Noise Impact Analysis

Ortega Plaza Commercial Retail Development

Lake Elsinore, CA

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Table of Contents

List of Figures

List of Tables

Executive Summary

A noise analysis was prepared for the Ortega Plaza Commercial Retail Development (project) to support the City of Lake Elsinore's Development Application guidelines to demonstrate compliance with the City of Lake Elsinore's Municipal Code. The project is located at 15890 Grand Avenue located at the southeast corner of Ortega Hwy (74) in the City of Lake Elsinore. This project is surrounded by residential properties and a school. The City of Lake Elsinore's Municipal Code requires that noise standards are met when residential land uses reside around the project site. Changes in noise levels were evaluated at the property boundaries of these sensitive land uses and along affected roadways during the operation of the facility and during stationary and mobile source construction activities.

Characterization of the Existing Environment

The existing environment was characterized by taking a 24-hour noise measurements within the project vicinity to determine the existing Community Noise Level of 77 CNEL. This noise level is within the conditionally acceptable category for Land Use Compatibility for Community Noise Environments. The dominant noise source within the project area that contributes to this noise level is vehicular traffic traveling along Ortega Highway.

Off-site Operational Traffic Noise (less than significant)

Traffic generated by the operation of the Project will influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels were calculated using the TNM 2.5 noise model to determine the noise levels at the nearest sensitive receiver locations. The traffic noise levels provided in this analysis are based on the traffic forecasts prepared by Urban Crossroads, Inc. Noise levels were calculated for Existing 2021, Existing plus Project (EAP) 2023, and Existing plus Project plus Cumulative (EAPC) 2023 traffic conditions. The analysis shows that the unmitigated Project-related traffic noise level increases under all with Project traffic scenarios are considered less than significant impacts at land uses adjacent to the study area roadway segments.

Stationary Operational Noise (less than significant)

Operation of the project will generate noise from stationary sources on-site. The project will construct a 3,375 sq. ft convenience store with a drive-thru quick serve restaurant and a 3,427 sq. ft gas-fueling canopy on an approximately 3.57-acre site. The project site incorporates a 461-foot-long sound wall at a height of 7 feet near the northeastern edge of the property line, which is adjacent to residential land uses.

The SoundPLAN noise prediction model was used to calculate noise levels at the noise-sensitive receptors located around the Project site. Inputs to the SoundPLAN model included ground topography and ground type, noise source locations and heights, receiver locations and sound walls. The primary non-transportation noise sources associated with the Project are HVAC equipment, on-site parking lot activities (i.e. car doors slamming, cars idling in the parking lot and parking lot circulation), gas-fueling, trash enclosure pickup and drive-thru speaker. Reference noise levels for these noise sources were obtained from the SoundPlan library.

Results from SoundPlan indicated that project noise levels would not exceed noise level limits listed in Section 17.176.060(A)(2) Table 1 of the City of Lake Elsinore Municipal Code. In addition, project noise levels for each of the on-site noise generating activities were combined with the existing ambient noise level to obtain a maximum noise level from the project at each of the sensitive receivers identified around the project site. At all sensitive receivers identified around the project site, the increases in operational noise levels from the project did not exceed allowable threshold levels. Therefore, stationary operational noise levels at the project's property boundary are less than significant.

Mobile Source Construction Noise (less than significant)

Although the construction schedule has not been developed for the project, it is anticipated construction activities involving stationary and mobile equipment will occur longer than 10 days. A worst-case scenario was developed to predict the maximum noise level based on typical mobile equipment usage during the construction of a convenience store with gas pumps and a car wash facility. Based on the maximum noise levels of mobile construction equipment published by the Federal Highway Administration, it was determined that the site preparation phase, which includes demolition, excavation and grading of the site, would generate the highest noise levels because it involves operating the noisiest construction equipment (i.e.) earthmoving equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three or four minutes at lower power settings. Most earth moving equipment will reach 85 dBA L_{max} at a distance of 50 feet. A worse-case scenario was developed based on three pieces of grading equipment (a dozer, a grader, and a backhoe) operating simultaneous at 40% of the time at an average distance of 224 feet measured from the center of the project site to the closest project site boundary. The highest noise level that would be experienced at the property boundary is 72 dBA L_{max}. This noise level is less than the City of Lake Elsinore noise standard of 75 dBA. Therefore, mobile source construction noise impacts are less than significant. If construction occurs daily, between 8:00 p.m. to 7:00 a.m. would exceed the noise standard of 60 dBA L_{max}. Therefore, limiting the construction hours to daytime hours between 7:00am to 7:00pm will reduce this impact to less than significant.

