# **APPENDIX G**

Noise Impact Study

# PBP INDUSTRIAL PROJECT NOISE IMPACT STUDY City of Palmdale, CA







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### **Prepared for:**

Mr. Dan Bott VCS ENVIRONMENTAL 30900 Rancho Viejo Road, Suite 100 San Juan Capistrano, CA 92675

### Prepared by:

RK ENGINEERING GROUP, INC. 1401 Dove Street, Suite 540 Newport Beach, CA 92660

> Bryan Estrada, AICP Becca Morrison

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### 1.0 Introduction

### 1.1 Purpose of Analysis and Study Objectives

The purpose of this report is to review potential noise impacts from the proposed PBP Industrial Project (hereinafter referred to as "project") and provide recommendations, if necessary, to minimize any potential project noise impacts.

This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.), and the standards and methodology follow the City of Palmdale Municipal Code and General Plan requirements.

The following is provided in this report:

- A description of the study area and the proposed project
- Information regarding the fundamentals of noise
- Identification of the regulatory setting and applicable noise standards
- Evaluation of the existing noise environment within the study area
- Analysis of the project's operational noise impacts
- Summary of recommended mitigation measures and project design features to reduce noise level impacts.

### 1.2 Site Location

The project site is generally located north of Rancho Vista Boulevard, south of Blackbird Drive, east of Lockheed Way, and west of 10<sup>th</sup> Street East, in the City of Palmdale, California. The project site is designated for Industrial use in the City of Palmdale General Plan 2045 Land Use Map and is zoned for General Industrial (M-2).

The City of Palmdale General Plan 2045 Noise Element defines noise sensitive land uses as residences, schools, libraries, hospitals/medical facilities, and assisted living facilities. The nearest adjacent noise-sensitive land uses are existing residential homes located approximately 990 feet southeast of the southernmost border of the project site and approximately 240 feet south of the centerline of Rancho Vista Boulevard.

The project site location map is provided in Exhibit A.



### 1.3 **Project Description**

The project proposes to construct and operate five industrial/warehouse buildings totaling 300,000 square feet of area, a water detention basin, and associated parking areas on four parcels of land with a total area of 20.47 acres. The project site is currently vacant.

The site plan used for this analysis, provided by RED BRICK SOLUTION CONSULTING ENGINEERS & ARCHITECTS, is illustrated in Exhibit B.

This report analyzes the short-term noise impacts associated with construction activities and long-term noise impacts associated with the day-to-day operation of the project. The primary sources of operational noise include HVAC mechanical equipment noise and parking lot and loading dock noise.

### 1.4 Summary of Analysis Results

Table 1 provides a summary of the noise analysis results, per the CEQA impact criteria checklist.

Table 1
CEQA Noise Impact Criteria

	Noise Impact Criteria	Potentially Significant	Potentially Significant Unless Mitigated	Less Than Significant Impact	No Impact
W	ould the project result in?				
a)	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?		X		
b)	Generation of excessive ground borne vibration or ground borne noise levels?			X	
c)	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, would the project expose people residing or working in the project area to excessive noise levels?				X

### 1.5 Recommended Project Design Features

The following recommended project design features include standard rules and requirements, best practices, and recognized design guidelines for reducing noise levels. Design features are assumed to be part of the conditions of the project and integrated into its design.

- NOI-1 All construction activities should take place Monday through Saturday, between the hours of 6:30 a.m. to 8:00 p.m. No construction should occur on Sundays.
- **NOI-2** The project should implement construction best practices to reduce noise levels. Best management practices should include the following:
  - All construction equipment should be equipped with muffles and other suitable noise attenuation devices (e.g., engine shields).
  - If feasible, electric hook-ups should be provided to avoid the use of generators.
  - Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, should be turned off when not in use for more than five minutes.
- NOI-3 All HVAC equipment should be shielded from the line of sight of adjacent properties behind rooftop parapet walls.
- NOI-4 Engine idling time for all delivery vehicles and moving trucks should be limited to five minutes or less. Signage should be posted near the loading areas indicating the idling time restrictions.

### 2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used within the report.

### 2.1 Sound, Noise and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic, or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

### 2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting out at 20 Hz all the way to the high pitch of 20,000 Hz.

### 2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines it loudness. The loudness of sound increases or decreases, as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square inch meter (N/m2), also called micro-Pascal ( $\mu$ Pa). One  $\mu$ Pa is approximately one hundred billionths (0.0000000001) of normal atmospheric pressure. Sound pressure level (SPL or L<sub>p</sub>) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels and abbreviated dB.

### 2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two (2) sounds of equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase.



If two (2) sounds differ by approximately 10 dB the higher sound level is the predominant sound.

### 2.5 <u>Human Response to Changes in Noise Levels</u>

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive the change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud<sup>1</sup>. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway), would result in a barely perceptible change in sound level.

### 2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant, while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels. Following are the most commonly used noise descriptors along with brief definitions.

### A-Weighted Sound Level

The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

### Ambient Noise Level

The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

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<sup>&</sup>lt;sup>1</sup> Source: U.S. DOT Federal Highway Administration. Dec. 2011. Highway Traffic Noise: Analysis and Abatement Guidance.

### Community Noise Equivalent Level (CNEL)

The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

### Decibel (dB)

A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A)

A-weighted sound level (see definition above).

### Equivalent Sound Level (LEQ)

The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

### Habitable Room

Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

L(n)

The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 is the sound level exceeded 10 percent of the sample time. Similarly L50, L90 and L99, etc.



### Noise

Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

### Outdoor Living Area

Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

### Percent Noise Levels

See L(n).

### Sound Level (Noise Level)

The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

### Sound Level Meter

An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

### Single Event Noise Exposure Level (SENEL)

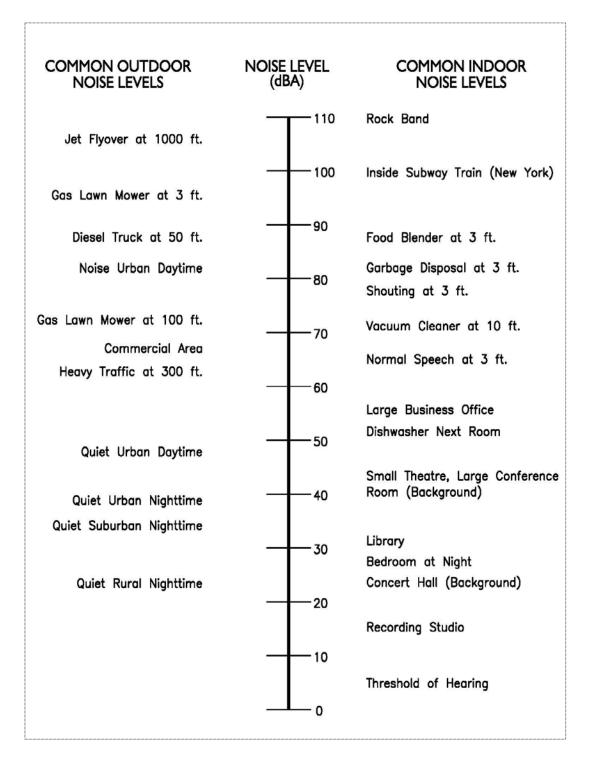
The dBA level which, if it lasted for one (1) second, would produce the same A-weighted sound energy as the actual event.

### 2.7 **Sound Propagation**

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at an additional rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 3 dB per doubling of distance for a line source and 6.0 dB per doubling of distance for a point source.

Figure 1
Typical Sound Levels from Indoor and Outdoor Noise Sources<sup>2</sup>



<sup>&</sup>lt;sup>2</sup> Source: AASHSTO. 1993. Guide on Evaluation and Abatement of Traffic Noise

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### 3.0 Regulatory Setting

The proposed project is located in the City of Palmdale and is subject to the applicable noise regulations within the City of Palmdale General Plan 2045 Noise Element and the City of Palmdale Municipal Code.

The General Plan Noise Element is used to ensure the project is compatible from a noise standpoint with the surrounding land uses and consistent with the established plans, policies and programs for noise control within the City. The Municipal Code Chapter 8.28 provides rules and regulations for building construction hours of operation and noise control. Chapter 9.18 sets the regulations for Disturbing, Excessive, Loud or Offensive Noise. The City of Palmdale General Plan 2045 Noise Element and Municipal Code Chapters 8.28 and 9.18 are provided in Appendix A.

### 3.1 General Plan 2045 Noise Element

### 3.1.1 Noise/Land Use Compatibility

The City of Palmdale General Plan Noise Element has adopted the State of California Office of Noise Control noise standards for land use compatibility. Table 2 summarizes the City's Noise/Land Use Compatibility guidelines for the land uses on and adjacent to the proposed project site:

Table 2
Noise/Land Use Compatibility Guidelines<sup>1</sup>

Land Use	Land Use	Noise Limit (dBA CNEL)					
Designation <sup>2</sup>	Designation <sup>2</sup> Compatibility Category		Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable		
Industrial	Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	75 and above			
Neighborhood Commercial	Residential – Low Density Single Family, Duplex, Triplex, and Similar	50 – 60	55 – 70	70 – 75	75 and above		

Source: City of Palmdale General Plan 2045 Noise Element, Figure 16.1 – California Noise Land Use Compatibility Standards.

<sup>&</sup>lt;sup>2</sup> Source: City of Palmdale General Plan 2045 Land Use Element, Figure 5.5 – General Plan Land Use Designations.



The City of Palmdale defines the noise compatibility categories as follows:

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

detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, 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 noise reduction requirements must be made and needed noise

insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be

undertaken.

### 3.1.2 Stationary Noise Sources

The City's General Plan also provides goals, policies, and implementation actions to minimize stationary noise impacts at sensitive land uses. In particular, the following goals and policies are adopted to minimize excessive noise impacts at residential and sensitive land uses.

**Goal N-1.** Minimize resident exposure to excessive noise.

**N-1.1 Future Noise Levels.** Use the state-recommended noise level guidelines shown in Figure 16.1 (Table 2 of this report) to determine the compatibility of proposed land uses with the existing and future noise environment of each proposed development site.

**N-1.2 Restrict Land Uses.** Restrict noise sensitive land uses near existing or future air, rail, or highway transportation noise sources unless mitigation measures have been incorporated into the design of the project to reduce the noise levels at the noise sensitive land use to less than 65 dBA CNEL at all exterior living spaces including but not limited to, single-family yards and



multi-family patios, balconies, pool areas, cook-out areas and related private recreation areas.

**N-1.3 Acoustical Analysis for Stationary Noise Sources.** When proposed stationary noise sources could exceed an exterior noise level of 65 dBA CNEL at the property line or could impact future noise sensitive land uses, require preparation of an acoustical analysis and mitigation measures to reduce exterior noise levels to no more than 65 dBA CNEL at the property line.

**N-1.4 Noise Abatement Strategies.** Explore the use of noise abatement strategies such as natural barriers, sound walls, and other buffers to mitigate excessive noise.

**N-1.5 Quiet Zones.** Where deemed appropriate, restrict train horn noise by establishing quiet zones within Palmdale based on Train Horn Rule (49 CFR Part 222).

Table 3 below provides the noise level thresholds used in this study to determine whether the project's stationary noise impacts will be significant at the adjacent sensitive receptor locations, per the General Plan Noise Element Goal N-1.

Table 3
Stationary Noise Thresholds

Land Use	Exterior Noise Threshold (dBA CNEL)
Residential	65

### 3.2 Municipal Code Chapters 8.28 and 9.18

### 3.2.1 Chapter 9.18 – Disturbing, Excessive, Loud, or Offensive Noise

The City of Palmdale Municipal code restricts excessive noise that would disturb residential and other sensitive land uses. Chapter 9.18 states that "it shall be unlawful for any person



to willfully make or continue, or cause or be made or continued, any loud, unnecessary, or unusual noise." Chapter 9.18 does not establish numerical limits on stationary noise.

