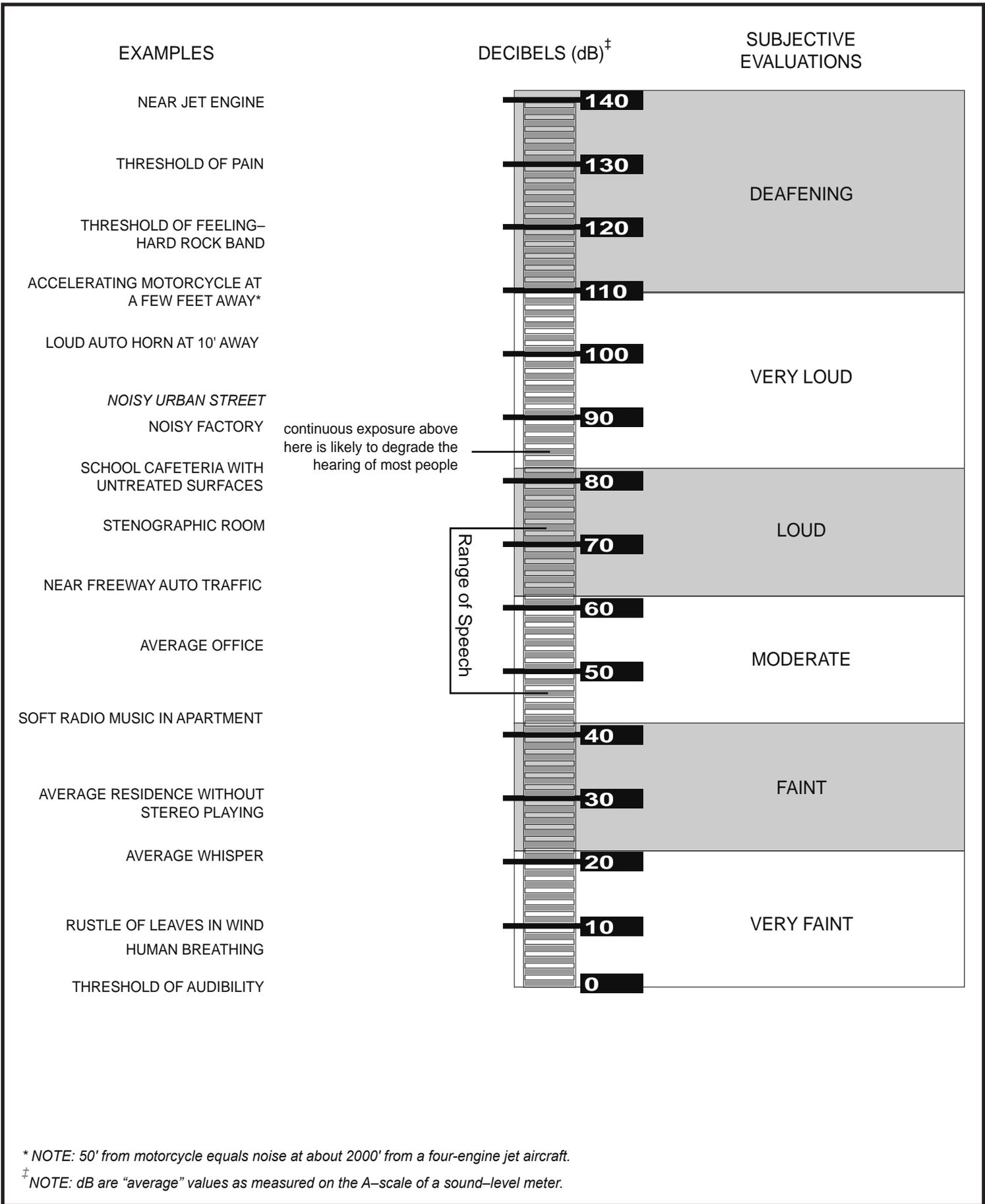
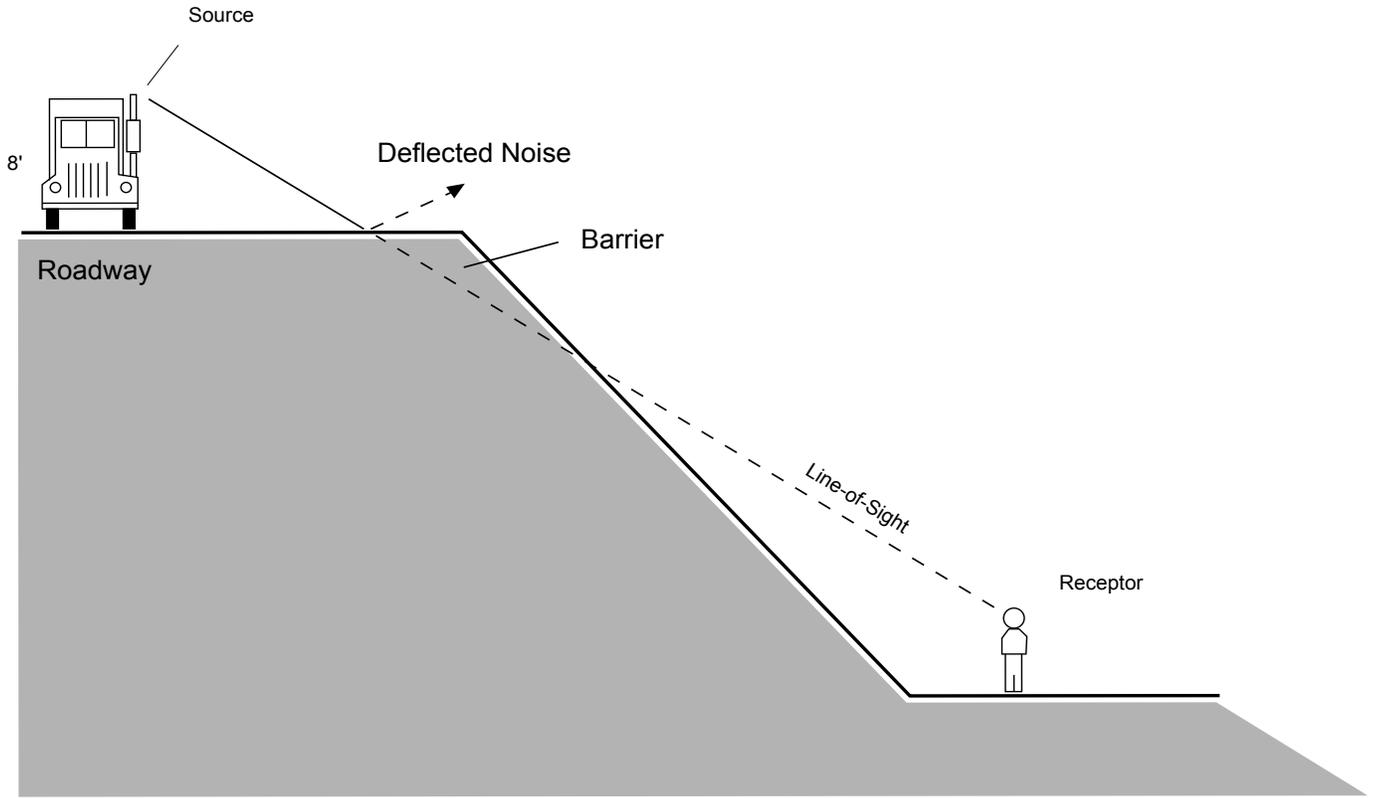
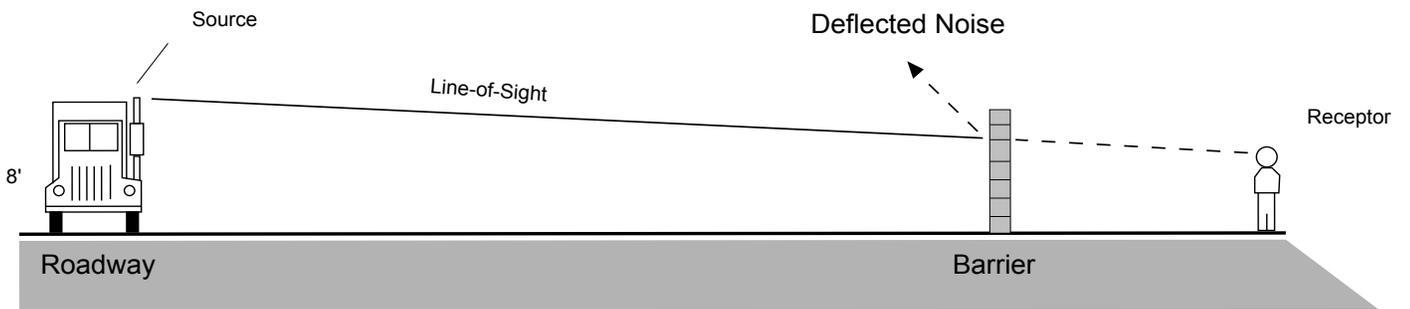


FIGURE 5.11-1



"Barrier Effect" Resulting from Differences in Elevation.



"Barrier Effect" Resulting from Typical Soundwall.

FIGURE 5.11-2

When assessing community reaction to noise, there is a need for a scale that averages sound pressure levels over time and quantifies the result in terms of a single numerical descriptor. Several scales have been developed that address community noise levels. Those that are applicable to this analysis are the L_{eq} and CNEL. L_{eq} is the average A-weighted sound level measured over a given time interval. L_{eq} can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods. CNEL is another average A-weighted sound level measured over a 24-hour time period. However, this noise scale is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained by adding 5 decibels to sound levels occurring during the evening from 7 PM to 10 PM, and 10 decibels to sound levels occurring during the nighttime from 10 PM to 7 AM. The 5 and 10 decibel penalties are applied to account for increased noise sensitivity during the evening and nighttime hours. The logarithmic effect of adding these penalties to the 1-hour L_{eq} measurements typically results in a CNEL measurement that is within approximately 3 dB(A) of the peak-hour L_{eq} .⁵

5.11.2.2 Description of Vibration Metrics

Vibration is a unique form of noise. It is unique because its energy is carried through structures and the earth, whereas, noise is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise; e.g., the rattling of windows from truck passbys. This phenomenon is related to the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, groundborne vibration generated by man-made activities attenuates rapidly as distance from the source of the vibration increases. Vibration, which spreads through the ground rapidly, diminishes in amplitude with distance from the source. The ground motion caused by vibration is measured as particle velocity in inches per second and, in the U.S. is referenced as VdB.

The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is barely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. **Figure 5.11-3,**

5 California Department of Transportation, Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol, (Sacramento, California: November 2009), pp. N51–N54.

Typical Levels of Ground-Borne Vibration, identifies the typical groundborne vibration levels in VdB and human response to different levels of vibration.