Stationary Source Construction Noise-Residential Land Use (less than significant with mitigation)

Stationary equipment is expected to be used at the project site during the architectural coating phase of construction. It is anticipated that an ultra-quiet air compressor would be required for painting buildings and structures on site as well as striping on the pavement. For this piece of equipment, the highest noise level that would be experienced at the property boundary is 52 dBA L_{max}. This noise level is less than the City of Lake Elsinore noise standard of 60 dBA at the nearest residential property. If construction occurs daily, between 8:00 p.m. to 7:00 a.m. would exceed the noise standard of 50 dBA L_{max}. Therefore, limiting the construction hours to daytime hours between 7:00 a.m. to 7:00 p.m. will reduce this impact to less than significant. During the architectural coating phase of construction the contractor shall utilize an ultra-quiet air compressor with a L_{max} noise level no more than 65 dBA. (Referenced as mitigation measure MM-5).

Vibration (less than significant)

Vibration impacts are generally associated with activities such as train operations, construction, and heavy truck movements. The operation of the project does not contain sources that would generate noticeable vibration, therefore, the vibration perception threshold of 0.01 in/sec during operation of the project will be less than significant.

Vibration impacts from construction were assessed by selected the maximum reference vibration levels provided by the FTA during grading activities. A large bulldozer represents the peak source of vibration with a reference level of 0.089 in/sec at a distance of 25 feet. Vibration was evaluated at the project's closest property boundary to land uses, which would occur near the residential land uses near R1 east of the project site. It was estimated that construction vibration levels would approach 0.006 in/sec. Using the construction vibration assessment annoyance criteria provided by the City of Lake Elsinore, the construction of the project will not result in vibration impacts at the project's property boundary. Moreover, construction at the Project site will be restricted to daytime hours (7:00 am to 7:00 pm on weekdays only Monday through Friday), thereby eliminating potential vibration impact during the sensitive nighttime hours. Further, the predicted construction noise level is below the vibration threshold of 0.01 in/sec. Therefore, construction vibration impacts at the project's property boundary are less than significant.

Construction Mitigation Measures

The following mitigation measures would reduce any noise level increases produced by the construction equipment to the nearby noise-sensitive land uses:

- *MM1: Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the hours of 7:00 a.m. and 7:00 p.m. on weekdays only, Monday through Friday. Construction is prohibited on weekends and holidays.*

- *MM2: During all project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receivers nearest the Project site.*

- *MM3: The construction contractor shall locate equipment staging in areas that will create a minimum distance of 200 feet between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., the center of the site) during all Project construction. If construction occurs within 50 feet residential locations, temporary noise barriers should be erected.*

- *MM4: The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. and 7:00 p.m. on weekdays. Construction is prohibited on weekends and holidays).*

- *MM5:The construction contractor shall utilize an ultra-quiet air compressor with a L_{max} noise level to no more than 65 dBA.*

1.0 Introduction

The Ortega Plaza Commercial Retail Development Project is located on a 3.57-acre parcel in the City of Lake Elsinore (City) at 15890 Grand Avenue, Lake Elsinore, CA 92530. The project will demolish an existing 1,314 square foot (sq. ft.) building that currently houses Burger King and Wings Quick Serve fast-food restaurants. The project will construct a 3,375 sq. ft convenience store with a drive-thru quick serve restaurant and a 3,427 sq. ft gas-fueling canopy. The existing 8,634 sq. ft. retail building and an existing 6,478 sq. ft. office building will remain on site.