# 3.2.2 Chapter 8.28 – Building Construction Hours of Operation and Noise Control

The City of Palmdale Municipal Code likewise does not establish numerical thresholds for noise produced during construction activity. However, construction-related noise is addressed through the following provisions:

Except as otherwise provided in this chapter, no person shall perform any construction or repair work on any Sunday, or any other day after 8:00 p.m. or before 6:30 a.m., in any residential zone or within 500 feet of any residence, hotel, motel or recreational vehicle park. For the purposes of this section, construction and repair work includes work of any kind upon any building or structure, earth excavating, filling, or moving, and delivery, preparation or operation of construction equipment, materials or supplies where any of the foregoing entails the use of an air compressor, jack hammer, power-driven drill, riveting machine, excavator, semi-truck, diesel power truck, tractor, cement truck, or earth moving equipment, hand hammer, or other machine, tool, device or equipment which makes loud noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness sleeping or residing in the area.

For purposes of this analysis, the requirements set forth in the Palmdale Municipal Code, Chapter 8.28 – Building Construction Hours of Operation and Noise Control, are utilized as the threshold of significance for assessing temporary construction impacts.

### 4.0 Study Method and Procedures

The following section describes the noise modeling procedures and assumptions used in the noise analysis.

### 4.1 Measurement Procedures and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

RK conducted the sound level measurements in accordance with Caltrans technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4: Specification for Sound Level Meter, 1983)

Piccolo-II Type 2 integrating-averaging level meters were used to conduct noise measurements at the project site and property boundaries.

The Leq, Lmin, Lmax, L2, L8, L25, and L50 statistical data were recorded over the measurement time period intervals and the information was utilized to define the noise characteristics for the project. The following gives a brief description of the procedures for sound level measurements:

- Microphones for sound level meters were placed five (5) feet above the ground for long-term noise measurements
- Sound level meters were calibrated before each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on "A" and slow response
- Temperature and sky conditions were observed and documented



Appendix B includes photos, field sheets, and measured noise data. Noise monitoring locations are graphically illustrated in Exhibit C.

### 4.2 Stationary Noise Modeling

On-site stationary noise sources were analyzed using SoundPLAN<sup>™</sup> noise modeling software. SoundPLAN<sup>™</sup> is a standards-based program that incorporates more than twenty national and international noise modeling guidelines. Stationary noise sources generated by the project include on-site parking lot noise and loading dock noise, which are classified under industrial sources within SoundPLAN.

Projected noise levels from SoundPLAN™ are based on the following key parameters:

- Developing three-dimensional noise models of the project site and study area
- Establishing reference noise level data for project noise sources
- Predicting the project noise levels at the selected community locations and

The sides of the buildings, walls, etc. were modeled as reflective surfaces and also as diffractive bodies.

Most of the ground surrounding the project site consists of pavement, dirt, and natural vegetation and has been run as a hard site (Ground Factor=0). The elevation profile for the project site is derived from Google Earth and all the receptors are placed at 5 foot above the ground level.

### Sound Power and Sound Pressure Level

Sound power level is the acoustic energy emitted by a source which produces a sound pressure level at some distance. While the sound power level of a source is fixed, the sound pressure level depends upon the distance from the source and the acoustic characteristics of the area in which it is located.

SoundPLAN requires that the source noise level be input using sound power level and which is calculated based on a measured sound pressure level. The sound power level is calculated using SoundPLAN software by calibrating the source noise level to equal the sound pressure level at an equal distance from the source in which the referenced measurement was taken.



### 4.2.1 HVAC Equipment Noise

To estimate noise level impacts from on-site HVAC equipment, referenced noise levels obtained by RK are utilized. Referenced noise levels represent similar commercial and industrial scale HVAC equipment operating under similar conditions as would be found on the project site.

All HVAC units are modeled as point sources and are graphically illustrated in Exhibit D. Table 4 indicates the referenced noise levels the HVAC equipment.

Table 4
HVAC Referenced Noise Levels<sup>1</sup>

Source	Distance from	Noise Levels (dBA)			
Source (feet)		$L_{eq}$	L <sub>max</sub>		
HVAC – Industrial <sup>1</sup>	3.0	88.5	88.5		

<sup>&</sup>lt;sup>1</sup> Referenced noise levels from an industrial HVAC system measured by RK over a 1-minute period.

To estimate the future noise levels during typical operational conditions, referenced noise levels are input into SoundPLAN and projected to the nearest sensitive receptor locations. Adjusted noise levels are based on the distance of the receptor location relative to the noise source, local topography and physical barriers including buildings and sound walls.

### 4.2.2 Loading Dock Noise

The project will include several loading docks within Lots 3, 12, and 20. To estimate future noise from loading activity, referenced noise levels are derived from the SoundPLAN emission spectra library. The referenced noise level "Truck: loading general cargo" has been used to determine the project's loading noise levels. Loading dock areas are modeled as area sources and are graphically illustrated in Exhibit D. Table 5 indicates the referenced noise levels for loading activity.

Table 5
Loading Dock Referenced Noise Levels<sup>1</sup>

Noise Source	Noise Level (Leq)		
Truck: loading general cargo	80.0		

<sup>&</sup>lt;sup>1</sup> Source: SoundPLAN library.



### 4.2.3 Parking Lot Noise

Parking lot noise would occur from vehicles entering and exiting the site, idling, exhaust, doors slamming, tires screeching, general loading activities, people talking, and the occasional horn honking. Parking lot noise would occur throughout the site and is assessed by using referenced noise levels in the SoundPLAN model. Parking lot noise is based on the type of vehicle and number of movements per hour. Referenced noise levels for parking lot activities are based on the SoundPLAN™ standard *Parkplatzlärmstudie 2007*. Key inputs for parking lot noise include size of area source, number of movements per hour, type of vehicles, and number of parking spaces within each lot.

### 5.0 Existing Noise Environment

The existing noise environment for the project site and surrounding areas has been established based on noise measurement data collected by RK. The project setting is rural/industrial and the primary environmental noise impacting the project site is roadway noise from adjacent streets, train noise, and noise from planes passing over the site.

### 5.1 Noise Measurement Results

To determine the existing noise level environment, RK conducted four (4) 1-hour noise measurements at the project study area.

Noise levels were measured on February 2, 2023 using Piccolo-II Type 2 integrating-averaging sound level meters. The information was utilized to establish the noise characteristics of the existing ambient environment.

The noise monitoring locations were selected based on the proximity and location to adjacent sensitive receptors. Exhibit C graphically illustrates the location of the noise measurements.

- Noise monitoring location one (L-1) was taken approximately 50 feet west of the centerline of 10<sup>th</sup> Street East. Nature/bird sounds and roadway noise along 10<sup>th</sup> Street East and Rancho Vista Boulevard were the primary sources of ambient noise observed during the noise measurement.
- Noise monitoring location two (L-2) was taken approximately 50 feet west of the centerline of 10<sup>th</sup> Street East. Nature/bird sounds and roadway noise along 10<sup>th</sup> Street East and Rancho Vista Boulevard were the primary sources of ambient noise observed during the noise measurement.
- Noise monitoring location three (L-3) was taken approximately 600 feet south of the centerline of Lockheed Way. Nature/bird sounds, overhead plane activity, and train movement/horns were the primary sources of ambient noise observed during the noise measurement.
- Noise monitoring location four (L-4) was taken approximately 330 feet south of the centerline of Blackbird Drive. Nature/bird sounds, overhead plane activity, and train movement/horns were the primary sources of ambient noise observed during the noise measurement.



Noise measurement results are summarized in Tables 6 through 9. Appendix B includes photographs, field sheets and measured noise data.

Noise measurements were conducted at the above selected locations to determine the existing ambient noise environment at the project site and nearby surrounding sensitive receptors.

Table 6
Noise Measurement Results, L-1<sup>1</sup>

Location	Start Time	Stop Time	Leq	Lmax	Lmin	L2	L8	L25	L50
	10:21 AM	10:51 AM	57.0	74.6	38.2	67.0	61.5	53.5	49.5
L-1		Measurement loise consisted Boulevard.							

<sup>&</sup>lt;sup>1</sup>L-1 was recorded on 02/02/2023.

Table 7
Noise Measurement Results, L-2<sup>1</sup>

Location	Start Time	Stop Time	Leq	Lmax	Lmin	L2	L8	L25	L50
	10:19 AM	10:49 AM	59.3	81.2	39.8	68	63.3	58.5	54.2
L-2		Measurement noise consisted Boulevard.							

<sup>&</sup>lt;sup>1</sup> L-2 was recorded on 02/02/2023.

Table 8
Noise Measurement Results, L-3<sup>1</sup>

Location	Start Time	Stop Time	Leq	Lmax	Lmin	L2	L8	L25	L50
	11:10 AM	11:40 AM	49.3	68.9	38.9	56.8	52.7	47.4	43.3
L-3	Comments: Measurement was taken approximately 600 feet south of the centerline of Blackbird Drive. Ambient noise consisted of nature/bird sounds, planes overhead, and train movement/horns.								

<sup>&</sup>lt;sup>1</sup> L-3 was recorded on 02/02/2023.



5-2

Table 9
Noise Measurement Results, L-4<sup>1</sup>

Location	Start Time	Stop Time	Leq	Lmax	Lmin	L2	L8	L25	L50
	11:13 AM	11:43 AM	48.4	61.6	39.6	56.2	53.1	48.2	44.4
L-4 Comments: Measurement was taken approximately 330 feet south of the centerline of I Drive. Ambient noise consisted of nature/bird sounds, planes overhead, and train movements.									

<sup>&</sup>lt;sup>1</sup> L-4 was recorded on 02/02/2023.

### **6.0 Operational Noise Impacts**

This assessment analyzes the anticipated noise levels generated by the project and compares them to the standards established in the City of Palmdale General Plan 2045 and Municipal Code.

The primary sources of operational noise include HVAC mechanical equipment and parking lot and loading dock activity.

### 6.1 <u>Stationary Source Noise Impacts</u>

On-site stationary noise impacts are assessed from the project site to the nearest adjacent sensitive receptor locations. Stationary noise sources occur on the project site and include HVAC equipment, parking lot activity, and loading dock noise.

HVAC equipment will be located on the roofs of the proposed buildings. HVAC equipment is expected to be shielded from the line of sight of the adjacent sensitive receptors by a parapet wall.

Loading Dock noise would occur from truck movement/idling and loading and unloading activities. Loading dock activity is expected to occur on Lots 3, 12, and 20.

On-site vehicular parking lot noise would occur from vehicle engine idling and exhaust, doors slamming, tires screeching, general loading activities, people talking, and the occasional horn honking. Parking lot activity is expected to occur along all project driveways, parking lots, and loading areas.

SoundPLAN calculation worksheets are shown in Appendix C and are graphically illustrated in Exhibits D through F.

The stationary noise analysis considers all project noise sources operating simultaneously during daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) hours. The result is worst case assessment of future noise levels, as not all noise sources would typically be in use at the same time. Noise impacts are assessed at the exterior of adjacent sensitive receptor locations.

The results of the exterior noise impact analysis are shown in Table 10 and are graphically illustrated in Exhibits D through F.



Noise levels generated by the project are not expected to exceed the City's exterior noise standards at any receptor locations. The noise standard for all exterior residential land uses is established to be 65 dBA CNEL.

Table 10
Project Stationary Noise Levels (dBA)

Location		Exterior Project Noise Level (Leq)	Exterior Project Noise Level (CNEL) <sup>1</sup>	Exterior Nosie Standard (CNEL) <sup>2</sup>	Noise Level Exceeds Standard (?)
Receptor- 1	Southeast of project site	47.2	53.9	65.0	No
Receptor- 2	Southeast of project site	45.4	52.1	03.0	No

<sup>&</sup>lt;sup>1</sup> Estimated 24-hour CNEL assumes all project noise sources will operate continuously during both daytime and nighttime hours, as a worst-case scenario.

### 6.2 <u>Mobile Source Noise Impacts</u>

### 6.2.1 Roadway Noise

The project is not expected to cause a substantial increase in ambient noise levels at nearby residential receptor locations as a result of increased traffic volumes along adjacent roadways. Typically, it takes a doubling of traffic volume along a roadway to cause a barely perceptible change in noise levels.<sup>3</sup>

Based on the *Level of Service Deficiency and Vehicle Miles Traveled Analysis*, performed by DAVID EVANS AND ASSOCIATES INC. in December 2022, (Traffic Study) the project is not expected to add a significant amount of traffic to Rancho Vista Boulevard or 10<sup>th</sup> Street East, which are the two main sources of roadway noise adjacent to the nearest residential land uses.