5.11.2.3 Sensitive Receptors

Some land uses are recognized as being more sensitive to noise levels and vibration than others. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks, and outdoor recreation areas are generally more sensitive to noise and vibration than are commercial and industrial land uses. Existing land uses surrounding the East Gateway Project include residential, commercial, light industrial development, vacant land, and mostly fallow farmland. Parcels that comprised the Specific Plan and East Gateway Annexation area north of State Route (SR) 126 currently have residential and commercial uses; and south of SR 126, uses include agriculture, commercial and light industrial/manufacturing. Areas along the Santa Clara River in the Specific Plan are primarily open space.

The primary noise sources affecting sensitive receptors (homes, schools, hospitals) in the city are traffic on SR 126 and State Route 150 (SR 150), as well as aircraft operations at the Santa Paula Airport. Some industrial, commercial, and agricultural uses are also identified as noise contributors, although such sources have not generally been identified as significant noise problems.⁶ The primary sources of noise with the potential to impact the East Gateway Project are roadway noise, railroad operations, the Santa Paula Airport, and agricultural operations.

5.11.2.4 Existing Noise Environment

Noise Monitoring

The primary off-site noise sources in the project area are commercial and residential uses, traffic along surrounding roadways, and train activities associated with the Fillmore & Western Railway Company. In order to document existing noise levels, short term noise monitoring was conducted by Meridian Consultants at one location on August 19, 2012 of the Fillmore & Western Railway operations, and at six locations within and along the perimeter of the East Gateway Project site on August 20, 2012. Noise monitoring locations are shown on **Figure 5.11-4, Noise Monitoring Locations**, and **Table 5.11-2, Existing Ambient Noise Levels**, provides existing ambient measured noise levels associated with each monitoring location. Noise monitoring was conducted using a Larson-Davis Sound Level Meter (Model 831) was used, which meets the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation. Wind speeds on both August 19th and 20th were below 5 miles per hour and no unusual noise was occurring during the noise monitoring, such as construction activities or major special events. Noise readings at each location were taken in 1-second intervals for approximately

⁶ Santa Paula General Plan Noise Element, p. N-3.

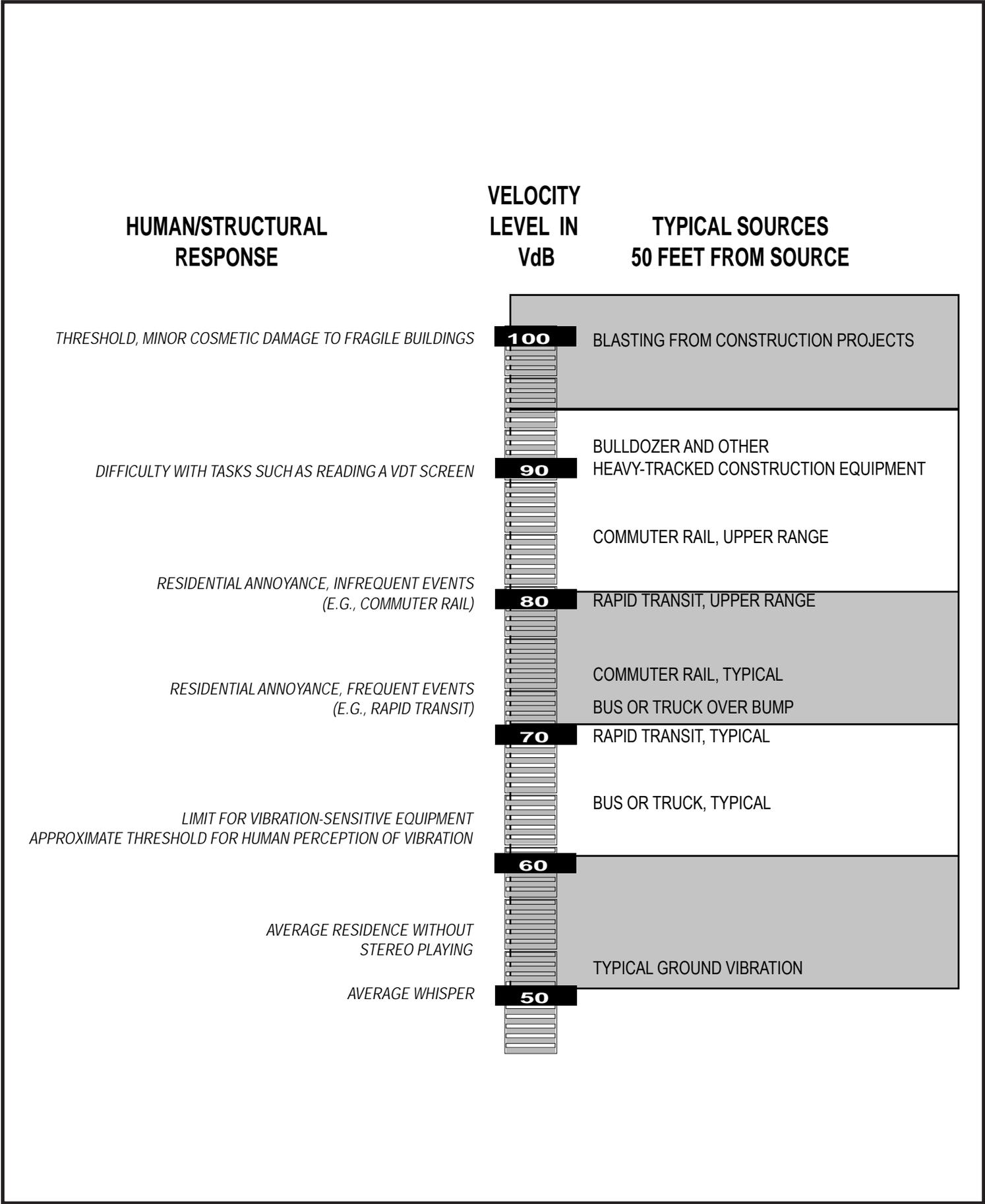
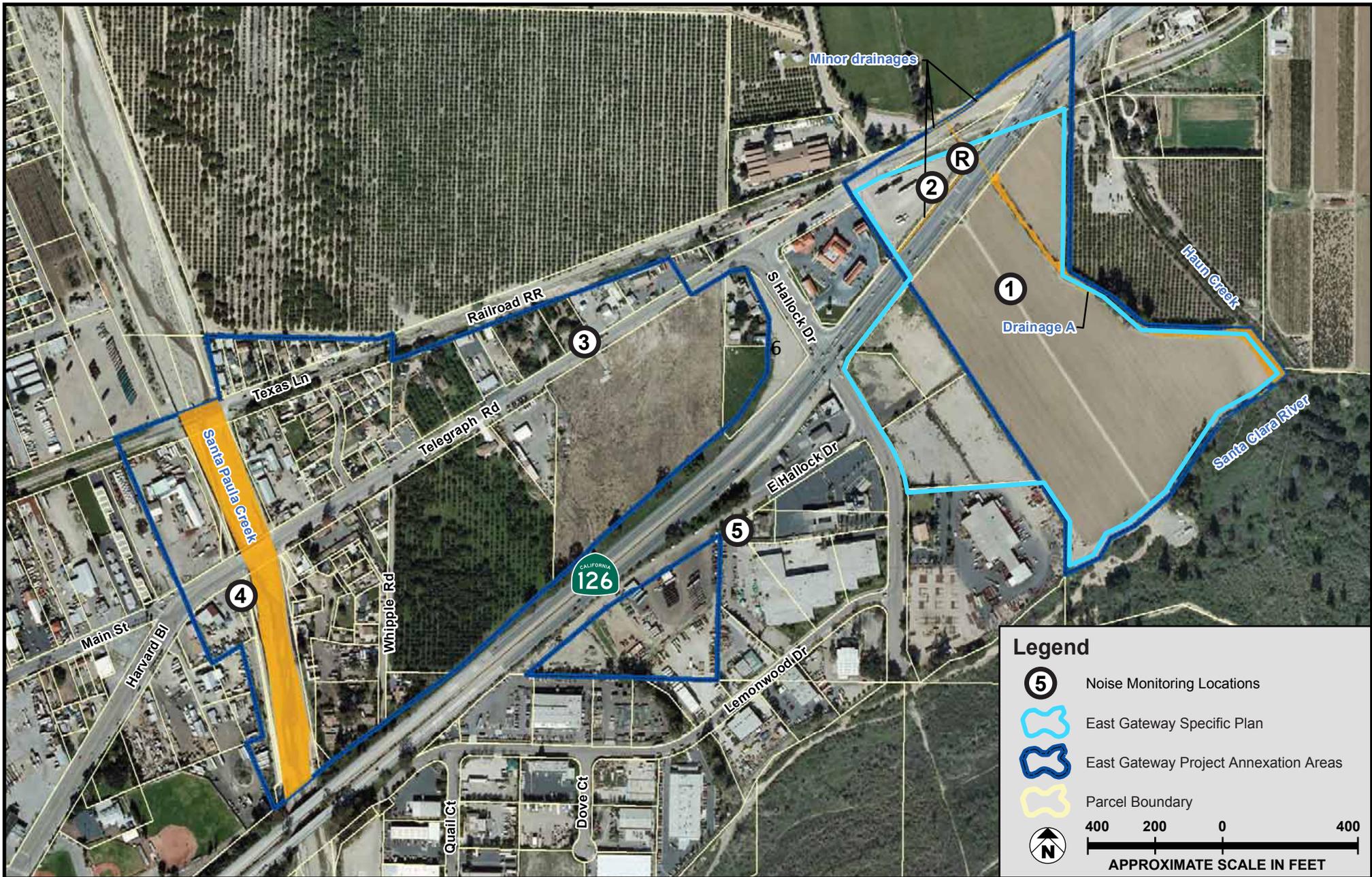


FIGURE 5.11-3



SOURCE: ESRI Maps and Data - September 2011

FIGURE 5.11-4

**Table 5.11-2
Existing Ambient Noise Levels**

Location No. ¹ -	Time period	Noise Sources	dB(A) Leq
R East Gateway Project site north of SR 126, south of railroad line, and east of the Mercantile	1:25 to 1:27 PM	Fillmore & Western train, warning horn, and crossing gate warning signals	84.6 Lmax 98.7
1 East Gateway Project site south of SR 126	7:09 to 7:24 AM	Vehicles on SR 126	62.1
2 East Gateway Project site north of SR 126, south of railroad line, and east of the Mercantile	7:31 to 7:46 AM	Vehicles on SR 126, trucks using Mercantile parking area	65.0
3 East Gateway Project site south of Telegraph Road, at gate entrance to vacant parcel, approximately 25 feet from roadway centerline	7:49 to 8:00 AM	Vehicles on Telegraph Road, loud pass-by of vehicle with no exhaust system	71.2
4 East Gateway Project site south of Telegraph Road, at gate entrance to flood control channel, approximately 40 feet from roadway centerline	8:03 to 8:18 AM	Vehicles on Telegraph Road, coming off of Main Street and Harvard Avenue intersection, loud pass-by of trash truck	68.1
5 Adjacent to annexation parcel on south side of SR 126 at end of Old Hallock Road near gate entrance to parcel	8:24 to 8:39 AM	Vehicles on SR 126	68.8
6 Adjacent to East Gateway Project site on Hallock Drive 20 feet from roadway centerline, east of the Mercantile, south of Telegraph Road, and north of SR 126	8:44 to 8:59 AM	Vehicles on Telegraph Road, Hallock Drive, and SR 126	72.5

*Note: ¹ – Location corresponds to **Figure 5.11-4, Noise Monitoring Locations.***

a two-minute period during a train pass-by on August 19, 2012 and for approximately 10 to 15-minute periods ($L_{eq10-15}$) at the six locations monitored on August 20, 2012. All readings were conducted using “A” frequency fast time weighting.