Projects of this type are required to undergo California Environmental Quality Act (CEQA) review to identify the environmental exceedances of thresholds levels. Noise exceedances occur when noise levels exceed the City of Lake Elsinore's General Plan Noise Element and the City of Lake Elsinore's Municipal Code established noise limits for various land uses.

This noise analysis has been prepared to support the City's environmental review process and to provide information regarding potential impacts from noise associated with the project. This noise study describes the existing noise environment, identifies applicable rules and regulations, discusses the noise modeling methodology and procedures used to assess noise impacts, evaluates potential noise impacts from the project, and includes measures to mitigate or provide design features to reduce noise impacts associated with the project to a less than significant level.

Appendix G of the 2020 California Environmental Quality Act (CEQA) Guidelines states that a project could have a noise impact if any of the following would occur:

> *a) Generation of substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies*
>
> *b) Generation of excessive groundborne vibration or groundborne noise levels*

1.1. Project Location

The project site is located on a 3.57-acre site at 15890 Grand Avenue located at the southeast corner of Ortega Hwy (74), as shown in Figure 1. The land uses in the vicinity of the project area include a school, Elsinore Naval & Military School, and residential homes along Morro Way and across the street from the project site along Hwy 74. The proposed project site plan is shown in Figure 2.

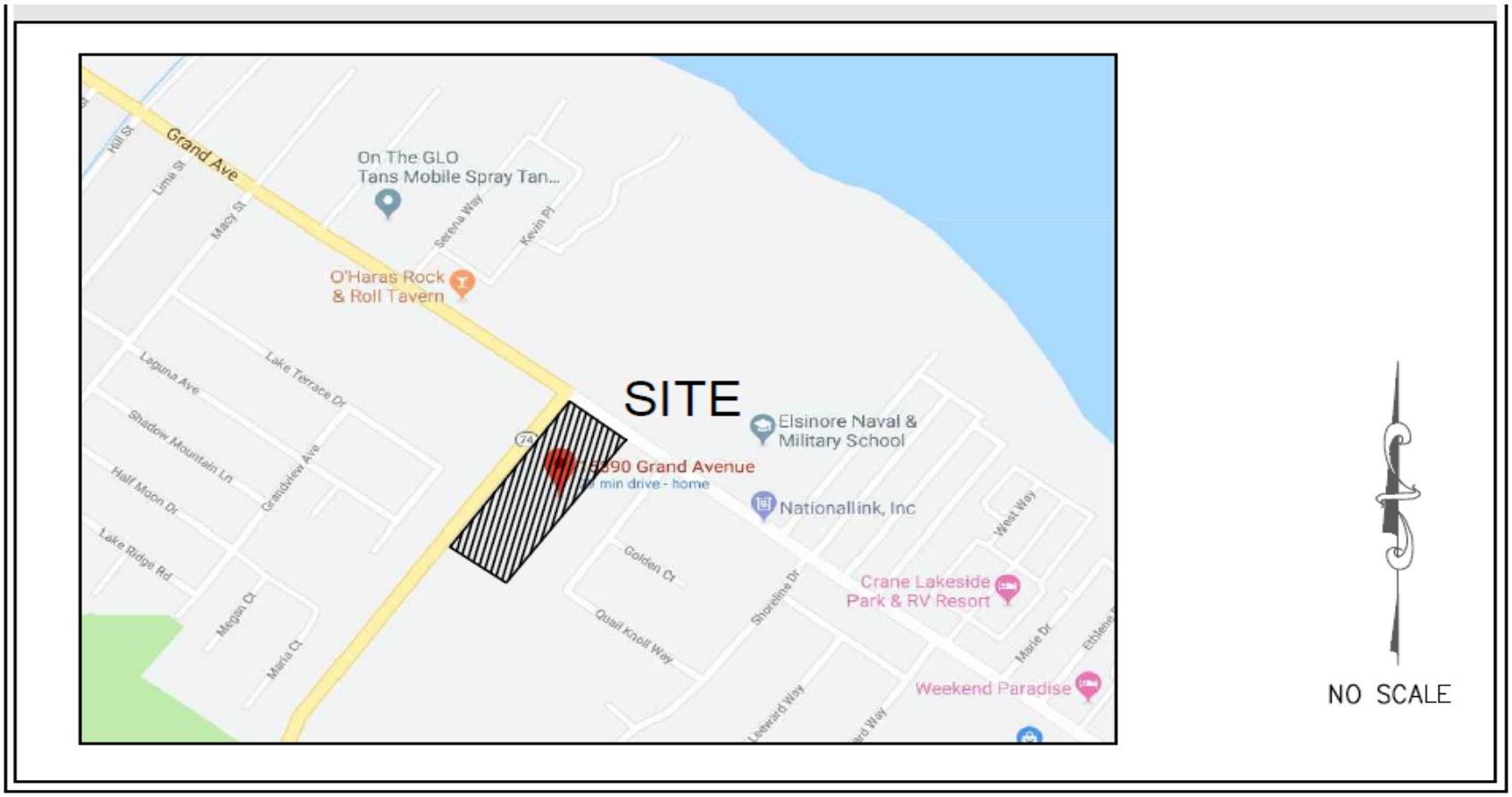


Figure 1. Vicinity Map of Project Location

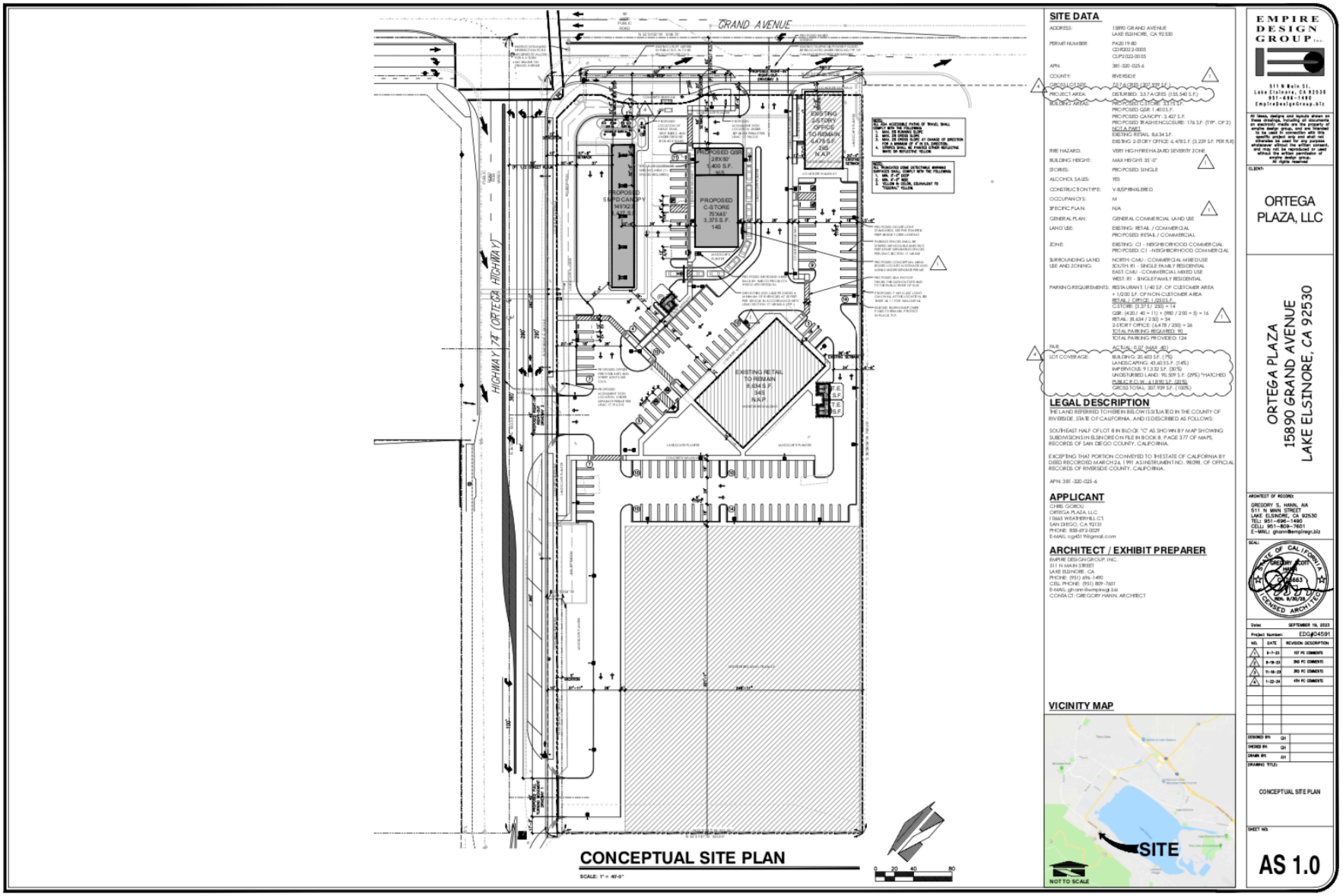


Figure 2. Project Site Plan

2.0 Characteristics of Sound

Sound is increasing to such disagreeable levels in the environment that it can threaten quality of life. Noise, usually defined as unwanted sound, consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves, combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with acoustical instruments.

2.1 Measurement of Sound