According to the Traffic Study, Rancho Vista Boulevard currently experiences an average daily traffic (ADT) of more than 25,000 in the vicinity of the site. Per the same analysis, the project is expected to generate a total of 2,058 ADT. The relatively small amount of traffic added by the project in comparison to the existing volume of the adjacent roadway

<sup>&</sup>lt;sup>3</sup> California Department of Transportation. Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol. September 2013. Section 2.2.1.1 Human Response to Changes in Noise Levels.



6-2

<sup>&</sup>lt;sup>2</sup> Source: City of Palmdale General Plan 2045 Noise Element, Goal N-1.

network would not be significant. Additionally, the project is not projected to add any traffic to 10 Street East, south of Rancho Vista Boulevard.

Therefore, it is reasonable to conclude that the project would not result in a significant permanent increase in ambient noise levels in the vicinity of the site as a result of increased traffic volumes along adjacent roadways.

### 6.2.2 Airport Noise

The proposed project site is located within the influence area of the adjacent Palmdale Regional Airport, located in Palmdale, California. A noise/land use compatibility assessment has been performed based on the General Plan Noise Element Figure 16.2 – Palmdale Airport Influence Area Noise Levels. The Palmdale Airport Influence Area Map is provided in Exhibit G.

The project is located within the 65 CNEL contour range, which is considered to have a "Normally Acceptable" and "Conditionally Acceptable" land use compatibility for industrial land uses and residential land uses, respectively.

Furthermore, the project is not expected to produce noise levels which exceed the City's exterior noise standards at adjacent land uses. Therefore, people residing and working in the project area will not be exposed to excessive noise levels from project or airport activity.

### 6.3 Operational Design Features

The following recommendations are provided to help ensure the proposed project meets the City of Palmdale and State of California requirements for residential interior noise exposure:

- NOI-3 All HVAC equipment should be fully shielded behind rooftop parapet walls from the line of sight of adjacent properties.
- NOI-4 Engine idling time for all delivery vehicles and moving trucks should be limited to five minutes or less. Signage should be posted near the loading areas indicating the idling time restrictions.



### 7.0 Construction Noise Impacts

The project will require temporary construction activities which will generate noise. The degree of construction noise will vary depending on the type of construction activity taking place and the location of the activity relative to the surrounding properties.

Table 11 shows the typical construction noise levels compiled by the Environmental Protection Agency (EPA) for common type construction equipment. Typical construction noise levels are used to estimate potential project construction noise levels at the adjacent sensitive receptors.

Table 11
Typical Construction Noise Levels<sup>1</sup>

Typical construction Noise Levels						
Туре	Noise Levels (dBA) at 50 Feet					
Earth Moving						
Compactors (Rollers)	73 - 76					
Front Loaders	73 - 84					
Backhoes	73 - 92					
Tractors	75 - 95					
Scrapers, Graders	78 - 92					
Pavers	85 - 87					
Trucks	81 - 94					
Mater	ials Handling					
Concrete Mixers	72 - 87					
Concrete Pumps	81 - 83					
Cranes (Movable)	72 - 86					
Cranes (Derrick)	85 - 87					
St	tationary					
Pumps	68 - 71					
Generators	71 - 83					
Compressors	75 - 86					
	Other					
Vibrators	68 - 82					
Saws	71 - 82					

<sup>&</sup>lt;sup>1</sup> Referenced Noise Levels from the Environmental Protection Agency (EPA)



The City of Palmdale recognizes that construction noise can be annoying to adjacent noise-sensitive land uses, however, it does not specify quantified noise impact criteria or thresholds<sup>4</sup>.

To help reduce potential impacts from construction activity, the City of Palmdale Municipal Code, Chapter 8.28 has adopted regulations for Building Construction Hours of Operation and Noise Control. The proposed project will be required to comply with the following:

No person shall perform any construction or repair work on any Sunday, or any other day after 8:00 p.m. or before 6:30 a.m., in any residential zone or within 500 feet of any residence, hotel, motel or recreational vehicle park. For the purposes of this section, construction and repair work includes work of any kind upon any building or structure, earth excavating, filling, or moving, and delivery, preparation or operation of construction equipment, materials or supplies where any of the foregoing entails the use of an air compressor, jack hammer, power-driven drill, riveting machine, excavator, semi-truck, diesel power truck, tractor, cement truck, or earth moving equipment, hand hammer, or other machine, tool, device or equipment which makes loud noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness sleeping or residing in the area.<sup>5</sup>

By complying with the requirements set forth in the Palmdale Municipal Code, Chapter 8.28 – Building Construction Hours of Operation and Noise Control, the project is not expected to result in a significant temporary increase in ambient noise levels at nearby sensitive receptor location.

### 7.1 Construction Design Features

The following recommendations are provided to help ensure the proposed project complies with the City of Palmdale construction requirements and implements construction best practices to help reduce construction noise levels.

NOI-1 All construction activities should take place Monday through Saturday, between the hours of 6:30 a.m. to 8:00 p.m. No construction should occur on Sundays.

engineering group, inc.

7-2

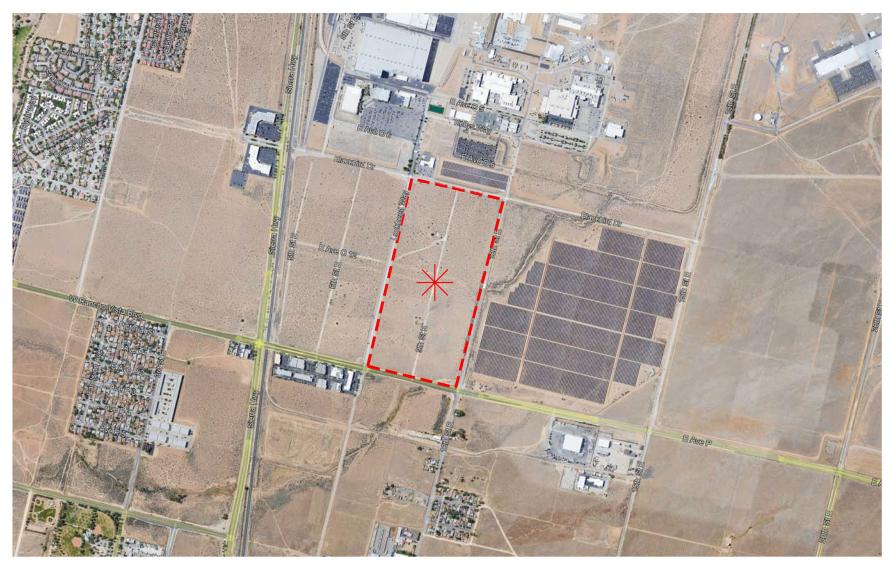
<sup>&</sup>lt;sup>4</sup> Palmdale General Plan. Table N-7, Noise Impacts by Source.

<sup>&</sup>lt;sup>5</sup> PMC Section 8.28.030, Construction Noise Prohibited in Residential Zone.

- NOI-2 The project should implement construction best practices to reduce noise levels. Best management practices should include the following:
  - All construction equipment should be equipped with muffles and other suitable noise attenuation devices (e.g., engine shields).
  - If feasible, electric hook-ups should be provided to avoid the use of generators.
  - Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, should be turned off when not in use for more than five minutes.

# **Exhibits**

# Exhibit A **Location Map**



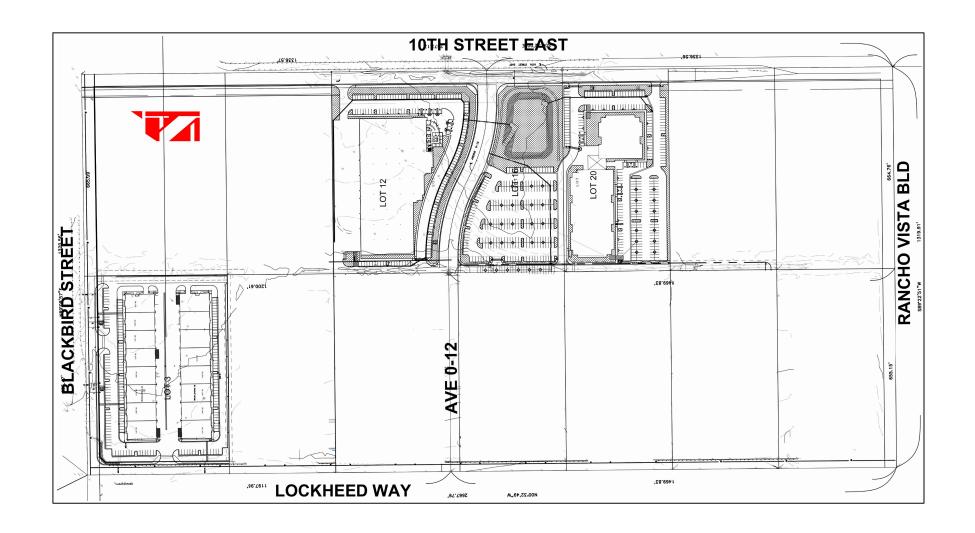
### Legend:

=== = Project Site Boundary

= Project Site



# Exhibit B **Site Plan**





## **Noise Monitoring Location Map**



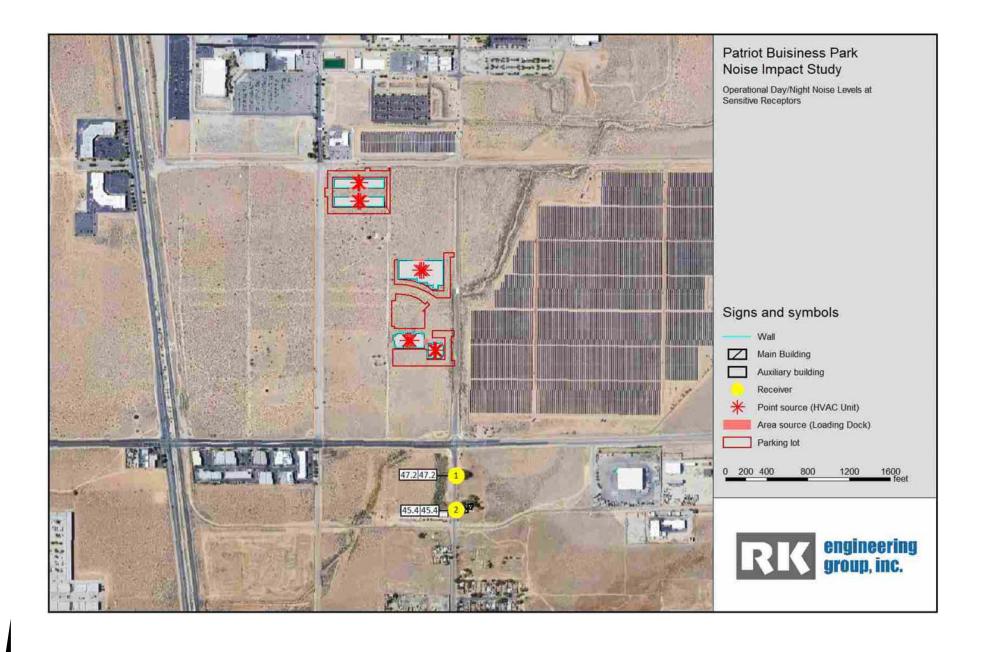
#### Legend:

=== = Project Site Boundary

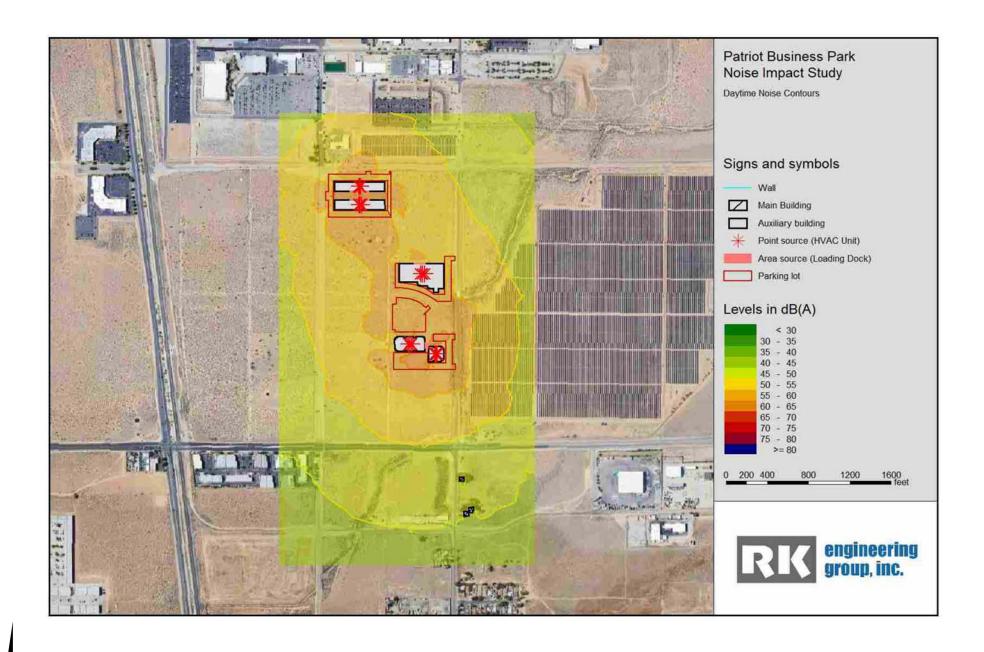
= Project Site

= Noise Monitoring Location

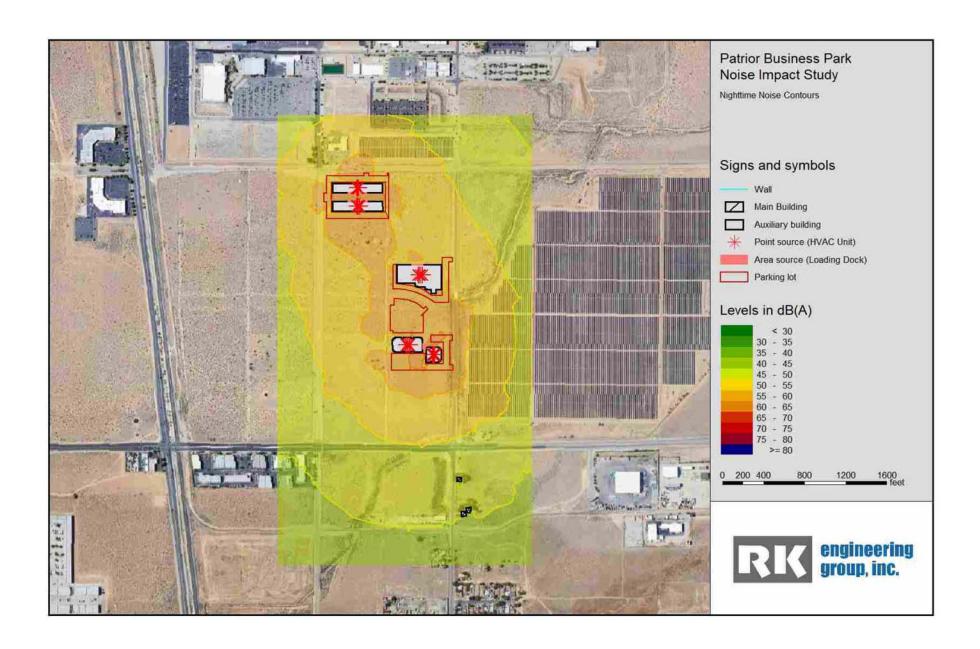
### Typical Operational Day/Night Noise Levels (dBA)



### **Operational Noise Contours - Daytime**

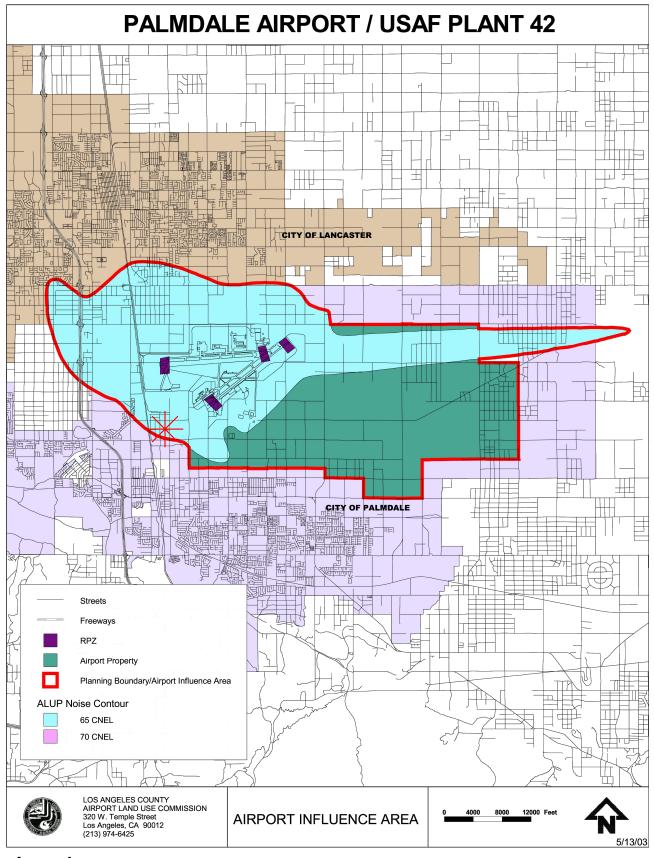


### **Operational Noise Contours - Nighttime**





### Palmdale Regional Airport Influence Area



Legend:



	Appendices

## Appendix A

City of Palmdale General Plan 2045 Noise Element and Municipal Code Chapters 8.28 and 9.18 NASA Plane at Plant 42



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Chapter 16

# **Noise**

The Noise Element outlines the goals and policies related to the noise environment in the Palmdale community.

# **Statutory Requirements**

The United States Federal Government and the State of California acknowledge the impact that the noise environment can have on public health and wellbeing. Per Government Code 65302, a Noise Element identifies and appraises noise problems in the community. The noise element analyzes and quantifies the projected noise level of the following sources:

- · Highways and freeways,
- Primary arterials and major local streets,
- Passenger and freight online railroad operations and ground rapid transit systems,
- Commercial, general aviation, heliport, helistop and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation,
- Local industrial plants, including, but not limited to, railroad classification yards, and,
- Other ground stationary noise sources, including, but not limited to, military installations, identified by local agencies as contributing to the community noise environment.

The following State and Federal regulations have been established to mitigate the negative externalities of excessive noise and support healthy noise environments across communities.

### **Federal Noise Control Act of 1972**

The Federal Noise Control Act establishes a national policy to limit the negative impacts to American health and welfare because of excessive noise. The Act authorizes the establishment of Federal noise level standards for major noise sources in commerce, including motor vehicles and machinery, and directs the EPA to oversee noise research and noise control. The Act establishes local governments as the primary responsible party in addressing noise mitigation.

## California Noise Insulation Standards (California Code of Regulations, Title 24)

The California Noise Insulation Standards are established in Title 24 of the California Code of regulations. The regulation establishes an interior noise limit of 45 dBA CNEL in any habitable room. To facilitate the established noise limit, Title 24 requires an acoustical analysis for any new residential building located in an area where CNEL noise levels exceed 60 dBA.

## California Airport Noise Standards (California Code of Regulations, Title 21)

Title 21 of the California Code of Regulations establishes airport noise standards for airports within the state. Title 21, Section 5012 outlines the standard for the acceptable level of aircraft noise for persons living in the vicinity of airports as 65 dBA CNEL.

# Federal Highway Administration Noise Standards

The Federal Highway Administration (FHWA) has established noise standards for noise sourced from highway traffic. The FHWA mandates that each state is responsible for enforcing the standards outlined by the administration. The noise standards consist of noise prediction requirements, noise analyses, noise abatement criteria, and requirements for informing local officials.

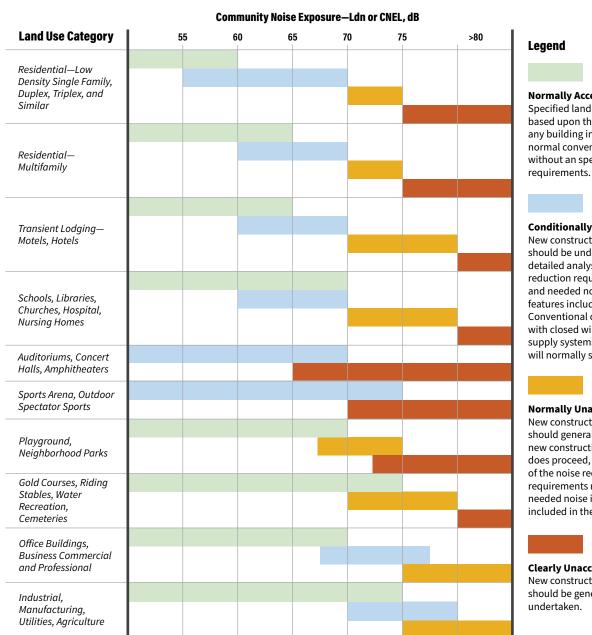
### **Relevant Plans & Documents**

#### California Land Use and Noise Compatibility Guide

The State of California Office of Noise Control (ONC) has established a set of noise standards based on land use compatibility. These standards are shown in Figure 16.1 below. The noise standards are intended to provide guidelines for the development of municipal noise elements. These basic guidelines may be tailored to reflect the existing noise and land use characteristics of a particular community.

### **Figure 16.1**

#### **California Noise Land Use Compatibility Standards**



#### **Normally Acceptable**

Specified land use is satisfactory, based upon the assumption that any building involved are of normal conventional construction, without an special noise insulation

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

#### **Normally Unacceptable**

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

#### **Clearly Unacceptable**

New construction or development should be generally not



#### Los Angeles County Airport Land Use Commission-Palmdale Regional Airport Influence Area

The Los Angeles County Airport Land Use Commission (ALUC) is a county-level agency required by the State to develop a plan for promoting compatibility between local airports and surrounding land uses. The ALUC is responsible for designating an Airport Influence Area (AIA) for every airport within its jurisdiction. An AIA is an airport planning area boundary that consists of all areas in which current or future airport-related noise, over flight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those areas. The Palmdale Regional AIA is shown in Figure 16.2. Development within these areas conform with the use, density, and intensity recommendations of the within the Accident Potential Zone (APZ) and Air Installations Compatible Use Zones (AICUZ.

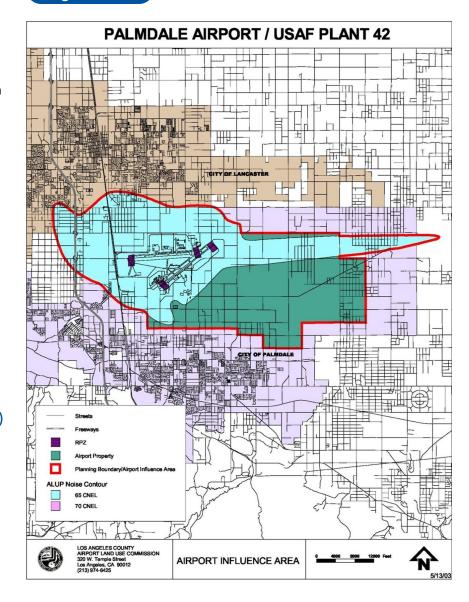
#### **Palmdale Municipal Code (Noise Standards)**

The Palmdale Municipal Code (PMC) establishes a restriction on excessive noise that would disturb neighborhoods or other sensitive uses. The Municipal Code's Noise Ordinance does not contain any specific limits, but rather states that "It shall be unlawful for any person to willfully make or continue, or cause or to be made or continued, any loud, unnecessary, or unusual noise..." The use

of the Noise Ordinance to regulate noise is limited given no specific limits are provided by which to determine if a noise source is excessive or not. PMC Section 8.28.030 addresses construction-related noise by prohibiting earth excavating and similar activities between 8:00 p.m. and 6:30 a.m. and on Sundays in any residential zone or within 500 feet of any residence, hotel, motel, or recreational vehicle park.

### **Figure 16.2**

#### Palmdale Airport Influence Area Noise Levels



# **Existing Context**

### Introduction

The noise environment within a geographic area may have a significant impact on the quality of life for community residents and workers. Excessive noise is defined as sound that is loud, unpleasant, unexpected, or undesired. The effects of excessive noise on humans can include general annoyance, interference with communication, sleep disturbance and hearing impairment. Perceptions of excessive noise can be highly variable and may be impacted by the time of day, distance to noise sources, characteristics of the noise receiver and qualities of the noise source. Therefore, jurisdictions must strategically establish noise standards in a manner that considers all aspects of how noise may be perceived.