Noise Sources

Each potential noise source affecting development in the East Gateway Project area is described in more detail below.

Roadway Noise

In order to characterize the ambient roadway noise environment in the East Gateway Project area, noise prediction modeling was conducted based on vehicular traffic volumes along nearby roadway segments. Noise levels were modeled using the Federal Highway Administration Highway Noise Prediction Model (FHWA-RD-77-108). This model calculates the average noise level in dB(A) CNEL along a given roadway segment based on traffic volumes, vehicle mix, average speeds, roadway geometry, and site conditions. As shown in **Table 5.11-3, Existing Roadway Noise Levels**, the existing noise levels on area roadway segments range from a low of 49.1 dB(A) CNEL on Orchard Street between 12th Street and SR 126 to a high of 64.3 on Telegraph Road north of SR 126. Overall, the modeled noise levels are consistent with those noise levels contained within the City of Santa Paula's General Plan (e.g. Figure N-2, Existing Noise Contours). It should be noted that the model calculates noise associated with a specific line source and the results characterize noise generated only by motor vehicle traffic along the specific roadway segment and do not reflect other noise sources in the project area.

Railroad

Currently, trains traveling along the Fillmore & Western Railway railroad tracks represent an intermittent and infrequent noise source that occurs outside of peak roadway traffic periods. The Fillmore & Western Railway operates trains throughout the year on both a regular and special train schedule. The regular scheduled train runs on weekends with two round trips on both Saturday and Sunday, and a weekday day train runs on some evenings. Special trains run during such times as the Christmas holidays or other holidays and special events.⁷ This conservative analysis assumes an average of three trains (six passbys) and an average speed of 10 miles per hour along the northern boundary of the Specific Plan and Annexation area. Existing noise levels at 90 feet from the railway centerline is approximately 63 dB(A) CNEL. In addition to being a potential source of noise in the East Gateway Project area, the rail line is a potential vibration source.

⁷ Teresa Wilkerson, Owner, Fillmore & Western Railway, personal communication, June 14, 2012.

**Table 5.11-3
Existing Roadway Noise Levels**

Roadway Segment	Noise Level in dB(A) CNEL at 75 ft. from Roadway Centerline
Hallock Drive s/o State Route 126	54.1
Hallock Drive between State Route 126 and Telegraph Rd	55.5
Hallock Drive n/o Telegraph Rd.	58.1
Telegraph Rd n/o State Route 126	59.8
Santa Paula St between Grant Line St and 12th St	58.6
Main St between 12th St and Telegraph Rd/Main St	58.9
Harvard Blvd between 12th St and Telegraph Rd/Main St	58.2
12th St between Richmond Rd and Santa Paula St	56.1
12th St between Santa Paula St and Santa Barbara St	58.4
12th St between Santa Barbara St and Main St	58.3
12th St between Main St and Ventura St	56.5
S. Mountain Rd between Harvard Blvd and Lemon Rd	57.0
Richmond Rd between 12th St and N Ojai Rd	52.3
Orchard St E between 12th St and SR 150	49.1
Saticoy St between 12th St and SR 150	51.6
Santa Paula St between 12th St and 10th St/N Ojai Rd	51.7
Santa Barbara St between 12th St and 10th St	52.6
Main St between 12th St and 10th St	54.8
Ojai Rd n/o Richmond Rd	63.8
N Ojai Rd between Richmond Rd and Orchard St	63.8
N Ojai Rd between Orchard St and Saticoy	63.6
N Ojai Rd between Saticoy St and E Santa Paula St	61.0
10th St between Santa Paula St and Santa Barbara St	57.9
10th St between Santa Barbara St and Main St	58.7
10th St between Main St and Harvard Blvd	61.3
10th St between Harvard Blvd and State Route 126 On/Off Ramps	63.0
10th St between State Route 126 On/Off Ramps (North) and On/Off Ramps (South)	59.9
Santa Paula St between 10th St and 8th St	52.3
Santa Barbara St between 10th St and 8th St	59.6
Main St between 10th St and 8th St	57.0
8th St between Pleasant St and Santa Paula St	56.8
8th St between Santa Paula St and Main St	56.8
8th St between Main St and Harvard Blvd	58.2
Santa Paula St between 8th St and 7th St	59.3
Main St between 8th St and Palm Ave	57.7
Santa Paula St between 5th St and Palm Ave	60.4
Palm Ave between Virginia Terrace and Santa Paula St	55.5
Palm Ave between Santa Paula St and Santa Barbara St	53.2

Roadway Segment	Noise Level in dB(A) CNEL at 75 ft. from Roadway Centerline
Palm Ave between Santa Barbara St and Main St	58.7
Palm Ave between Main St and Harvard Blvd.	60.2
Palm Ave between Harvard Blvd and State Route 126 On/Off Ramps	61.5
Palm Ave between State Route 126 On/Off Ramps (North) and On/Off Ramps (South)	59.7
Palm Ave s/o State Route 126	54.8
Santa Paula St between Palm Ave and Steckel Drive	60.3
Main St between Palm Ave and Steckel Drive	58.7
Santa Paula St between Steckel Drive and Peck Rd	59.1
Main St between Steckel Drive and Peck Rd/Harvard Blvd	57.3
Steckel Drive between Santa Paula St and Main St	56.3
Steckel Drive between Main St and Harvard Blvd	57.5
Peck Rd between Santa Paula St and Telegraph Rd	61.2
Peck Rd between Telegraph Rd and Faulkner Rd	62.5

Source: Refer to **Appendix 5.11** for Modeling Results

Santa Paula Airport

The East Gateway Project area is located approximately 0.75-miles northeast and east of the Santa Paula Airport. The Santa Paula Airport (Airport) is in the south-central part of the City and is bounded by SR 126 on the north, Palm Avenue on the west, Ojai Street on the east and the Santa Clara River on the south. The Airport is a public use airport which is privately owned and operated by the Santa Paula Airport Association. The Airport encompasses a total of 38 acres and provides a single asphalt runway (Runway 4/22) which is 2,650 feet long and 40 feet wide.⁸ The runway is used by piston and propeller, single and twin-engine planes. No commercial aircraft use this Airport. Existing Airport noise contours (2010) indicate that the East Gateway Project area south of SR 126, where most of the flight activities occur, is substantially below 60 dB(A). The remaining portions of the East Gateway Project area north of SR 126 are well outside the 60 dB(A) noise contour for the Airport.

Agricultural Operations

Agricultural operations produce noise within the East Gateway Project. Agricultural operations occur north of the East Gateway Project in the East Area 1 Annexation Area, and within and east of the Specific Plan Area south of SR 126. Noise from tractors and other agricultural equipment such as frost control are the

⁸ Ventura County Airport Land Use Commission, Airport Comprehensive Land Use Plan for Ventura County (Final Report), page 4-6 (2000).

major sources of agricultural noise. Additionally, a periodic source of noise affecting the project area results from packing operations, including refrigeration trucks and movement of farm equipment..

5.11.3 REGULATORY SETTING

5.11.3.1 State

California Code of Regulations

The California Noise Insulation Standards of 1988⁹ require that interior noise levels from the exterior sources do not exceed 45 decibels CNEL/L_{dn} in any habitable room of a multi-residential use facility (e.g., hotels, motels, dormitories, long-term care facilities, and apartment houses and other dwellings, except detached single-family dwellings) with doors and windows closed. Where exterior noise levels exceed 60 dB(A) CNEL/L_{dn}, an acoustical analysis is required to show that the proposed construction will reduce interior noise levels to 45 dB(A) CNEL/L_{dn} or less. These standards are used by the City of Santa Paula and County of Ventura to establish their standards.

California Department of Health Services

The California Department of Public Health, Environmental Health Division, has published recommended guidelines for noise and land use compatibility referred to as the Guidelines for Noise and Land Use Compatibility (State Guidelines).¹⁰ The State Guidelines indicate that residential land uses and other noise-sensitive receptors generally should locate in areas where outdoor ambient noise levels do not exceed 65 to 70 dB(A) (CNEL/L_{dn}). The Department of Public Health does not mandate application of this compatibility matrix to development projects; however, under Government Code § 65302(f), each jurisdiction is required to consider the State Guidelines when developing its general plan Noise Element and when determining acceptable noise levels within its community. Consistent with the California Noise Insulation Standards, the State Department of Housing and Community Development does require that new multi-family units cannot be exposed to outdoor ambient noise levels in excess of 65 dB(A) (CNEL/L_{dn}), and, if necessary, sufficient noise insulation must be provided to ensure interior ambient levels of 45 dB(A) or less. These guidelines are used by the City of Santa Paula and County of Ventura to establish their standards.

Under the State Guidelines, an exterior noise level of 70 dB(A) CNEL is typically the dividing line between an acceptable and unacceptable exterior noise environment for all noise-sensitive uses, including

⁹ 24 CCR 24, §§ 3501 et seq.

¹⁰ California Department of Health Services. Guidelines for the Preparation and Content of Noise Elements of the General Plan, 1976. These Guidelines are also published by the Governor's Office of Planning and Research in the State of California General Plan Guidelines (2003).

residences, schools, libraries, places of worship, hospitals, day care centers, and nursing homes of conventional construction. Noise levels below 75 dB(A) CNEL are typically acceptable for office and commercial buildings, while levels up to 75 dB(A) CNEL are typically acceptable for industrial uses. In unacceptable interior noise environments, additional noise insulation features, such as extra batting or resilient channels in exterior walls, double-paned windows, air conditioners to enable occupants to keep their windows closed without compromising their comfort, solid wood doors, noise baffles on exterior vents, etc., are typically needed to provide acceptable interior noise levels. These guidelines are used by the City of Santa Paula and County of Ventura to establish their standards.

5.11.3.2 Local

City of Santa Paula

Noise Element

As required by Government Code,¹¹ the Noise Element of the City of Santa Paula General Plan evaluates the existing and future noise environment and associated noise sources and sets goals, objectives and policies to limit noise exposure and address specific noise sources in the City.

The following goals, objectives and policies are established by the City of Santa Paula Noise Element:¹²

General Goals

Goals

- 1.1 Existing exposure of citizens to excessive noise sources should be reduced.
- 1.2 Development should mitigate undue generation of noise.
- 1.3 The City of Santa Paula should consider the noise environment as part of land use planning.