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units, such as inches or pounds, decibels are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) are 10 times more intense than 1 decibel, 20 decibels are 100 times more intense, and 30 decibels are 1,000 times more intense. Thirty decibels represent 1,000 times more acoustic energy than one decibel. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 decibels. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10-decibel increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 A-weighted decibels (dBA) (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately six decibels for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source, such as highway traffic or railroad operations, the sound decreases three decibels for each doubling of distance in a hard site environment. Line source noise, when produced within a relatively flat environment with absorptive vegetation, decreases four and one-half decibels for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoyance effects of sound. Equivalent continuous sound level

(L_{eq}) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} and Community Noise Equivalent Level (CNEL) or the day-night average level (Ldn) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a 5-dBA weighting factor applied to the hourly L_{eq} for noise occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and a 10-dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). Ldn is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and Ldn are within 1 dBA of each other and are normally interchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoyance aspects of intermittent noise.

Another noise scale often used together with the L_{max} is the maximum sound level, during a measurement period or a noise event. L_{max} is similar to the L10 or the upper limit of fluctuating noise. For example, the L10 noise level represents the noise level exceeded 10 percent of the time during a stated period. The L50 noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L90 noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L50 are approximately the same.

Noise impacts can be described in three categories. The first is audible impact, which refers to increases in noise levels noticeable to humans. Audible increases in noise levels generally require a change of 3.0 dB or greater since this level has been found to be barely perceptible in an exterior environment. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise levels of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

2.2 Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160–165 dBA will result in dizziness or loss of equilibrium. The

ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less developed areas.

Table 2-1 lists Definitions of Acoustical Terms, and **Table 2-2** shows Common Sound Levels and Their Noise Sources.

Table 2-1. Definitions of Acoustical Terms

Term	Definition
Decibel, dB	A unit of level that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.[1]
L02, L08, L50, L90	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period, respectively.
Equivalent Continuous Noise Level, Leq	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, Ldn	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Lmax, Lmin	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurement and Noise Control 1991.
1. All sound levels in this report are A-weighted, unless reported otherwise.

Table 2-2. Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Noise jet engine	140	Deafening	**128 times as loud**
Civil defense siren	130	Threshold of pain	**64 times as loud**
Hard rock band	120	Threshold of feeling	**32 times as loud**
Accelerating motorcycle at a few feet away	110	Very loud	**16 times as loud**
Pile driver; noisy urban street/heavy city traffic	100	Very loud	**8 times as loud**
Ambulance siren; food blender	95	Very loud	
Garbage disposal	90	Very loud	**4 times as loud**
Freight cars; living room music	85	Loud	
Pneumatic drill; vacuum cleaner	80	Loud	**2 times as loud**
Busy restaurant	75	Moderately loud	
Near freeway auto traffic	70	Moderately loud	**Reference level**
Average office	60	Quiet	**1/2 as loud**
Suburban street	55	Quiet	
Light traffic; soft radio music in apartment	50	Quiet	**1/4 as loud**
Large transformer	45	Quiet	
Average residence without stereo playing	40	Faint	**1/8 as loud**
Soft whisper	30	Faint	
Rustling leaves	20	Very faint	
Human breathing	10	Very faint	**Threshold of hearing**

Source: Handbook of Acoustical Measurement and Noise Control 1991.
1. All sound levels in this report are A-weighted, unless reported otherwise.