Understanding the potential effects and externalities of noise requires an understanding of sound and how sound is measured. Noise is typically described in terms of loudness (amplitude) of the sound and frequency (pitch) of the sound. Noise loudness is measured in decibels (dB). Decibels (dB) are based on a logarithmic scale that condenses range in sound pressure levels to a more usable range of numbers. A 10 dB increase represents a

10-fold increase in sound intensity, a 20 dB change is a 100-fold difference, and so forth.

The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called "weighting" is applied to decibel noise measurements and used to filter noise frequencies that are not audible to the human ear. A weighted decibel (dBA) is an adjusted measure of sound loudness that adjusts the sound rating scale to levels consistent with the sensitivity range of the human ear. Typical exterior daytime noise levels range from 50 to 75 dBA.

In California, noise land use compatibility is primarily measured using Community Noise Equivalent Level (CNEL). The CNEL rating is the average sound level over a 24-hour period, with a penalty of 4 dB added between 7pm and 10pm and a penalty of 10 dB added for the nighttime hours of 10 pm to 7 am. The noise levels identified within this chapter are all discussed using dBA CNEL, unless otherwise indicated.

### **Noise Generators**

Noise generators are major sources of noise within a community that may impact residents or workers. These major sources of noise include motor vehicles, railways, airports, and construction activities. The most distributed and predominant noise source across cities in California is traffic noise, due to the prevalence of motor vehicles driving along area roadways. Traffic noise is of primary concern because it is characterized by a high number of individual events, which often create a sustained noise level over time. In Palmdale, noise levels are the highest adjacent to freeways, highways, and other large roadways.



#### **Traffic Noise**

Traffic noise is the primary noise source in the city. The highest noise levels occur along high traffic volume roadways, including freeways, highways, and arterials. These roadways in Palmdale include Highway 138/ Palmdale Boulevard, SR-14, Sierra Highway, and major streets such as Pearblossom Highway, 5th Street West, 50th Street East, 30th Street East, Avenue S, and Rancho Vista Boulevard. For modeled existing and future noise contours along high-volume roadways, see Figure 16.3 and Figure 16.4.

#### **Railway Operation Noise**

In general, noise from rail operations is under the jurisdiction of the Federal Railroad Administration (FRA). The FRA sets forth and enforces railway noise safety standards, including noise emissions for railroad locomotive cabs, at-grade crossing bells, and locomotive warning horns. Union Pacific and Metrolink, which

transport freight and people, respectively, operate rail lines in Palmdale. These rail line operators must meet any mandates enforced by the FRA.

Currently, the Antelope Valley Station Line of the Metrolink commuter rail system runs through Palmdale adjacent to the Sierra Highway. As a commuter rail service, most weekday trains on the Antelope Valley line run during the peak traffic morning and evening hours, when noise levels are high due to peak traffic amounts.

The California High Speed Rail from San Francisco to the Los Angeles area is proposed to run through Palmdale. According to the Rail Authority, the High-Speed Rail is anticipated to result in moderate to severe impacts to the noise environment in those locations where train speeds and operations are near sensitive land uses. The level of noise impacts associated with the High-Speed Rail in Palmdale will depend on the final rail alignment and the nature and density of nearby sensitive uses.

An additional high-speed rail line, known as Brightline West, is undergoing environmental permitting, and anticipated to run from Las Vegas to Los Angeles through Palmdale. Similar to the High-Speed Rail, noise impacts associated with the rail line will depend on the final rail alignment and the nature and density of nearby sensitive uses.

Freight rail in Palmdale is transported along the Union Pacific Railroad. Most of the freight train traffic occurs between the hours of 1:00 am and 5:00 am. Freight traffic does not have a set schedule. Noise generated by freight trains in Palmdale was previously measured at 64 to 73 dBA. Approximately 10 to 25 freight trains travel through Palmdale per day.



#### Mineral Extraction

Sand and gravel mining widely occurs within the city, specifically throughout Littlerock Wash (floodplain within the Littlerock Fan). Active quarries are located within an existing floodplain where no other type of development exits. Consequently, development is not located near noise-generating mineral extraction activities.



#### **Airport Noise**

Plant 42, a US Air Force facility, is located in the northern part of the city near existing industrial uses and undeveloped land that is designated as industrial. The airport currently has two operational runways. Noise levels in this area of the City have been measured at 60.5 – 68.5 dBA depending on proximity to major noise sources. Peak noise levels due to aircraft operations (approaches and landings) have been measured at 85.5 dBA near the USAF Plant 42 runway. Figure 16.2 depicts the noise levels surrounding the Palmdale Regional Airport. Overall community noise levels surrounding the airport are typically around 65 CNEL.



<sup>79.</sup> The Littlerock Fan is a 12 square mile area extending from the north flank of the San Gabriel Mountains for about 8 miles, which includes the Littlerock Wash floodplain and the fan area to the west

The City is considering the construction of a new passenger airport terminal, which would promote an increase in commercial flights. Proposed commercial flights would not increase noise levels beyond those observed historically. In addition to the Palmdale Regional Airport, there are several airports adjacent to the city that may impact the noise environment. Airports in the vicinity of Palmdale include:

- Agua Dulce Airpark in Agua Dulce located approximately four miles from Palmdale City limits.
- Bohunk's Airpark in Lancaster located approximately five miles from Palmdale City limits.
- Nichols Farms airport located in the unincorporated area of Los Angeles County approximately 5 miles from the Palmdale City limits.
- General William J. Fox Airfield in the Lancaster located approximately 7 miles from Palmdale.

#### **Stationary Noise**

Whereas mobile-source noise affects many receptors along an entire length of roadway, stationary noise sources affect only their immediate areas. Stationary sources of noise may occur within all types of land uses. Generally, residential uses generate noise from landscaping, maintenance activities, and air conditioning systems. Commercial uses tend to generate higher levels of noise, sourced from building operations such as heating, ventilation, air conditioning (HVAC) systems, loading docks, as well as activity from restaurants, bars, outdoor dining, parking garages/lots, etc. Consequently, potential noise concerns can arise when new developments with a mix of uses (i.e., residential, commercial, office) are proposed.

Industrial uses may generate noise from HVAC systems, loading docks, and machinery; all of which may be on a more continual basis due to the nature of the particular activities. Industrial activity is typically the generator of the highest levels of stationary source noise. However, Palmdale's industrial uses (e.g., Air Force Plant 42, Northrop Grumman, and Boeing) are geographically insulated from noise sensitive land uses. The major industrial uses in Palmdale are primarily located in the northeastern section of the city.

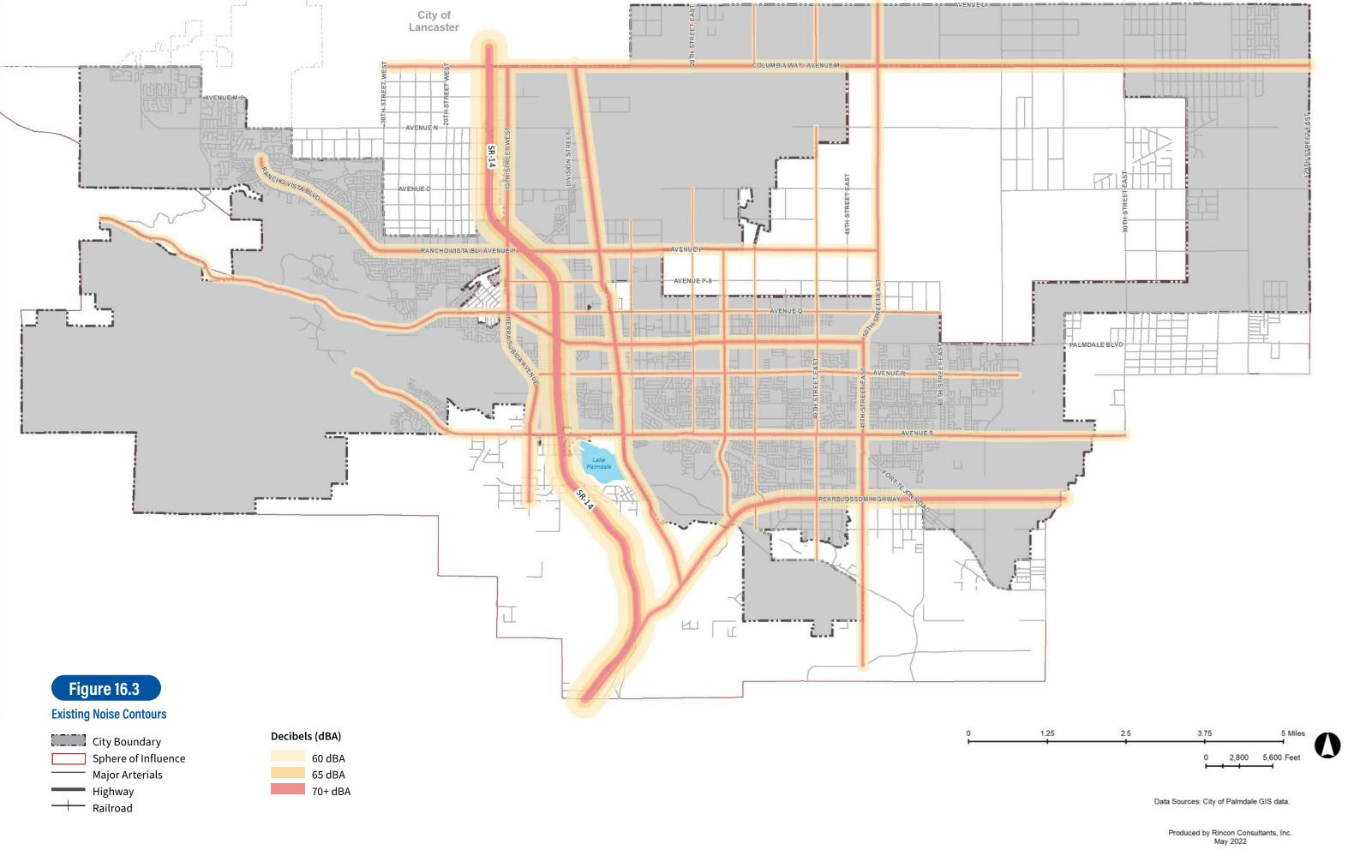
A notable source of stationary noise comes from construction-related activity. Construction of new development could result in stationary noise from various types of construction equipment, such as backhoes, dump trucks, and paving machines, all of which can cause substantial short-term increases in noise in the vicinity of construction sites.