Traffic Noise

Objective

- | | |
|----------------|--|
| Objective 1(a) | Minimize the adverse effect of traffic-generated noise on residential and other noise sensitive land uses from noise and highways. |
|----------------|--|

¹¹ California Government Code § 65302(f).

¹² Santa Paula General Plan Noise Element, pp. N-14 to N-18.

Policies

- Policy 1.a.a. Use the land use/noise compatibility matrix shown on Figure N-1 to determine the appropriateness of land uses relative to roadway noise.
- Policy 1.b.b. Work with Caltrans to landscape or install mitigation elements along freeways and highways adjacent to existing residential subdivisions or noise-sensitive uses to reduce noise impacts.
- Policy 1.c.c. Work with Caltrans to mitigate the negative effects of noise attributable to new freeways by elevating or depressing them or incorporating other noise attenuation elements.
- Policy 1.d.d. Minimize noise attributable to vehicular travel in pedestrian oriented areas and residential neighborhoods by inhibiting through trips through the use of diagonal parking, one-way streets, road dips, cul-de-sacs, and other traffic controls.
- Policy 1.e.e. Provide for the development of alternative transportation modes, such as bicycle paths and pedestrian walkways, to minimize the number of automobile trips.
- Policy 1.f.f. Require that new equipment and vehicles purchased by the City comply with noise performance standards consistent with the best available noise reduction technology.
- Policy 1.g.g. Work with local agencies and businesses to provide public transit services that reduce traffic and associated noise.
- Policy 1.h.h. Work with public transit agencies to ensure that the buses, vans, and other vehicles used do not generate excessive noise levels.
- Policy 1.i.i. Consider the use of rubberized asphalt paving material for future road paving and re-paving. Studies have indicated that such paving material can result in a 3 to 5 dBA reduction in noise.
- Policy 1.j.j. Consider the use of speed humps and other “traffic calming” devices to reduce traffic noise in residential areas.

Airport Noise

Objectives

Objective 2(a) Minimize the effect of air traffic noise generated by the existing and future operations of the Santa Paula Airport on residences and other noise sensitive land uses.

Policies

- Policy 2.a.a. Coordinate with airport officials to address operational noise as conflicts are identified.
- Policy 2.b.b. Work with airport officials to address noise concerns from aerobatics and air shows on a case by-case basis.
- Policy 2.c.c. Consider the land use/noise compatibility matrix (Figure N-1) when determining the appropriateness of land uses in the Airport vicinity.

Railroad Noise

Objective

Objective 3(a) Minimize the noise effect of railroad operations on residential uses and other sensitive land uses.

Policies

- Policy 3.a.a. Work with all railroad operators and the Ventura County Transportation Commission to properly maintain lines and establish operational restrictions during the early morning and late evening hours to reduce impacts in residential areas and other noise sensitive areas.
- Policy 3.b.b. Work with all railroad operators to install noise mitigation features where operations affect existing adjacent residential or other noise sensitive uses.

Policy 3.c.c. Consider the land use/noise compatibility matrix when determining the appropriateness of land uses in the rail line vicinity.

Industrial and Commercial Noise

Objective

Objective 4(a) Minimize noise spillover from industrial and commercial operations, including the packing industry, into adjacent residential neighborhoods and other sensitive uses.

Policies

Policy 4.a.a. Require that automobile and truck access to industrial and commercial properties adjacent to residential areas be located at the maximum practical distance from the residential area.

Policy 4.b.b. Require that all parking for industrial and commercial uses adjacent to residential areas be enclosed within a structure, buffered by walls, and/or limited hours of operation.

Policy 4.c.c. Limit the use of leaf blowers, motorized lawn mowers, parking lot sweepers, or other high-noise equipment on commercial properties if their activity will result in noise which adversely affects residential areas

Policy 4.d.d. Require that the hours of truck deliveries to industrial and commercial properties adjacent to residential uses be limited unless there is no feasible alternative or there are overriding transportation benefits by scheduling deliveries at another hour.

Mixed Residential/Commercial Noise

Objective

Objective 6(a) Minimize the local noise impacts associated with the development of residential units above ground floor commercial uses where permitted.

Policies

- Policy 6.a.a. Require that commercial uses developed as part of a structure containing residences on upper floors not be noise intensive.
- Policy 6.b.b. Require that building design of structures designed for commercial and residential uses prevent transfer of noise from the commercial to the residential use.
- Policy 6.c.c. Require common wall and floors between commercial and residential uses to be constructed to minimize the transmission of noise and vibration.

Construction Noise

Objective

- Objective 7(a) Minimize the impacts of construction noise on adjacent uses.

Policies

- Policy 7.a.a. Require that construction activities adjacent to residential units be limited as necessary to prevent adverse noise impacts.
- Policy 7.b.b. Require that construction activities employ feasible and practical techniques which minimize the noise impacts on adjacent uses.

Objective

- Objective 8(a) Ensure that buildings are constructed to prevent adverse noise transmission between different uses located in the same structure and individual residences in multifamily buildings.

Policies

- Policy 8.a.a. Establish design criteria for commercial buildings that prevent the transmission of significant and unacceptable noise between individual tenants and businesses.

- Policy 8.b.b. Establish design criteria for multi-family buildings that prevent the transmission of significant and unacceptable noise between individual residential units.

Municipal Code

Santa Paula Municipal Code (SPMC) Chapter 93 sets noise standards for land uses within the City. SPMC § 93.21 establishes the acceptable exterior noise standard for residential uses of 65 dB(A) from 7:00 A.M. through 10:00 P.M. and 60 dB(A) from 10:00 P.M. through 7:00 A.M. The exterior noise level standard for other noise-sensitive uses, including schools, libraries, hospitals, community care facilities and assembly halls is 65 dB(A) at all times. According to the SPMC, commercial and office uses cannot exceed an outdoor noise level of 70 dB(A) and neighborhood commercial uses cannot experience an external noise level of more than 65 dB(A). Industrial uses cannot to exceed an external noise level of more than 75 dB(A). The SPMC does not set acceptable interior noise level standards.

The SPMC § 93.23 also states that construction activities between 8:00 A.M. and 6:00 P.M. Monday through Friday are exempt from the noise standards set in SPMC § 93.21.

Ventura County

General Plan

Some portions of the East Gateway Project are currently located in the unincorporated area of Ventura County. The East Gateway Project if implemented would be annexed into the City of Santa Paula. The Ventura County General Plan identifies the following goal, policies and programs relative to noise:¹³

Goal

- Goal 2.16.1 To protect the health, safety and general welfare of County residents by elimination or avoidance of adverse noise impacts on existing and future noise sensitive uses.

Policies

- Policy 1. All discretionary development shall be reviewed for noise compatibility with surrounding uses. Noise compatibility shall be determined from a consistent set of criteria based on the standards listed below. An acoustical analysis by a qualified

¹³ Ventura County General Plan, amended June 2011.

acoustical engineer shall be required of discretionary developments involving noise exposure or noise generation in excess of the established standards. The analysis shall provide documentation of existing and projected noise levels at on-site and off-site receptors, and shall recommend noise control measures for mitigating adverse impacts.

(1) Noise sensitive uses proposed to be located near highways, truck routes, heavy industrial activities and other relatively continuous noise sources shall incorporate noise control measures so that:

- a. Indoor noise levels in habitable rooms do not exceed CNEL 45.
- b. Outdoor noise levels do not exceed CNEL 60 or L_{eq} 1H of 65 dB(A) during any hour.

(2) Noise sensitive uses proposed to be located near railroads shall incorporate noise control measures so that:

- a. Guidelines (1) a. and (1) b. above are adhered to.
- b. Outdoor noise levels do not exceed L_{10} of 60 dB(A).

(3) Noise sensitive uses proposed to be located near airports:

- a. Shall be prohibited if they are in a CNEL 65 or greater, noise contour.
- b. Shall be permitted in the CNEL 60 to CNEL 65 noise contour area only if means will be taken to ensure interior noise levels of CNEL 45 or less.

(4) Noise generators, proposed to be located near any noise-sensitive use, shall incorporate noise control measures so that ongoing outdoor noise levels received by the noise sensitive receptor, measured at the exterior wall of the building, does not exceed any of the following standards:

- a. L_{eq} 1H of 55dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 6:00 A.M. to 7:00 P.M.
- b. L_{eq} 1H of 50dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 7:00 P.M. to 10:00 P.M.
- c. L_{eq} 1H of 45dB(A) or ambient noise level plus 3dB(A), whichever is greater, during any hour from 10:00 P.M. to 6:00 A.M. Section 2.16.2(4) is not applicable to increased traffic noise along any of the roads identified within the 2020 Regional Roadway Network (Figure 4.2.3) Public Facilities Appendix of the Ventura County General Plan (see 2.16.2-1(1)). In addition, State and Federal highways, all railroad line operations, aircraft in flight, and public utility facilities are noise generators having Federal and State regulations that preempt local regulations.

(5) Construction noise shall be evaluated and, if necessary, mitigated in accordance with the County Construction Noise Threshold Criteria and Control Plan.

Policy 2. Discretionary development which would be impacted by noise, or generate project related noise which cannot be reduced to meet the standards prescribed in Policy 2.16.2-1, shall be prohibited. This policy does not apply to noise generated during the construction phase of a project.

Policy 3. The priorities for noise control shall be as follows:

- (1) Reduction of noise emissions at the source.
- (2) Attenuation of sound transmission along its path, using barriers, landforms modification, dense plantings, and the like.
- (3) Rejection of noise at the reception point via noise control building construction, hearing protection or other means.

5.11.4 THRESHOLDS OF SIGNIFICANCE

5.11.4.1 CEQA Guidelines

In order to assist in determining whether a project would have a significant effect on the environment, the *California Environmental Quality Act (CEQA)* identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Specifically, Appendix G of the *State CEQA Guidelines* (Environmental Checklist Form) lists the following thresholds under which a project may be deemed to have a significant noise impact if it would have:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

5.11.4.2 Noise Regulations

The *CEQA Guidelines* do not identify what constitutes a substantial increase in ambient noise. Moreover, the *CEQA Guidelines* do not provide an impact threshold for potential noise impacts. Consequently, the following thresholds of significance were developed for this noise analysis based solely on the applicable City and County plans and policies discussed previously. State standard and guidelines were provided under the Applicable Regulations above as a matter of information and are not considered thresholds.

On-Site Noise Thresholds

According to the City's Noise Element Noise Standards (**Figure 5.11-5, City of Santa Paula Noise Compatibility Matrix**), office buildings, business commercial and professional uses are "acceptable" with exterior noise levels of up to 70 dB(A) Ldn/CNEL. Given this, the proposed project would result in a significant noise impact if on-site exterior locations around these types of uses would be exposed to noise levels above 70 dB(A) Ldn/CNEL. Industrial uses identify 75 dB(A) as the "acceptable" exterior noise level threshold. For residential uses, the noise guidelines identify 60 dB(A) Ldn/CNEL as the "acceptable" exterior noise level threshold. In addition, as presented in the Noise Element, the maximum interior noise threshold is 45 dB(A) CNEL for noise sensitive uses.