3.0 Regulatory Standards

Federal, state, and local county governments, and most municipalities in the state of California have established standards and ordinances to control noise. These noise standards serve to limit the population from exposure to physically and/or psychologically damage as well as intrusive noise levels. Federal, state, and local agencies regulate different aspects of environmental noise. Applicable regulations for each level of government is provided below for the project.

3.1 Federal Regulations and Standards

There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the project. With regard to noise exposure and workers, the Office of Safety and Health Administration (OSHA) regulations safeguard the hearing of workers exposed to occupational noise. Federal regulations also establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 Code of Federal Regulations (CFR), Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters (approximately 50 feet) from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

3.2 California Noise Requirements

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Officeof Planning and Research (OPR). The purpose of the Noise Element is to *limit the exposure ofthe community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.3 California State Building Code

California Government Code Section 65302 (f) mandates that the legislative body of each county and city adopt a noise element as part of their comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services as shown in **Table 3-1**, California Land Use Compatibility Noise Guidelines. City of Lake Elsinore has adopted these standards.

Table 3-1. Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure Level (in terms of CNEL)			
	Normally Acceptable	**Conditionally Acceptable**	**Normally Unacceptable**	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 - 60	55 - 70	70 - 75	**75 - 85**
Residential - Multiple Family	50 - 65	60 - 70	70 - 75	**70 - 85**
Transient Lodging - Motel, Hotels	50 - 65	60 - 70	70 - 80	**80 - 85**
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	**80 - 85**
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	NA	**65 - 85**
Sports Arenas, Outdoor Spectator Sports	NA	50 - 75	NA	**70 - 85**
Playgrounds, Neighborhood Parks	50 - 70	NA	67.5 - 75	**72.5 - 85**
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 70	NA	70 - 80	**80 - 85**
Office Buildings, Business Commercial and Professional	50 - 70	67.5 - 77.5	75 - 85	**NA**
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	75 - 85	**NA**

Source: **General Plan Guidelines, Office of Planning and Research, California, October 2003, page 250.**

Notes:
NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

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

CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.

NA: Not Applicable

The guidelines rank noise-land use compatibility in terms of "normally acceptable," "conditionally acceptable" and "clearly unacceptable" noise levels for various land use types. Single-family homes are "normally acceptable" in exterior noise environments up to 60 CNEL and "conditionally acceptable" up to 70 CNEL. Multiple-family residential uses are "normally acceptable" in exterior noise environments up to 65 CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries, and churches are "normally acceptable" in exterior noise environments up to 70 CNEL, as are office buildings and business, commercial and professional uses.

Further, the State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise level exceeds 65 dBA CNEL.

3.4 Local Regulations and Standards

Ultimately, local authority is given to the City of Lake Elsinore. The City of Lake Elsinore has a Noise Ordinance, but there are no requirements set for vehicular noise in the proposed project area. However, the City of Lake Elsinore has created a General Plan that includes a Noise Element to examine noise sources in the City to identify and assess the potential for noise conflicts and problems, and to identify ways to reduce existing and potential noise impacts.

3.4.1 City of Lake Elsinore General Plan Element

The City of Lake Elsinore has adopted Section 3.7, Noise, of the Public Safety and Welfare Element of the General Plan to control and abate environmental noise, and to protect the citizens of Lake Elsinore from excessive exposure to noise. The Noise section specifies the maximum exterior noise levels allowable for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise section identifies noise polices designed to protect, create, and maintain an environment free from noise that may jeopardize the health or welfare of sensitive receivers, or degrade quality of life. To protect City of Lake Elsinore residents from excessive noise, the Noise section contains the following goal related to the Project:

Goal 7 Maintain an environment for all City residents and visitors free of unhealthy, obtrusive, or otherwise excessive noise.