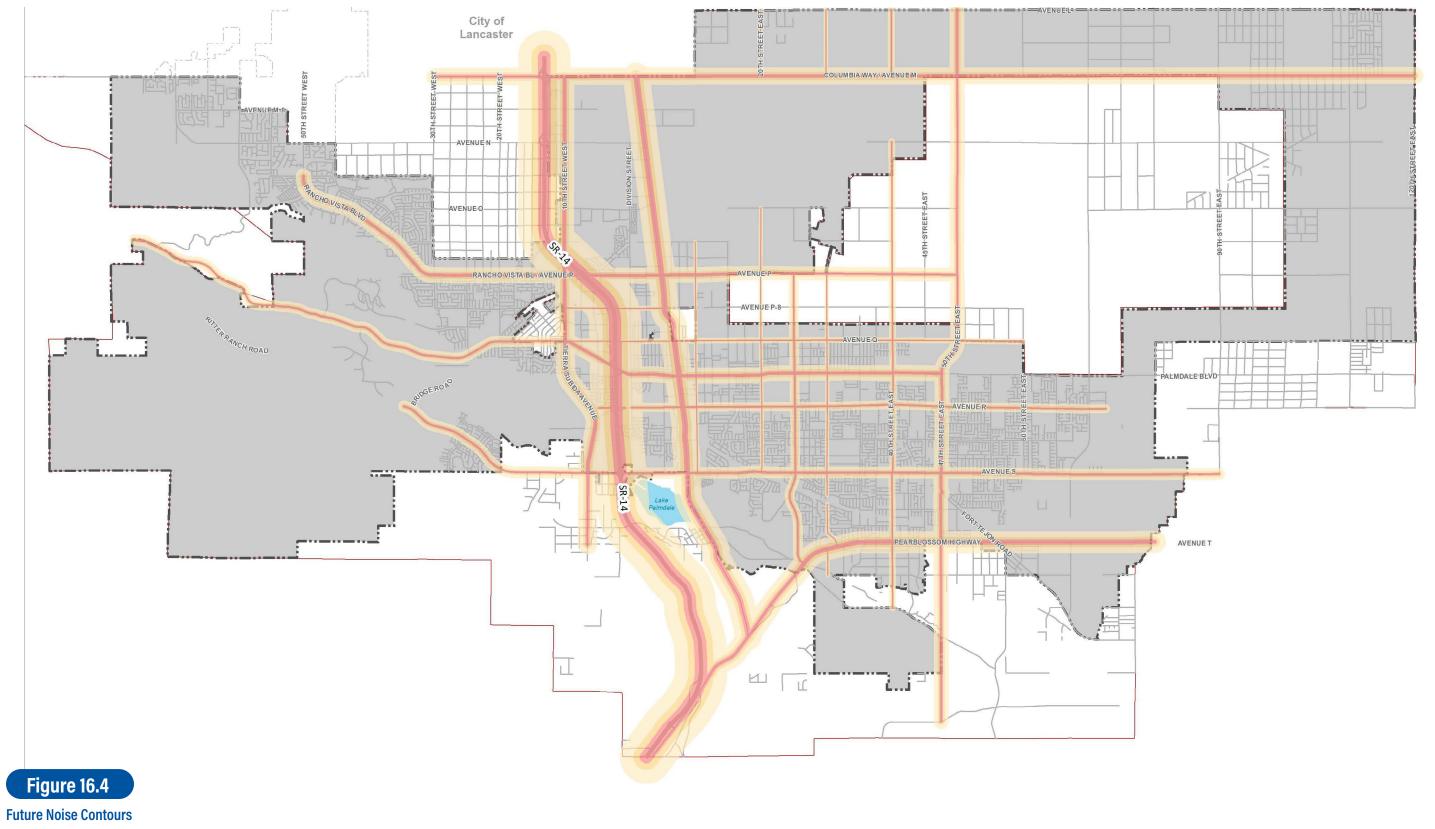


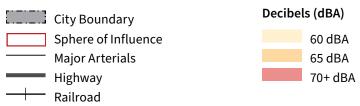
### **Sensitive Land Uses**

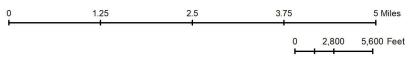
Noise sensitive land uses are considered sensitive to noise impacts. Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Noise sensitive land uses include residences, schools, libraries, hospitals/medical facilities, and assisted living facilities. These uses are considered the most sensitive to noise intrusion and, therefore have more stringent noise exposure standards than manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. The sensitive noise land uses in Palmdale are shown in Figure Figure 16.3.

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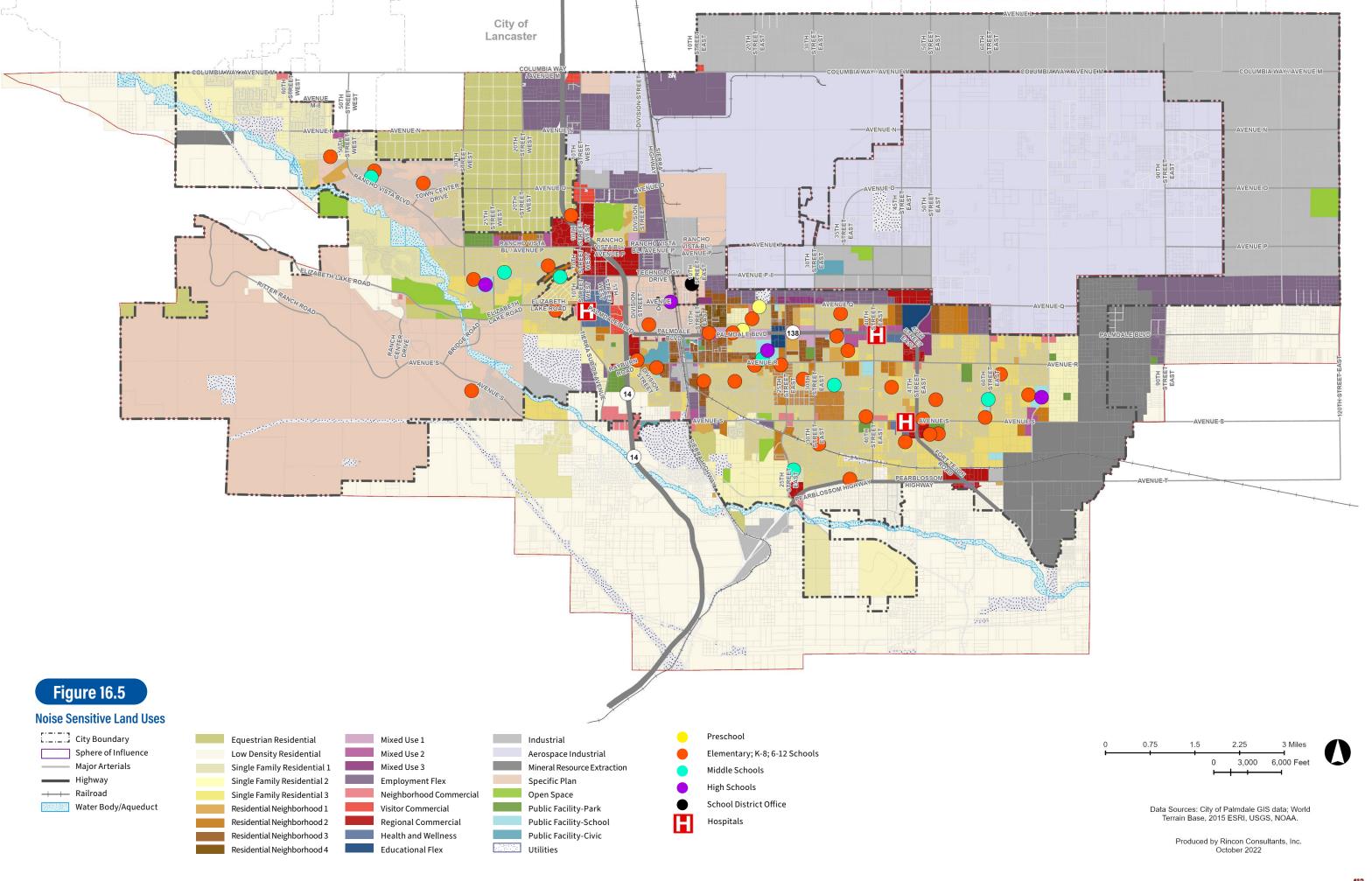






Data Sources: City of Palmdale GIS data.

Produced by Rincon Consultants, Inc. May 2022



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# **Desired Outcomes, Indicators, and Targets**

The following section includes goals and policies for the Noise Element. Goals and policies are followed by implementation actions. Some Noise policies are woven throughout the General Plan, including in the Land Use Element, among others.

### **Top Key Outcomes**

**OUTCOME:** Minimize noise exposure and noise generation near noise sensitive uses.

#### KPI:

Noise sensitive uses near major noise generators

#### TARGET:

 No noise sensitive uses (e.g., residences, schools, hospitals) in areas where noise from freeways, high traffic volume roads, rail activity, or the airport exceeds 65 dBA CNEL **OUTCOME:** Noise levels for all new development are within the "Normally Acceptable" range or the "Conditionally Acceptable" range.

#### KPI's:

- Acceptable noise levels
- Construction and operational noise exposure for noisesensitive land uses

#### **TARGETS:**

- Ensure that noise levels for all new development are within the "Normally Acceptable" or the "Conditionally Acceptable" range by ensuring design features can achieve the applicable interior and exterior noise standards
- Minimize exposure of noise-sensitive land uses to excessive construction and operational noise.



## **Goals and Policies**

The following section includes goals and policies for the Noise Element. Goals and policies are followed by implementation actions. Some Noise policies are woven throughout the General Plan, including in the Circulation and Mobility, Equitable and Healthy Communities, and Land Use and Community Design Elements, among others.

#### **NOISE EXPOSURE**

#### Goal N-1

Minimize resident exposure to excessive noise.

N-1.1 Future Noise Levels. Use the state-recommended noise level guidelines shown in Figure 16.1 to determine the compatibility of proposed land uses with the existing and future noise environment of each proposed development site.

N-1.2 Restrict Land Uses. Restrict noise sensitive land uses near existing or future air, rail, or highway transportation noise sources unless mitigation measures have been incorporated into the design of the project to reduce the noise levels at the noise sensitive land use to less than 65 dBA CNEL at all exterior living spaces including but not limited to, single-family yards and multi-family patios, balconies, pool areas, cook-out areas and related private recreation areas.

N-1.3 Acoustical Analysis for Stationary Noise Sources. When proposed stationary noise sources could exceed an exterior noise level of 65 dBA CNEL at the property line or could impact future noise sensitive land uses, require preparation of an acoustical analysis and mitigation measures to reduce exterior noise levels to no more than 65 dBA CNEL at the property line.

N-1.4 Noise Abatement Strategies. Explore the use of noise abatement strategies such as natural barriers, sound walls, and other buffers to mitigate excessive noise.

N-1.5 Quiet Zones. Where deemed appropriate, restrict train horn noise by establishing quiet zones within Palmdale based on Train Horn Rule (49 CFR Part 222).

#### Goal N-2

Maintain acceptable noise environments throughout the City.

N-2.1 Extreme Noise Sources. Avoid locating new extreme noise sources adjacent to noise sensitive land uses unless mitigation measures can mitigate noise impacts to the sensitive uses.

N-2.2 Restrict Construction Activities. Restrict construction activities in the vicinity of sensitive receptors during the evening, early morning, and weekends and holidays.

N-2.3 Maintain Acceptable Noise Environments. Utilize any or all the following measures to maintain acceptable noise environments throughout the city:

- Control of noise at its source, including noise barriers and other muffling devices built into the noise source.
- Provision of buffer areas and/or wide setbacks between the noise source and other development.
- Reduction of densities, where practical, adjacent to the noise source (freeway, airport, railroad).
- Use of sound insulation, blank walls, double paned windows and other design or architectural techniques to reduce interior noise levels.
- Designation of appropriate land uses adjacent to known noise sources.

N-2.4 Acoustical Analysis for
Noise Sensitive Land Uses. Where
deemed appropriate based upon
available information, require
acoustical analysis and appropriate
mitigation for noise-sensitive land
uses proposed in areas that may be
adversely impacted by significant
intermittent noise sources. Such
noise sources may include but not
be limited to railroads, racetracks,
stadiums, aircraft overflights and
similar uses.

N-2.5 High Speed Rail and Palmdale Airport. As necessary, participate in future planning for the High-Speed Rail and the Palmdale Airport expansion to ensure that neither facility creates noise conditions that adversely affect residents, businesses, or visitors.



#### **COMPATIBLE LAND USES**

#### Goal N-3

Promote noise compatible land uses within the 65 dBA CNEL contour and the Frequent Overflight Area of Air Force Plant 42. N-3.1 Frequent Overflight Area.

Designate and permit employment flex, industrial, aerospace industrial, and similar uses within the 65 dBA CNEL contour and the Frequent Overflight Area.

N-3.2 Areas Within 65 dBA CNEL.
Restrict noise sensitive land uses
(such as residential uses, religious institutions, schools, assisted living facilities, or similar uses) within areas designated within both the 65 dBA CNEL contour and the Frequent Overflight Area, unless mitigation measures prevent adverse health impacts from high noise emissions.

N-3.3 Areas Outside 65 dBA CNEL. In areas outside of the 65 dBA CNEL contours but within the Frequent Overflight Area, encourage land uses that are not noise-sensitive, to the extent feasible. N-3.4 Require Disclosure
Statement. Through the
development review process,
require a disclosure statement
indicating that the property is
subject to frequent overflight and
aircraft noise upon sale of property
within the Accident Potential
Zone (APZ) and Air Installations
Compatible Use Zones (AICUZ).