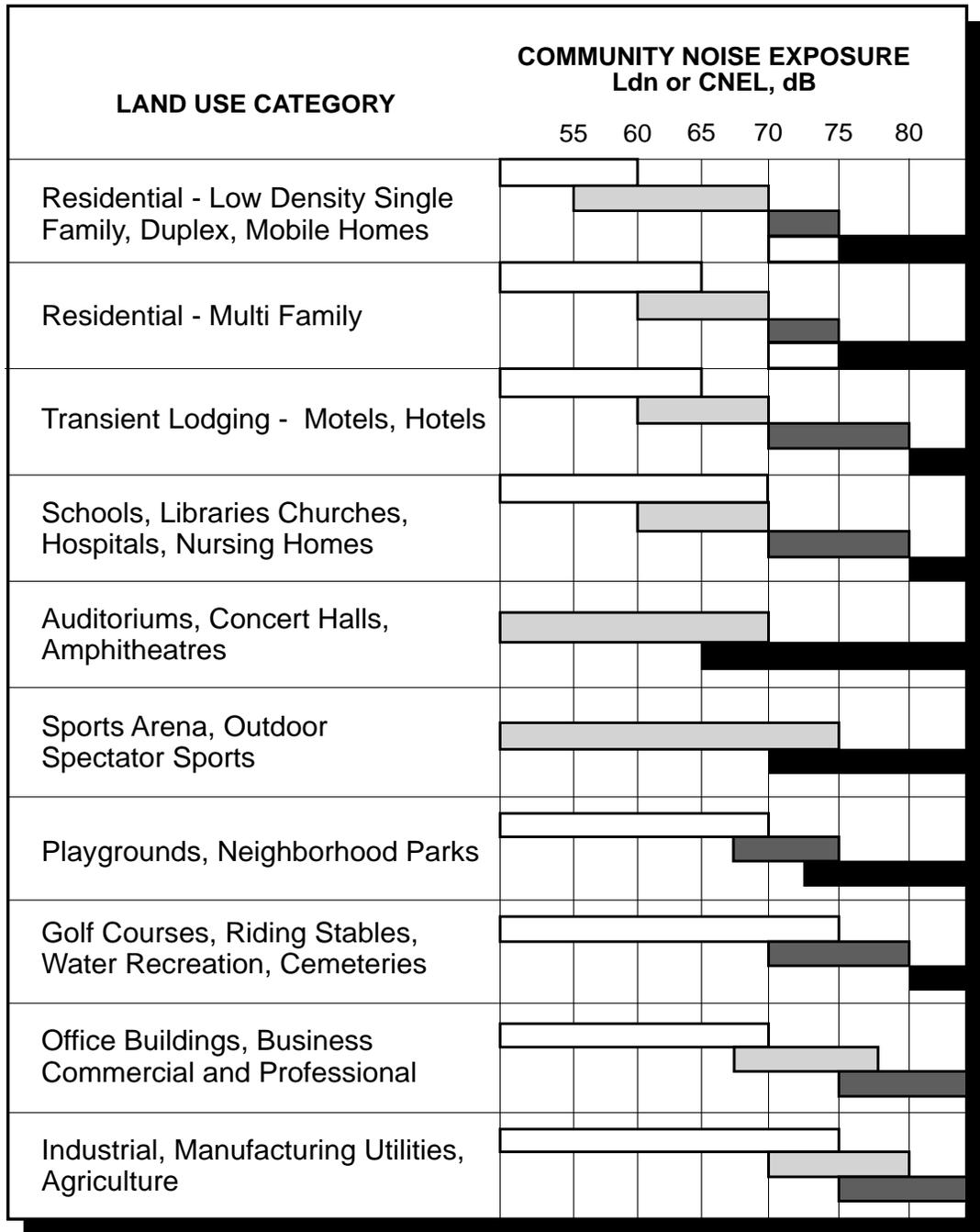
Off-Site Noise Thresholds

Off-site noise thresholds consider the City Noise Compatibility Matrix, and County General Plan community responses to changes in noise levels, and CEQA standards. Changes in a noise level of less than three dB(A) are not typically noticed by the human ear.¹⁴ Some individuals who are extremely sensitive to changes in noise may notice changes from three to five dB(A).

Based on this information, the following thresholds have been established for this analysis to assess traffic related noise increases:

- An increase of three dB(A) or greater in traffic noise levels that occur from project-related activities would be significant if the resulting noise levels exceeded the City Noise Compatibility Matrix for "acceptable" exterior noise levels. In addition, an increase of three dB(A) or greater in traffic noise levels that occurs from project-related activities would be significant if the resulting noise levels exceeded County outdoor CNEL (County standard applies only to Telegraph Road and South Mountain Road).
- An increase of five dB(A) or less in traffic noise levels that occur from project-related activities would not be considered significant if the resulting noise levels remain below the "acceptable" thresholds established by the City. Increases in traffic noise greater than 5 dB(A) would be considered to be significant.
- Stationary noise sources proposed as part of the East Gateway Project that result in increases in noise levels at on-site or adjacent sensitive land uses that exceed 3 dBA would be considered significant.

¹⁴ Federal Highway Administration. Fundamentals and Abatement of Highway Traffic Noise. September 1980.



- 
NORMALLY ACCEPTABLE
 Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- 
CONDITIONALLY ACCEPTABLE
 New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- 
NORMALLY UNACCEPTABLE
 New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise reduction features included in the design.
- 
CLEARLY UNACCEPTABLE
 New construction or development should generally not be undertaken.

FIGURE 5.11-5

Vibration Thresholds

The CEQA Guidelines do not define the levels at which ground-borne vibration is considered “excessive.” This analysis uses the Federal Railway Administration’s vibration impact thresholds for sensitive buildings, residences, and institutional land uses. These thresholds are 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences) and 83 VdB at institutional buildings.

5.11.5 PROJECT IMPACTS

The environmental impact analysis presented below is based on determinations made in the Notice of Preparation (NOP) for issues that were determined to be potentially significant with mitigation incorporated, or for issues identified by reviewing agencies, organizations, or individuals commenting on the NOP that made a reasonable argument that the issue was potentially significant (see Responses to NOP, **Appendix 1.0**).

5.11.5.1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impacts

Roadway Noise

Vehicular noise could potentially affect sensitive receptors within the East Gateway Project area, as well as sensitive receptors located along the studied roadway system. The Federal Highway Administration Noise Prediction Model (FHWA-RD-77-108) was used to calculate roadway noise based on the distribution of traffic volumes identified in the Traffic Impact Analysis for the East Gateway Project, prepared by Fehr and Peers. Noise generated by traffic volumes with and without the project along studied roadway segments was calculated. Model results are shown in **Table 5.11-4, Existing With and Without the Project Noise Levels (dB(A) CNEL) at 75 Feet from Roadway Centerline**. As shown, noise increases resulting from the project range from a low of 0.0 dB(A) (several location throughout the City of Santa Paula) to a high of 5.4 dB(A) (Hallock Drive south of SR 126).

Overall, the East Gateway Project would result in significant noise impacts along five roadway segments. These include Hallock Drive south of SR 126 (increase of 5.4 dBA), Hallock Drive between SR 126 and Telegraph Road (increase of 4.8 dBA causing an exceedance of the 60 dBA exterior residential threshold), Telegraph Road north of SR 126 (increase of 4.6 dBA to level already exceeding 60 dBA exterior residential threshold), Main Street between 12th Street and Telegraph Road (increase of 3.3 dBA

**Table 5.11-4
Existing With and Without Project Noise Levels (dB(A) CNEL)
at 75 Feet From Roadway Centerline**

Roadway Segment	Without Project	With Project	Change Due to Project	Significant Impact?
Hallock Drive s/o State Route 126	54.1	59.5	5.4	Yes
Hallock Drive between State Route 126 and Telegraph Road	55.5	60.3	4.8	Yes
Hallock Drive n/o Telegraph Road.	58.1	58.2	0.1	No
Telegraph Road n/o State Route 126	59.8	64.3	4.5	Yes
Santa Paula Street between Grant Line Street and 12th Street	58.6	58.6	0.0	No
Main Street between 12th Street and Telegraph Road/Main Street	58.9	62.2	3.3	Yes
Harvard Blvd between 12th Street and Telegraph Road/Main Street	58.2	61.5	3.3	Yes
12th Street between Richmond Road and Santa Paula Street	56.1	57.1	1.0	No
12th Street between Santa Paula Street and Santa Barbara Street	58.4	59.8	1.4	No
12th Street between Santa Barbara Street and Main Street	58.3	59.7	1.4	No
12th Street between Main Street and Ventura Street	56.5	56.5	0.0	No
S. Mountain Road between Harvard Blvd and Lemon Road	57.0	57.6	0.6	No
Richmond Road between 12th Street and N Ojai Road	52.3	52.3	0.0	No
Orchard Street E between 12th Street and SR 150	49.1	49.1	0.0	No
Saticoy Street between 12th Street and SR 150	51.6	53.3	1.7	No
Santa Paula Street between 12th Street and 10th Street/N Ojai Road	51.7	55.8	4.1	No
Santa Barbara Street between 12th Street and 10th Street	52.6	52.6	0.0	No
Main Street between 12th Street and 10th Street	54.8	55.9	1.1	No
Ojai Road n/o Richmond Road	63.8	64.1	0.2	No
N Ojai Road between Richmond Road and Orchard Street	63.8	64.0	0.2	No
N Ojai Road between Orchard Street and Saticoy	63.6	63.9	0.3	No
N Ojai Road between Saticoy Street and E Santa Paula Street	61.0	61.0	0.1	No
10th Street between Santa Paula Street and Santa Barbara Street	57.9	58.0	0.1	No
10th Street between Santa Barbara Street and Main Street	58.7	58.8	0.1	No
10th Street between Main Street and Harvard Blvd	61.3	61.5	0.1	No
10th Street between Harvard Blvd and State Route 126 On/Off Ramps	63.0	63.1	0.1	No
10th Street between State Route 126 On/Off Ramps (North) and On/Off Ramps (South)	59.9	60.0	0.1	No
Santa Paula Street between 10th Street and 8th Street	52.3	54.4	2.1	No

Roadway Segment	Without Project	With Project	Change Due to Project	Significant Impact?
Santa Barbara Street between 10th Street and 8th Street	59.6	59.8	0.1	No
Main Street between 10th Street and 8th Street	57.0	57.7	0.6	No
8th Street between Pleasant Street and Santa Paula Street	56.8	57.0	0.2	No
8th Street between Santa Paula Street and Main Street	56.8	57.0	0.2	No
8th Street between Main Street and Harvard Blvd	58.2	58.2	0.0	No
Santa Paula Street between 8th Street and 7th Street	59.3	60.0	0.7	No
Main Street between 8th Street and Palm Ave	57.7	58.1	0.4	No
Santa Paula Street between 5th Street and Palm Ave	60.4	61.0	0.6	No
Palm Ave between Virginia Terrace and Santa Paula Street	55.5	55.5	0.0	No
Palm Ave between Santa Paula Street and Santa Barbara Street	53.2	53.2	0.0	No
Palm Ave between Santa Barbara Street and Main Street	58.7	58.8	0.2	No
Palm Ave between Main Street and Harvard Blvd.	60.2	60.3	0.1	No
Palm Ave between Harvard Blvd and State Route 126 On/Off Ramps	61.5	61.5	0.0	No
Palm Ave between State Route 126 On/Off Ramps (North) and On/Off Ramps (South)	59.7	59.8	0.1	No
Palm Ave s/o State Route 126	54.8	56.3	1.5	No
Santa Paula Street between Palm Ave and Steckel Drive	60.3	60.9	0.6	No
Main Street between Palm Ave and Steckel Drive	58.7	59.0	0.3	No
Santa Paula Street between Steckel Drive and Peck Road	59.1	59.5	0.4	No
Main Street between Steckel Drive and Peck Road/Harvard Blvd	57.3	57.7	0.4	No
Steckel Drive between Santa Paula Street and Main Street	56.3	56.5	0.2	No
Steckel Drive between Main Street and Harvard Blvd	57.5	57.6	0.1	No
Peck Road between Santa Paula Street and Telegraph Road	61.2	61.3	0.2	No
Peck Road between Telegraph Road and Faulkner Road	62.5	62.6	0.1	No

Source: Refer to **Appendix 5.11** for Modeling Results

to level already exceeding 60 dBA exterior residential threshold), and Harvard Boulevard between 12th Street and Telegraph Road (increase of 3.3 dBA to level already exceeding 60 exterior residential threshold). These roadway segments are experiencing noise level increases since they are the main entrance and exit points carrying the majority of the traffic to the East Gateway Project area. While these increases would result in exterior noise impacts, the increases would not result in residential interior levels exceeding 45 dBA along these roadway segments.¹⁵

Potential repaving any of five identified roadways segments with rubberized asphalt as proposed for mitigation would reduce these noise levels by 3 to 5 dBA, and impacts could be reduced to less than significant.

None of the noise levels on the roadways surrounding the East Gateway Project site (e.g., Hallock Drive and Telegraph Road) would result in on-site future commercial land uses being exposed to traffic noise levels above the 70 dBA compatibility threshold for commercial type uses.

Railroad Noise

As previously noted, trains traveling on the Fillmore & Western Railway Company right-of-way represents an intermittent noise source. Currently, the Fillmore & Western Railway Company operates tourist-oriented trains between 12:00 P.M. and 3:00 P.M. on Saturdays and Sundays. The tracks are also used by one freight train, which passes by the Specific Plan area twice on Mondays, Wednesdays, and Fridays between the hours of 8:00 A.M. and 12:00 P.M. The Santa Paula Branch Rail Line Corridor is currently classified as Federal Railroad Administration Track Class 1, the lowest track classification. Class 1 limits freight to a maximum speed of 10 mph, and passenger trains to 15 mph. Because the Fillmore & Western Company has an at-grade crossing at SR 126 and at Telegraph Road, and is entering and exiting the City of Santa Paula near the East Gateway Project area, the train speeds are less than 10 mph. Noise monitoring conducted of a train- pass by at approximately 50 feet from the project area , which included warning signals and train horn signals before crossing at-grade areas results in a L_{eq2} of 84.6 dB(A) and maximum of 98.7 dB(A). Assuming an average of three trains (6 passbys) per day and a speed of 10 miles per hour along the northern boundary of the East Gateway Project, predicted noise levels at 90 feet from the railway centerline would be 63 dB(A) CNEL. When combined with traffic noise, overall exterior noise levels on the East Gateway Project site would be approximately 67 dB(A) CNEL at 75 feet from the Telegraph Road centerline. This combined railroad and roadway noise level would be below the 70 dBA compatibility threshold resulting in less than significant impacts.

¹⁵ This assumes a 25 dBA exterior to interior reduction due to standard construction techniques.

Airport Noise

Refer to **Section 5.11.6.5** for a discussion of airport noise impacts. Potential impacts were considered to be less than significant.

Onsite Stationary Source Noise

Development of the East Gateway Project would introduce parking lots associated with retail-commercial, business park, light industrial, manufacturing, and shopping center uses on the project site. Generally, noise associated with parking lots is not of sufficient volume to exceed community noise standards based on the time-weighted CNEL scale. Parking lots can be a source of annoyance due to automobile engine start-ups and acceleration, and the activation of car alarms. Parking lots can generate L_{eq} noise levels of between 49 dB(A) L_{eq} (tire squeals) to 74 dB(A) L_{eq} (car alarms) at 50 feet. Existing onsite residential land uses along Telegraph Road, Ferris Lane, Texas Lane, and Whipple Road within the East Gateway Project would be the closest sensitive receptors and would thus represent the worst-case impact associated with parking lot noise from the project. . Due to the high level of traffic noise along SR 126 in the project area, normal daytime parking lot L_{eq} noise would not likely be audible due to the masking of noise by traffic on nearby roadways. However, single noise events could be an annoyance to onsite and surrounding residents and may exceed a 3 dB(A) increase over ambient conditions at receptor locations. Consequently, impacts are considered to be potentially significant.

External truck loading and unloading docks associated with the East Gateway Project are potential stationary noise sources. These sources would primarily be associated with the retail and commercial, light industrial, and shopping center uses. The specific location of the loading docks has not been determined. The operations at loading docks typically result in noise levels of 64 to 66 dB(A) at 75 feet. The noise from loading docks would not cause an increase in long-term average noise of more than 5 dB(A) on the time-weighted CNEL scale, and would not be significant from that perspective. However, single noise events could be an annoyance to existing onsite and offsite residential land uses along Telegraph Road, Ferris Lane, Texas Lane, and Whipple Road within the East Gateway Project and may exceed a 3 dB(A) increase over ambient conditions. Therefore, impacts are considered to be potentially significant.

New uses associated with the East Gateway Project on the project site could introduce various stationary noise sources, including electrical and mechanical air conditioning, most of which would be located on rooftops. Typically, equipment noise sources on retail and commercial uses produce noise levels of approximately 56 dB(A) at 50 feet. While noise levels may be annoying within a quiet environment, it is very likely that existing daytime ambient levels within the project and surrounding areas would substantially mask these on-site sources. Nevertheless, given the location of proposed onsite uses near

residential uses, the possibility exists that during nighttime periods these sources could exceed a 3 dB(A) increase at receptor locations. Therefore, impacts are considered to be potentially significant.

Mitigation Measures

The following measures have been identified to mitigate the identified impacts:

- 5.11-1** Consistent with the City of Santa Paula Noise Element, any paving or repaving of the five off-site roadways segment (Hallock Drive south of SR 126, Hallock Drive between SR 126 and Telegraph Road, Telegraph Road north of SR- Main Street between 12th Street and Telegraph Road, Harvard Boulevard between 12th Street and Telegraph Road) that must be conducted in conjunction with implementation of the specific plan must utilize asphalt-rubber paving material consisting of 20 percent recycled rubber or more and 80 percent paving-grade asphalt. Studies have demonstrated that such paving material will reduce traffic noise by 3 to 5 dB(A)..
- 5.11-2** In combination with rubberized asphalt paving, the speed limits on the five roadway segment experiencing significant noise impacts off-site (Hallock Drive south of SR 126, Hallock Drive between SR 126 and Telegraph Road, Telegraph Road north of SR- Main Street between 12th Street and Telegraph Road, Harvard Boulevard between 12th Street and Telegraph Road) could be reduced from existing speed limits, when determined feasible. The feasibility would be determined by the City of Santa Paula Public Works Department, who is responsible for determining citywide, vehicle speeds based on engineering standards. In some cases, the reduction of speed limits may not be warranted. Each 5 mile per hour reduction in the speed limit can decrease the CNEL level by about 1 dB(A).
- 5.11-3** Sound attenuation measures shall be incorporated into the design of individual projects to minimize noise from parking lots. These measures could include, but are not limited to, a noise barrier of sufficient size to break the line of sight, an open-space buffer, a setback, or a combination of methods shall be developed along locations between parking lot noise and exterior usable areas within on-site and adjacent residential uses where these uses interface. Acoustical analysis shall be performed to demonstrate that the parking lot does not result in noise levels that exceed City of Santa Paula 3 dBA standard. These components shall be incorporated into the plans to be submitted by the applicant to the City of Santa Paula for review and approval prior to the issuance of building permits.

5.11-4 Sound attenuation measures must be incorporated into the design of individual projects to minimize noise from loading docks. These measures may include, but are not limited to, designing loading docks to have either a depressed (i.e., below grade) loading area, an internal bay, or a wall to break the line of sight between on-site and adjacent residential land uses and loading operations. Acoustical analysis must be performed to demonstrate that the parking lot does not result in noise levels that exceed the City of Santa Paula 3 dBA standard. These components must be incorporated into the plans to be submitted by the applicant to the City for review and approval before the City issues building permits.

5.11-5 In order to reduce mechanical, electrical, or other commercial type noise, the individual projects must locate equipment away from receptor areas, install equipment with proper acoustical shielding, and incorporate the use of parapets into building design. Acoustical analysis must be performed to demonstrate that the mechanical, electrical, and other commercial type noise does not result in noise levels that exceed the City of Santa Paula 3 dBA standard. These components must be incorporated into the plans to be submitted by the applicant to the City for review and approval before the City issues building permits.

Residual Impacts

Impacts would be less than significant.

5.11.5.2 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Impacts

Construction

Ground vibrations from construction activities very rarely reach the levels that can damage structures, but they can achieve the audible range and be felt in buildings very close to the site. The primary and most intensive vibration source associated with the development of the project would be the use of earth moving equipment during construction. This type of equipment can create intense noise that is disturbing and can result in ground vibrations.

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, and to slight structural damage at the

highest levels. Ground vibrations from construction activities rarely reach the levels that can damage structures, but they can achieve the audible and perceptible ranges in buildings close to the construction site. **Table 5.11-5, Vibration Source Levels for Construction Equipment**, lists vibration source levels for construction equipment.

**Table 5.11-5
Vibration Source Levels for Construction Equipment**

Equipment	VdB at 25 feet
Excavator	80
Large bulldozer	87
Backhoe	80
Loaded trucks	86
Roller	74
Small bulldozer	58

Source: Office of Planning and Environment, Federal Transit Administration, Transit Noise and Vibration Impact Assessment (May 2006) FTA-VA-90-1003-06, 12-9.