N-3.5 Aviation Easement. Through conditions of approval, require that any owner of property within the 65 dBA CNEL noise contour or the low altitude overflight area of Plant 42 seeking a land use action from the City to provide an aviation easement to the Los Angeles Department of Airports, the U.S. Air Force, and the City of Palmdale.

#### **CIRCULATION**

#### Goal N-4

Minimize adverse noise impacts associated with transportation.

#### N-4.1 Coordinate with Caltrans.

Coordinate with Caltrans to implement noise mitigation measures, such as sound barrier walls, in the design, improvement, or expansion of freeways and major roadways.

N-4.2 Assess Noise Environment in Residential Areas. Regularly assess the noise environment in residential areas related to heavy vehicle traffic to determine if adjustments should be made to transportation routes.

N-4.3 Insulate Sensitive Receivers. Implement traffic calming and traffic diversion measures across the City to insulate sensitive land uses from freeway and roadway noise.

N-4.4 Protect Disadvantaged Community Members. Prohibit new high noise generating uses in disadvantaged communities, as feasible.

# **Implementation Actions**

The table below identifies programs, planning efforts, coordination efforts, and other actions that will help implement the General Plan's Noise goals and policies. Programs are consistent with this chapter's goals and policies.

The table provides a description of each Implementation Action and lists the correlating policies. Each action also identifies a timeframe for implementation with Short-term representing a 1–3-year timeframe, Medium-term is 4-7 years, Long-term is 8+ years and Ongoing represents an action that the City should continue. Additionally, the table includes the City department that should function as the lead for implementing the actions.



<b>Correlating Goals</b>	Action	Timeframe	Responsible Department
N-1, N-2, N-3	<b>Noise Standards:</b> Establish numeric noise standards within the Palmdale Municipal Code consistent with the State recommended noise level guidance.	\	Economic and Community Development
N-1, N-2, N-3	Municipal Code Update: Update the Palmdale Municipal Code to include noise regulations consistent with all policies outlined within this Noise chapter.		Economic and Community Development
N-1, N-2, N-3, N-4	<b>Noise Reporting Platform:</b> Develop a noise reporting platform in collaboration with existing City applications or webpages to allow for easy noise reporting for community members.		Economic and Community Development and Public Works
N-1, N-4	<b>Quiet Zones:</b> Meet and coordinate with railroad operators to install Quiet Zones at rail crossings near sensitive uses.	\	Economic and Community Development
N-1, N-2, N-4	<b>Regional High-Speed Rail:</b> Meet and coordinate with regional high-speed rail operators to implement the best practices for noise reduction and mitigation within the city.		Economic and Community Development
N-1, N-2, N-4	<b>Traffic Calming/Diversion:</b> Evaluate the need for the insulation of sensitive land uses from freeway and roadway noise throughout the city and include the development of insulation measures into the Capital Improvements Plan.		Economic and Community Development and Public Works



City of Palmdale General Plan Effective October 22, 2022





# Chapter 8.28 BUILDING CONSTRUCTION HOURS OF OPERATION AND NOISE CONTROL

#### Sections:

8.28.010 Definitions.

8.28.030 Construction noise prohibited in residential zones.

8.28.040 Exceptions.

8.28.050 Appeals.

8.28.060 Exemptions – Generally.

8.28.070 Exemptions for public utilities.

**8.28.080** Repealed.

8.28.090 Violations – Penalties.

#### 8.28.010 Definitions.

As used in this chapter:

- (A) "Person" means an individual, partnership, firm or corporation.
- (B) "Section" means a section of this chapter.
- (C) Reference to Ordinance or Statute. Whenever any reference is made to this chapter, or any other ordinance, or to any statute, such reference shall apply to all amendments and additions thereto, now or hereafter made. (Ord. 584 § 1, 1986)

#### 8.28.030 Construction noise prohibited in residential zones.

Except as otherwise provided in this chapter, no person shall perform any construction or repair work on any Sunday, or any other day after 8:00 p.m. or before 6:30 a.m., in any residential zone or within 500 feet of any residence, hotel, motel or recreational vehicle park. For the purposes of this section, construction and repair work includes work of any kind upon any building or structure, earth excavating, filling, or moving, and delivery, preparation or operation of construction equipment, materials or supplies where any of the foregoing entails the use of an air compressor, jack hammer,

power-driven drill, riveting machine, excavator, semi-truck, diesel power truck, tractor, cement truck, or earth moving equipment, hand hammer, or other machine, tool, device or equipment which makes loud noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness sleeping or residing in the area. (Ord. 1335 § 1, 2007; Ord. 584 § 1, 1986)

#### 8.28.040 Exceptions.

The provisions of PMC <u>8.28.030</u> do not apply to any person who performs the construction, repair, excavation or earth moving work involved pursuant to the express written permission of the City Engineer to perform such work at times prohibited in PMC <u>8.28.030</u>. Upon receipt of an application in writing therefor, stating the reasons for the request and the facts upon which such reasons are based, the City Engineer may grant such permission if he finds that:

- (A) The work proposed to be done is affected with public interest; or
- (B) Hardship, injustice or unreasonable delay would result from the interruption thereof during the hours and days specified in PMC 8.28.030; or
- (C) The building or structure involved is devoted or intended to be devoted to a use immediately incident to public defense. (Ord. 584 § 1, 1986)

#### 8.28.050 Appeals.

Any person dissatisfied with the decision of the City made pursuant to the provisions of this chapter may appeal therefrom to the administrative hearing officer appointed pursuant to Chapter 1.20 PMC, within 15 days of the date of the decision, by filing with the City Clerk a written notice of appeal, briefly stating in the notice the grounds relied upon for appeal. If the appeal is made within the time prescribed, the City Clerk shall cause the matter to be set for hearing before the administrative hearing officer, to be held within 45 days from the date of receipt of the notice of appeal, giving the appellant not less than five days' notice in writing of the time and place of hearing. The findings and determinations of the administrative hearing officer at the hearing shall be final and conclusive, and within three days after the findings and determinations are made, the City Clerk shall give notice thereof to the appellant.

In the event no appeal is taken by the permittee, the decision of the City Engineer shall become final and conclusive on the expiration of the time fixed in this section for appeal. (Ord. 1322 § 3, 2007; Ord. 584 § 1, 1986)

#### 8.28.060 Exemptions - Generally.

The provisions of PMC <u>8.28.030</u> do not apply to the construction, repair, or excavation during prohibited hours as may be necessary for the preservation of life or property when such necessity arises during such hours as the offices of the City are closed, or where such necessity requires immediate action prior to the time at which it would be possible to obtain a permit pursuant to PMC <u>8.28.040</u>, if the person doing such construction, repair or excavation obtains a permit therefor within one day after the office of the City Engineer is first opened subsequent to the making of such construction, repair or excavation. (Ord. 584 § 1, 1986)

#### 8.28.070 Exemptions for public utilities.

The provisions of PMC <u>8.28.030</u> do not apply to the construction, repair, or excavation by a public utility which is subject to the jurisdiction of the Public Utilities Commission as may be necessary for the preservation of life or property and where such necessity makes it necessary to construct, repair, or excavate during the prohibited hours. (Ord. 584 § 1, 1986)

#### 8.28.080 Exemptions in nonresidential zones.

Repealed by Ord. 1335. (Ord. 584 § 1, 1986)

#### 8.28.090 Violations – Penalties.

Any person violating any provision of this chapter is guilty of a misdemeanor punishable by a fine of not more than \$500.00 or by imprisonment in the County Jail for not more than six months or by both such fine and imprisonment. Every such person is guilty of a separate offense for every day during any portion of which any violation of any of the provisions of this chapter is committed, continued, or permitted by such person and shall be punished as provided by this chapter. (Ord. 584 § 1, 1986)

The Palmdale Municipal Code is current through Ordinance 1555, passed November 17, 2020.

Disclaimer: The City Clerk's office has the official version of the Palmdale Municipal Code. Users should contact the City Clerk's office for ordinances passed subsequent to the ordinance cited above.

City Website: <a href="https://cityofpalmdale.org/">https://cityofpalmdale.org/</a>

City Telephone: (661) 267-5151

Code Publishing Company

# Chapter 9.18 DISTURBING, EXCESSIVE, LOUD, OR OFFENSIVE NOISE

#### Sections:

- 9.18.010 Noise.
- 9.18.020 Acts constituting disturbing, excessive, loud, offensive noise.
- 9.18.030 Loud parties.
- 9.18.040 Reimbursement for law enforcement costs.
- 9.18.050 Enforcement and penalties for all provisions of this chapter.

Prior legislation: Ords. 1208 and 1308.

#### 9.18.010 Noise.

- (A) It shall be unlawful for any person to willfully make or continue, or cause or permit to be made or continued, any loud, unnecessary, or unusual noise which unreasonably disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area.
- (B) The characteristics and conditions, which may be considered in determining whether such noise violates the provisions of this section, shall include, but not be limited to, the following:
  - (1) The volume of the noise;
  - (2) The intensity of the noise;
  - (3) Whether the nature of the noise is usual or unusual;
  - (4) Whether the origin of the noise is natural or unnatural;
  - (5) The volume and intensity of the background noise, if any;
  - (6) The proximity of the noise to sleeping facilities;
  - (7) The nature and zoning of the area within which the noise emanates;
  - (8) The density of the inhabitation of the area within which the noise emanates;

- (9) The time of the day or night the noise occurs;
- (10) The duration of the noise;
- (11) Whether the noise is recurrent, intermittent, or constant;
- (12) Whether the noise is produced by a commercial or noncommercial activity. (Ord. 1332 § 1, 2007)

#### 9.18.020 Acts constituting disturbing, excessive, loud, offensive noise.

The following activities, among others, are declared to cause disturbing, excessive, loud, or offensive noises in violation of this chapter and causing or permitting such activities is unlawful; provided, however, that inclusion in this section shall not be construed as limiting the type of activities which may be found to cause disturbing, excessive, loud, or offensive noises:

- (A) Horns, Signaling Devices, Etc. The unnecessary or unreasonable use or operation of horns, signaling devices, or other similar devices, on automobiles, motorcycles, motor-driven cycles or any other vehicles.
- (B) Radios, Television Sets, Phonographs, Loud Speaking Amplifiers, and Similar Devices.
  - (1) Uses Restricted. The use or operation of any sound production or reproduction device, radio receiving set, loud speakers, and sound amplifier or other similar machine or device for the producing or reproducing of sound in such a manner as to disturb the peace, quiet, or comfort of any reasonable person of normal sensitivity in any area of the City is prohibited. This provision shall not apply to any participant in a licensed parade, to law enforcement or emergency personnel in the performance of their duties, or to any person duly authorized, licensed, or permitted by the City to engage in such conduct in a public park, public facility, or other public place.
  - (2) Prima Facie Violations of this Subsection. Any of the following shall constitute evidence of a prima facie violation of this subsection; provided, however, that inclusion herein shall not be construed as limiting the activities which may be found to violate this section:
    - (a) The operation of any such sound production or reproduction device, radio receiving set, musical instrument, drum, phonograph, television set, machine, loud speaker and sound amplifier, or similar machine or device between the hours of 10:00 p.m. and 8:00 a.m. in such a manner as to be plainly audible at a distance of 50 feet from the building, structure, or vehicle in which it is located.