Loaded trucks and large bulldozers are capable of producing approximately 86 and 87 VdB, respectively, at 25 feet. Land uses on the project site and surrounding the project site consist of scattered residential uses where people sleep and other miscellaneous scattered structures used in agricultural operations. Depending on the location of operations of construction equipment near these areas, the East Gateway Project could result in vibration levels near sensitive receptors above 80 VdB and result in significant impacts.

Operational

Operating trains can be a source of ground-borne vibration to adjacent land uses. The Fillmore & Western Railway Company railroad tracks runs adjacent to the northern boundary of the East Gateway Project near Hallock Drive and Telegraph Road. Currently, the Fillmore & Western Railway Company operates tourist-oriented trains on Saturdays and Sundays. The tracks are also used by one freight train, which passes by the project site twice on Mondays, Wednesdays, and Fridays between the hours of 8:00 A.M. and 12:00 P.M. In general, train-generated vibration passes below the threshold of perception or 65 VdB at a distance of 90 meters, or 295 feet, from train tracks. The threshold of annoyance or approximately 80 VdB is 20 meters, or 66 feet, from train tracks, if the vibration is constant.¹⁶ In the case of the East Gateway Project, land uses proposed are considered to be vibration-sensitive and include retail-commercial, business park, light industrial, manufacturing and shopping center. In addition, the vibration

¹⁶ California Department of Transportation, Division of Environmental Analysis. Transportation Related Earthborne Vibrations. 20 February 2002, Page 17

from the Fillmore & Western track would not be constant (up to 6 trains trips per day), the proposed structures to be developed would be in excess of 100 feet from the track centerline, and the vibration level would be below 80 VdB. Potential vibration impacts are considered to be less than significant.

Mitigation Measures

The following measures have been identified to mitigate the identified impacts:

- 5.11-6** The construction contractors must use best management practices (BMPs) to reduce vibration due to East Area Gateway construction activities by implementing the following:
- identifying all uses in the vicinity of individual development projects that may be adversely affected by the vibrations, including residences and non-residential land uses that may contain vibration-sensitive equipment;
 - installing seismographs at the aforementioned sensitive locations where construction activities would be occurring adjacent to these use, to ensure that vibration thresholds of 80 VdB are not exceeded, and/or that construction activities would not cause structural damage or adversely affect vibration-sensitive equipment;
 - adjusting vibration amplitudes of the construction equipment used on site to below 80 VdB at adjacent sensitive locations, such as limiting the number of pieces operating in one location at the same time in areas where conditions would impact sensitive structures, the sensitivity of vibration sensitive equipment, and/or human tolerance;
 - utilizing cast-in-drilled-hole (CIDH) piles in lieu of pile driving;
 - providing notification to the residential land uses directly adjacent to the project site, at least 10 days in advance, of construction activities that are anticipated to result in vibration levels above the thresholds;
 - conducting demolition, earthmoving, and ground-impacting operations sequentially, so as not to have two such operations occurring on the project site at the same time;
 - selecting a demolition method to minimize vibration, where possible (e.g., sawing masonry into sections rather than demolishing it by pavement breakers); and/or
 - operating earth-moving equipment on the construction site as far away as possible or practical from vibration-sensitive sites, using wheeled or rubber-tracked equipment, and using small pieces of equipment such as smaller bulldozers when possible.

Residual Impacts

Impacts would be less than significant.

5.11.5.3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Impacts

Please refer to **Section 5.11.5.1**. Potential noise impacts due to roadways, parking lots, loading docks, electrical and mechanical equipment are considered to be less than significant or would be mitigated to less than significant.

Mitigation Measures

Mitigation Measures 5.11-1 to 5.11-5 measures have been identified to mitigate the identified impacts.

Residual Impacts

Impact would be less than significant.

5.11.5.4 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Impacts

Construction of the retail-commercial, business park, light industrial, manufacturing, and shopping center land uses as well as on and off-site infrastructure improvements (water line, storm drainage, etc.) associated with the Specific Plan and Annexation Area would occur over a span of several years. The construction-related noise level associated with implementation of the East Gateway Project would vary during the construction period and would depend upon the construction phase. The first phase, site preparation, is generally the noisiest and has the shortest duration. Activities during this phase include excavation, earth moving, and soils compaction. Other construction phases that would be included with the development of the East Gateway Project would include demolition, building construction and asphalt paving. Construction activities would not be continuous.

Construction typically involves use of both mobile and stationary equipment. Mobile equipment, such as bulldozers, scrapers, and graders, are operated in a cyclical schedule in which a period of full power is followed by a period of reduced power. Stationary equipment can be subdivided into two groups. One group contains such items as pumps, generators, compressors, and similar equipment that generally operates at a fixed power and produces a constant sound level under normal operations. The other group contains impact equipment, such as jackhammers, pavement breakers, etc., which are operated in a cyclical fashion.

The US EPA has compiled data on the noise-generating characteristics of specific types of construction equipment. This data is presented in **Figure 5.11-6, Noise Levels of Typical Construction Equipment**. Noise levels generated by heavy equipment can range from approximately 68 dB(A) to excess of 100 dB(A) when measured at 50 feet. These noise levels diminish with distance from the construction site at a rate of approximately 6 dB(A) per doubling of distance. For example, a noise level of 68 dB(A) measured at 50 feet from the noise source to the receptor would reduce to 62 dB(A) at 100 feet from the source to the receptor, and further reduce by another 6 dB(A) to 56 dB(A) at 200 feet from the source to the receptor.

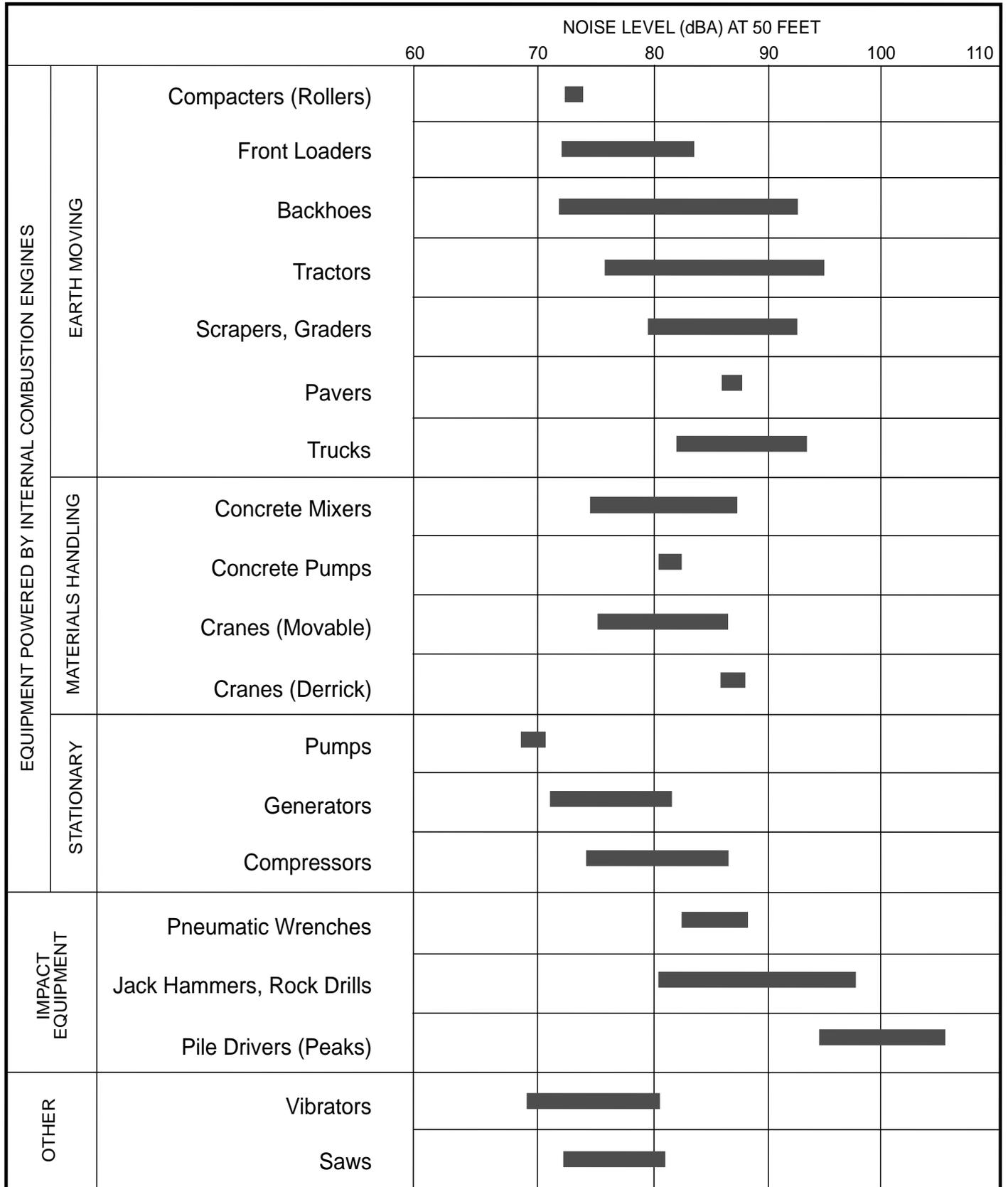
Noise levels generated during typical sub-phases are presented in **Table 5.11-6, Typical Maximum Noise Levels for Construction Phases**. Equipment estimates used for the analysis for demolition, grading, and building construction noise levels are representative of worst-case conditions, since it very unlikely that all the equipment contained on site would operate simultaneously.

**Table 5.11-6
Typical Maximum Noise Levels for Construction Phases**

Construction Phase	Approximate L_{eq} dB(A) without Noise Attenuation			
	25 Feet	50 Feet	100 Feet	200 Feet
Clearing	90	84	78	72
Excavation	94	88	82	78
Foundation/Conditioning	94	88	82	78
Laying Subbase, Paving	85	79	73	67

Source: U.S Department of Transportation, Construction Noise Handbook, Chapter 9.0, August 2006.

Noise levels at onsite and adjacent noise-sensitive land uses to the East Gateway Project would experience noise level increases during construction activities. These noise level increases would be temporary and intermittent. Future development within the East Gateway Project would be required to comply with SPMC §93.21 which generally requires construction noise to be restricted to the hours of 8:00 A.M. to 6:00 P.M. Monday through Friday (though a temporary noise permit can be obtained pursuant to SPMC §93.06). Therefore, no violation of the Noise Ordinance would occur and temporary increases in noise during construction of the East Gateway Project are not considered significant. Sensitive land uses surrounding the East Gateway Project within the unincorporated areas of Ventura County may experience construction noise levels in excess of 3 dB(A) over existing ambient noise conditions resulting in potentially significant construction noise impacts. However, these impacts would be short-term and not constant in duration.



Note: Based on limited available data samples.

FIGURE 5.11-6

In addition to equipment-generated noise associated with construction activities, construction traffic would generate noise along access routes to the proposed development areas. The major pieces of heavy equipment would be moved onto the development only one time for each construction activity (i.e., demolition, grading). In addition, daily transportation of construction workers and the hauling of materials both on and off the project site are expected to cause increases in noise levels along study area roadways, although noise levels from such trips would be less than peak hour noise levels generated by East Area Gateway trips during project operation. Average daily trips associated with construction activities would not result in a doubling of trip volume along study area roadways. Given that it takes a doubling of average daily trips on roadways to increase noise by 3 dB(A), the noise level increases associated with construction vehicle trips along major arterials in the City of Santa Paula and County of Ventura would be less than 3 dB(A).

Impacts would be less than significant.

Mitigation Measures

The following measures have been identified to mitigate the identified impacts:

- 5.11-7** The project applicant must require by contract specifications that the following construction best management practices (BMPs) be implemented by contractors to reduce construction noise levels:
- Two weeks before beginning construction, the applicant must notify all surrounding land uses within 200 feet of a project site disclosing the construction schedule, including the various types of activities that would be occurring throughout the duration of the construction period.
 - Before any site activity, the contractor will be required to submit a material haul route plan to the City of Santa Paula and Ventura County for review and approval. The contractor must ensure that the approved haul routes are used for all materials hauling, to minimize exposure of sensitive receivers to potential adverse noise levels from hauling operations.
 - Ensure that construction equipment is properly muffled according to industry standards and in good working condition.
 - Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible.
 - Stationary construction equipment, such as pumps, generators, or compressors, must be placed as far from noise sensitive uses as feasible during all phases of project construction.

- Implement noise attenuation measures to the extent feasible, which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources.
- Use electric air compressors and similar power tools rather than diesel equipment, where feasible.
- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, must be turned off when not in use for more than 30 minutes.
- Construction hours, allowable workdays, and the phone number of the job superintendent must be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent must investigate, take appropriate corrective action, and report the action taken to the reporting party. Contract specifications must be included in the proposed project construction documents, which must be reviewed by the City before the City issues grading permits.

Residual Impacts

Impacts would be less than significant.

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

Impacts

The East Gateway Project is located approximately 0.75-miles northeast and east of the Santa Paula Airport. The Airport is used by piston and propeller, single and twin engine planes. No commercial aircraft use this airport. Existing and future noise levels (Year 2012 and 2015) for the Airport indicated that the East Gateway Project south of SR 126, where most of the flight activities occur, is below 60 dB(A). In fact, the 60 dB(A) Airport noise contour does not extend over the South Mountain Road Bridge crossing of the Santa Clara River. All the remaining portions of the East Gateway Project north of SR 126 are well outside the 60 dB(A) noise contour for the Airport. Consequently, aircraft noise would not significantly impact the East Gateway Specific Plan and other East Gateway Project annexation areas and impacts are considered to be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

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

Impacts

Refer to **Section 5.11.5.5** for a discussion of aircraft noise impacts. Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

5.11.6 CUMULATIVE ANALYSIS

Cumulative Impacts

Cumulative development would result in significant noise increases along Hallock Drive, Telegraph Road, Santa Paula Street, Main Street, and Palm Avenue. These increases in noise would be noticeable over existing conditions and result in cumulative impacts. As indicated in **Table 5.11-7, Cumulative With and Without Project Noise Levels (dB(A) CNEL) at 75 Feet from Roadway Centerline**, the East Gateway Project's contribution to these cumulative noise level increases would be less than 3.0 dBA. Overall, the East Gateway Project's contribution would not be considered to be cumulatively considerable and would be less than significant.

With regard to stationary sources, cumulatively significant noise impacts may result from cumulative development. Stationary sources of noise that could be introduced in the area by cumulative projects could include mechanical equipment, loading docks, and parking lots. Since these projects would be required to adhere to Santa Paula's noise standards, all the stationary sources would be required to provide shielding or other noise abatement measures so as not to cause a substantial increase in ambient noise levels. Moreover, due to distance, it is unlikely that noise from multiple cumulative projects would interact to create a significant combined noise impact. As such, it is not anticipated that a

significant cumulative increase in permanent ambient noise levels would occur and, therefore, the impact would be less than significant. Therefore, the East Gateway Project's contribution to cumulative noise impacts would not be cumulatively considerable.

Cumulative Mitigation Measures

Implementation of **Mitigation Measures 5.11-1 to 5.11-5** have been identified to mitigate the identified impacts.

Residual Impact

Impacts would be less than significant.

5.11.7 REFERENCES

Documents referenced in the preparation of this noise section include the following:

- California Department of Health Services. *Guidelines for the Preparation and Content of Noise Elements of the General Plan*, 1976. These Guidelines are also published by the Governor's Office of Planning and Research in the State of California General Plan Guidelines (2003).
- California Department of Transportation, *Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol*, November 2009.
- California Department of Transportation, Division of Environmental Analysis. *Transportation Related Earthborne Vibrations*. 20 February 2002.
- City of Santa Paula, *Noise Element*, adopted April 1998, updated September 2010.
- Federal Transit Administration, Office of Planning and Environment, *Transit Noise and Vibration Impact Assessment*, 2006.
- Fehr and Peers, *Transportation Analysis Report for East Gateway Project*, June 2012.
- Ventura County Airport Land Use Commission, *Airport Comprehensive Land Use Plan for Ventura County (Final Report)*, 2000.
- Ventura County, *General Plan*, as amended June 2011.
- Ventura County Transportation Commission, *Draft Final Report Santa Pula Branch Line Rail Study*, March 2007.
- U.S. Department of Transportation, Federal Highway Administration, *Fundamentals and Abatement of Highway Traffic Noise*, September 1980.

**Table 5.11-7
Cumulative With and Without Project Noise Levels (dB(A) CNEL)
at 75 Feet from Roadway Centerline**

Roadway Segment	Existing	Cumulative Without Project	Cumulative With Project	Change Due to Project	Significant Impact?
Hallock Dr s/o State Route 126	54.1	59.7	60.7	1.0	No
Hallock Dr between State Route 126 and Telegraph Rd	55.5	64.5	65.0	0.5	No
Hallock Dr n/o Telegraph Rd.	58.1	63.1	63.3	0.2	No
Telegraph Rd n/o State Route 126	59.8	65.8	66.4	0.6	No
Santa Paula St between Grant Line St and 12th St	58.6	63.8	63.9	0.1	No
Main St between 12th St and Telegraph Rd/Main St	58.9	62.7	63.2	0.5	No
Harvard Blvd between 12th St and Telegraph Rd/Main St	58.2	62.5	63.1	0.6	No
12th St between Richmond Rd and Santa Paula St	56.1	58.5	58.8	0.3	No
12th St between Santa Paula St and Santa Barbara St	58.4	58.8	59.5	0.7	No
12th St between Santa Barbara St and Main St	58.3	58.7	58.8	0.1	No
12th St between Main St and Ventura St	56.5	56.8	56.8	0.0	No
S. Mountain Rd between Harvard Blvd and Lemon Rd	57.0	58.0	58.5	0.5	No
Richmond Rd between 12th St and N Ojai Rd	52.3	53.0	53.0	0.0	No
Orchard St E between 12th St and SR 150	49.1	50.2	50.2	0.0	No
Saticoy St between 12th St and SR 150	51.6	54.8	55.2	0.4	No
Santa Paula St between 12th St and 10th St/N Ojai Rd	51.7	61.6	61.9	0.3	No
Santa Barbara St between 12th St and 10th St	52.6	56.4	56.4	0.0	No
Main St between 12th St and 10th St	54.8	58.2	58.6	0.4	No
Ojai Rd n/o Richmond Rd	63.8	64.5	64.6	0.1	No
N Ojai Rd between Richmond Rd and Orchard St	63.8	64.5	64.5	0.0	No
N Ojai Rd between Orchard St and Saticoy	63.6	64.3	64.4	0.1	No
N Ojai Rd between Saticoy St and E Santa Paula St	61.0	61.5	61.6	0.1	No
10th St between Santa Paula St and Santa Barbara St	57.9	62.6	62.6	0.0	No
10th St between Santa Barbara St and Main St	58.7	62.2	62.2	0.0	No
10th St between Main St and Harvard Blvd	61.3	62.2	62.4	0.2	No
10th St between Harvard Blvd and State Route 126 On/Off Ramps	63.0	64.1	64.1	0.0	No
10th St between State Route 126 On/Off Ramps (North) and On/Off Ramps (South)	59.9	61.0	61.0	0.0	No
Santa Paula St between 10th St and 8th St	52.3	61.5	61.8	0.3	No
Santa Barbara St between 10th St and 8th St	59.6	60.0	60.1	0.1	No

Roadway Segment	Existing	Cumulative Without Project	Cumulative With Project	Change Due to Project	Significant Impact?
Main St between 10th St and 8th St	57.0	58.4	58.7	0.3	No
8th St between Pleasant St and Santa Paula St	56.8	57.2	57.5	0.3	No
8th St between Santa Paula St and Main St	56.8	59.8	59.8	0.0	No
8th St between Main St and Harvard Blvd	58.2	59.6	59.7	0.1	No
Santa Paula St between 8th St and 7 th St	59.3	60.6	61.2	0.6	No
Main St between 8th St and Palm Ave	57.7	59.2	59.4	0.2	No
Santa Paula St between 5th St and Palm Ave	60.4	61.5	61.9	0.4	No
Palm Ave between Virginia Terrace and Santa Paula St	55.5	55.9	55.9	0.0	No
Palm Ave between Santa Paula St and Santa Barbara St	53.2	59.6	59.7	0.0	No
Palm Ave between Santa Barbara St and Main St	58.7	60.8	60.9	0.1	No
Palm Ave between Main St and Harvard Blvd.	60.2	61.8	61.8	0.0	No
Palm Ave between Harvard Blvd and State Route 126 On/Off Ramps	61.5	62.2	62.2	0.0	No
Palm Ave between State Route 126 On/Off Ramps (North) and On/Off Ramps (South)	59.7	60.2	60.3	0.1	No
Palm Ave s/o State Route 126	54.8	56.8	57.2	0.4	No
Santa Paula St between Palm Ave and Steckel Dr	60.3	61.2	61.3	0.1	No
Main St between Palm Ave and Steckel Dr	58.7	59.8	59.9	0.1	No
Santa Paula St between Steckel Dr and Peck Rd	59.1	59.6	60.2	0.6	No
Main St between Steckel Dr and Peck Rd/Harvard Blvd	57.3	61.7	61.8	0.1	No
Steckel Dr between Santa Paula St and Main St	56.3	56.9	57.1	0.2	No
Steckel Dr between Main St and Harvard Blvd	57.5	57.9	58.0	0.1	No
Peck Rd between Santa Paula St and Telegraph Rd	61.2	61.9	62.0	0.1	No
Peck Rd between Telegraph Rd and Faulkner Rd	62.5	62.9	63.0	0.1	No

Source: Refer to **Appendix 5.11** for Noise Modeling Results