- (b) The operation of any sound amplifier which is part of, or connected to, any radio, stereo receiver, compact disc player, digital video disc player, computer, cassette tape player, or other similar device when operated in such a manner as to be plainly audible at a distance of 50 feet and when operated in such a manner as to cause a person to be aware of vibration accompanying the sound at a distance of 50 feet from the source.
- (3) Impoundment. Any person who is authorized to enforce any provision of this chapter and who encounters evidence of a prima facie violation of this section is empowered to confiscate and impound as evidence any or all of the components amplifying or transmitting the sound.
- (C) Hospitals, Schools, Libraries, Rest Homes, Long-Term Medical or Mental Care Facilities. To make noise adjacent to a hospital, school, library, rest home, or long-term medical or mental care facility, which noise unreasonably interferes with the workings of such institutions or which disturbs or unduly annoys occupants of such institutions.
- (D) Jake Brakes. The use of jake brakes, using compression release engine brakes and any method of using engine compression to slow a vehicle is prohibited in the City of Palmdale and unlawful. (Ord. 1458 § 1, 2014; Ord. 1332 § 1, 2007)

#### 9.18.030 Loud parties.

- (A) Loud Parties Defined. A "loud party" is a gathering of two or more people on private property which is determined by law enforcement personnel at the scene to be disruptive to the public peace, health, safety, or welfare due to the magnitude of the crowd, noise, disturbances, unruly behavior of those attending the party or gathering, excessive traffic or traffic congestion, illegally parked vehicles blocking other traffic or fire access or destruction of property.
- (B) Loud Parties Prohibited. It shall be unlawful for any responsible person to organize, cause, or permit a loud party.
  - (1) For the purposes of this subsection, "responsible person" means the person who owns the property where the party, gathering or event takes place; the person in charge of the premises; and/or the person who organized the event. If the responsible person is a minor, then the parents or guardians of that minor are also responsible persons whether or not they are present at the party. All responsible persons, as defined herein, are deemed to have caused or permitted the loud party and are responsible for and may be charged with a violation of this chapter; provided, however, a property owner who is not present at the party or gathering may not be charged with a violation of this chapter unless the absentee owner had knowledge that the party or gathering was occurring, was planned to occur or reasonably should have known the party or gathering

would occur. This exception does not apply to a parent or guardian of a responsible person who is a minor.

- (2) Prima Facie Violations of this Subsection. The following shall constitute evidence of a prima facie violation of this subsection; provided, however, that inclusion herein shall not be construed as limiting the activities which may be found to violate this subsection: A party, event or gathering where:
  - (a) Noise emanating from or attributable to that party, event or gathering is audible from a distance of 50 feet from the source of that noise; or
  - (b) Persons present at the party or gathering are acting in a wild, unruly, uncontrollable manner disruptive to neighbors; or
  - (c) The number of persons present violates the fire code, presenting a fire hazard; or
  - (d) Vehicles of those attending the party or gathering are illegally parked or parked in a manner to cause traffic congestion or to block traffic or fire access; or
  - (e) Persons present at the party or gathering have caused or are causing destruction to property of others.
- (C) Loud Parties Declared a Public Nuisance. Loud parties as defined in this section are hereby declared to be a public nuisance and may be abated as set forth herein or as otherwise provided by law.
- (D) Authority of Law Enforcement Personnel. Law enforcement personnel are authorized to take all actions and to give all directions and orders that may be necessary to abate the nuisance, violation or condition, including the arrest of, or issuance of citations to, the responsible person or persons, and any others who are in violation of this chapter or any other state statute or local ordinance.
- (E) Cease and Desist Order. No person shall fail or refuse to obey or fail to comply with orders of law enforcement personnel to discontinue the loud party, to disperse or vacate the location of the loud party, and to turn off radios, television sets, phonographs, loud speaking amplifiers, and similar devices. Refusal to comply with such an order is a separate and additional offense from that of causing or permitting a loud party.
- (F) Loud Party Participation Prohibited. All persons attending a party or social gathering declared to be a public nuisance by law enforcement personnel shall immediately disperse upon the order of law

enforcement personnel, and all persons not domiciled at the site of such party or social gathering shall immediately leave the premises. No person shall fail or refuse to obey and abide by such an order. (Ord. 1458 § 2, 2014; Ord. 1332 § 1, 2007)

#### 9.18.040 Reimbursement for law enforcement costs.

If after issuance of a written reimbursement notice as required by this section, law enforcement personnel are required to respond to the property to address another violation of this chapter within a 30-day period after issuance of said notice, then the responsible person or persons, as defined in this chapter, shall be jointly and severally liable for all actual costs and expenses incurred by the City during second or subsequent responses.

- (A) Written Reimbursement Notice. Law enforcement personnel responding to a loud party shall issue a written reimbursement notice to the responsible person that if within a 30-day period after the initial response law enforcement personnel are again required to respond to the property to address a violation of this chapter, then the responsible person shall be liable to reimburse the City for all costs and expenses incurred by law enforcement personnel during second or subsequent responses for violations of this chapter.
- (B) Reimbursement of Costs and Expenses. All responsible persons for a party or gathering, which requires a second or subsequent response, as described herein above are jointly and severally liable for the following costs and expenses incurred by the City:
  - (1) The actual costs incurred by the City for the services of the law enforcement personnel for each response after the initial response;
  - (2) Damage to public property incurred in the course of any second or subsequent response by law enforcement personnel; and
  - (3) Injuries to any law enforcement personnel involved in a second or subsequent response.
- (C) Collection. The expense of a reimbursable response hereunder shall be charged against the person liable for the expense under this chapter. The charge constitutes a debt of that person to the City, and is collectible by the City in the same manner as in the case of an obligation under a contract, expressed or implied.
- (D) Other Penalties Not Precluded. Nothing contained in this subsection is intended to preclude the filing of any administrative or criminal charges or the imposition of criminal fines or administrative penalties, or the summary, civil or administrative abatement of any public nuisance under state or local

law, including other sections of this chapter, against any person or persons who may be subject to the reimbursement provisions of this section. (Ord. 1332 § 1, 2007)

#### 9.18.050 Enforcement and penalties for all provisions of this chapter.

- (A) This chapter may be enforced by Peace Officers and by the City of Palmdale employees specified in PMC Title 1.
- (B) Violations of this chapter may be punished as set forth in PMC Title 1.
- (C) As an additional remedy for violations of this chapter, the operation or maintenance of any device, instrument, vehicle, or machinery in violation of any provision of this chapter, which operation or maintenance causes discomfort or annoyance to reasonable persons of normal sensitiveness, or which endangers the comfort, repose, health, or peace of residents in the area, shall be deemed and is declared to be a public nuisance which may be abated through summary abatement, administrative abatement, or abatement by a restraining order or injunction issued by a court of competent jurisdiction. (Ord. 1332 § 1, 2007)

The Palmdale Municipal Code is current through Ordinance 1600, passed November 2, 2022.

Disclaimer: The City Clerk's office has the official version of the Palmdale Municipal Code. Users should contact the City Clerk's office for ordinances passed subsequent to the ordinance cited above.

City Website: https://cityofpalmdale.org/

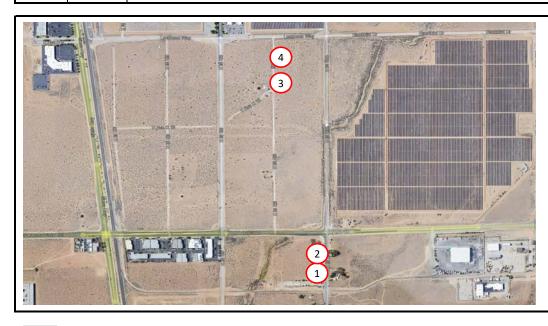
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## **Appendix B**

Field Data and Photos

					Field She	eet				
Project	t: Patriot Busine	ess Park		Engineer:	B. Morrison				Date: JN:	02/02/2023 2389-2023-03
South of L	<b>ment Address</b> Lockheed Way, t of 8th St. E., a	North of Ran			<b>City:</b> Palmdale, CA	4			Site No.:	
	evel Meter:		Calibration	Record:				Conditions:		
Piccolo II				Input, dB/		Time		Temp:	47 Deg. F.	
Serial #	P022208220	4	1	94.0		10:12 AM		Windspeed:	4 m.p.h.	
	P022208220	5	2	94.0		10:11 AM	<u> </u>	Direction:	Southwest	
	P022101080	1	3	94.0		11:06 AM		Skies:	Mostly Clea	ar
	P022101080	2	4	94.0		11:06 AM				
Calibrato BSWA	or:		5	/	1	/	/			
Serial #	500732									
Meter Se	ettings:		L LINEAR		✓ SLOW		☐ 1/1 OCT			JTE INTERVALS
	C-WTD		☐ IMPULSE		FAST		1/3 OCT		L(N) PERC	ENTILE VALUES
<b>Notes:</b> All measu	rements were t	aken over a d	uration of 30	) minutes.					Measurem  Long-ter  ✓ Short-ter	m
		Start Time	Stop Time	Leq	Lmax	Lmin	L2	L8	L25	L50
		10:21 AM	10:51 AM	57.0	74.6	38.2	67.0	61.5	53.5	49.5
	1	Comments:	Measurement	t was taken	approximately	50 feet we	st of the cen	iterline of 10th ancho Vista Bo	Street E. Ar	
		10:19 AM	10:49 AM	59.3	81.2	39.8	68	63.3	58.5	54.2
	2	Comments:	Measurement	t was taken	approximately	50 feet we	st of the cen	iterline of 10th ancho Vista Bo	Street E. Ar	
la/		11:10 AM	11:40 AM	49.3	68.9	38.9	56.8	52.7	47.4	43.3
Interval	3	Comments:	Measuremen <sup>-</sup>	t was taken		600 feet so	outh of the c	enterline of Lo		. Ambient noise
		11:13 AM	11:43 AM	48.4	61.6	39.6	56.2	53.1	48.2	44.4
	4				approximately es overhead,				ckheed Way	. Ambient noise
	5	Comments:	l .	I		I	I		I	





		Field Sheet - Photos		
Project:	Patriot Business Park	Engineer: B. Morrison	Date:	02/02/2023
	ratifor busifiess raik		JN:	2389-2023-03
Measurement	t Address:	City:	Site No.:	1
South of Loc	ckheed Way, North of Rancho	Palmdale, CA		1
Vista Blvd., E	East of 8th St. E., and West of			



		Field Sheet - Photos		
Project:	Patriot Business Park	Engineer: B. Morrison	Date:	02/02/2023
	Patriot Business Park	-	JN:	2389-2023-03
Measuremen	t Address:	City:	Site No.:	י
South of Loc	ckheed Way, North of Rancho	Palmdale, CA		2
Vista Blvd., I	East of 8th St. E., and West of			



		Field Sheet - Photos		
Project:	Patriot Business Park	Engineer: B. Morrison	Date:	02/02/2023
	Patriot Business Park	_	JN:	2389-2023-03
Measurement	t Address:	City:	Site No.:	2
South of Loc	kheed Way, North of Rancho	Palmdale, CA		3
Vista Blvd., E	ast of 8th St. E., and West of			



		Field Sheet - Photos		
Project:	Patriot Business Park	Engineer: B. Morrison	Date:	02/02/2023
	Patriot Business Park	_	JN:	2389-2023-03
Measuremen	t Address:	City:	Site No.:	1
South of Loc	ckheed Way, North of Rancho	Palmdale, CA		4
Vista Blvd., I	East of 8th St. E., and West of			



## Appendix C

SoundPLAN Calculation Worksheet

### Contribution levels of the receivers

		Le	evel
Source name	Traffic lane	Day	Night
		dE	B(A)
1	1.Fl	47.2	47.2
HVAC	-	30.1	30.1
HVAC	-	30.1	30.1
HVAC	-	30.1	30.1
HVAC5	-	30.7	30.7
HVAC5	-	30.7	30.7
HVAC6	-	30.7	30.7
HVAC7	-	33.9	33.9
HVAC8	-	34.0	34.0
HVAC9	-	33.9	33.9
HVAC10	-	37.6	37.6
HVAC11	-	37.5	37.5
HVAC12	-	35.4	35.4
HVAC13	-	38.7	38.7
HVAC14	-	38.7	38.7
HVAC15	-	38.6	38.6
Lot 3	-	14.3	13.0
Lot 12	_	22.2	20.3
Lot 16	_	17.7	16.1
Lot 20	-	32.2	30.5
2	1.Fl	45.4	45.4
HVAC	-	29.1	29.1
HVAC	-	29.1	29.1
HVAC	_	29.1	29.1
HVAC5	_	29.7	29.7
HVAC5	-	29.7	29.7
HVAC6	-	29.7	29.7
HVAC7	_	32.5	32.5
HVAC8	-	32.5	32.5
HVAC9	-	32.5	32.5
HVAC10	_	35.7	35.7
HVAC11	-	35.6	35.6
HVAC12	-	33.5	33.5
HVAC13	-	36.5	36.5
HVAC14	_	36.5	36.5
HVAC15	_	36.5	36.5
Lot 3	_	14.6	13.4
Lot 12	_	20.7	18.8
Lot 16	-	16.7	15.2
Lot 20	<u>-</u>	30.0	28.3
LO. LO	I		20.0