To ensure noise-sensitive land uses are protected from excessive noise levels (Goal 7), the Noise section identifies the following policies:

7.1 Apply the noise standards set forth in the Lake Elsinore Noise and Land Use Compatibility Matrix (see Table 3-1) and Interior and Exterior Noise Standards (see Table 3-2) when considering all new development and redevelopment proposed within the City.

7.2 Require that mixed-use structures and areas be designed to prevent transfer of noise and vibration from commercial areas to residential areas.

7.3 Strive to reduce the effect of transportation noise on the I-15.

7.4 Consider estimated roadway noise contours based upon Figure 3.6, Noise Contours, when making land use design decisions along busy roadways throughout the City.

7.5 Participate and cooperate with other agencies and jurisdictions in the development of noise abatement plans for highways.

VIBRATION STANDARDS

The City of Lake Elsinore Municipal Code, Section 17.176.080(G), states that operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet (46 meters) from the source if on public space or public right-of-way is prohibited. The Municipal Code defines the vibration perception threshold to be a motion velocity of 0.01 in/sec over the range of one to 100 Hz.

Typically, the human response at the perception threshold for vibration includes annoyance in residential areas as previously shown on Exhibit 2-B, when vibration levels expressed in vibration decibels (VdB) approach 75 VdB. The City of Lake Elsinore, however, identifies a vibration perception threshold of 0.01 in/sec. For vibration levels expressed in velocity, the human body responds to the average vibration amplitude often described as the root-mean-square (RMS). The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a one-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to reduce the range of numbers used to describe human response to vibration. Therefore, the City of Lake Elsinore vibration standard of 0.01 in/sec in RMS velocity levels is used in this analysis to assess the human perception of vibration levels due to Project-related construction activities.

3.4.2 City of Lake Elsinore Municipal Code

Section 17.176.060 of the City of Lake Elsinore Municipal Code states the following: No person shall, operate or cause to be operated, any source of sound at any location within the incorporated City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person which causes the noise level when measured on any other property, either incorporated or unincorporated to exceed…the maximum permissible sound levels by receiving land use. For general commercial land use , the Municipal Code identifies base exterior noise level limits for the daytime (7:00 a.m. to 10:00 p.m.) hours of 65 dBA L50 and 60 dBA L50 during the nighttime (10:00 p.m. to 7:00 a.m.) hours. These standards shall apply for a cumulative period of 30 minutes in any hour (L_{50}), as well as the standard plus 5 dBA cannot be exceeded for a cumulative period of more than 15 minutes in any hour (L_{25}), or the standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour (L8), or the standard plus 15 dBA for a cumulative period of more than 1 minute in any hour (L2), or the standard plus 20 dBA for any period of time (L_{max}). (6). **Table 3-2** shows the City of Lake Elsinore noise standards by land use.

Table 3-2. City of Lake Elsinore Exterior Noise Limits

Land Use	Condition	Based Exterior Noise Level Standards (dBA)				
		L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 mins)	L_{max} (Anytime)
Single-Family Residential	Daytime	50	55	60	65	70
	Nighttime	40	45	50	55	60
Multi-Family Residential	Daytime	50	55	60	65	70
	Nighttime	45	50	55	60	65
Public Space/ Light Comm.	Daytime	60	65	70	75	80
	Nighttime	55	60	65	70	75
General Commercial	Daytime	65	70	75	80	85
	Nighttime	60	65	70	75	80
Light Industrial	Anytime	70	75	80	85	90
Heavy Industrial	Anytime	75	80	85	90	95

Source: City of Lake Elsinore Municipal Code, Section 17.176.060(A)(2) & Table 1 (Appendix 3.1).
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m

The City of Lake Elsinore has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 17.176.080 (F), Construction/Demolition indicates that operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work by public service utilities or by variance issued by the City is prohibited. The Municipal code further requires construction activities to be conducted in such a manner that the maximum (L_{max}) noise levels at affected residential and commercial properties will not exceed the mobile (less than 10-day duration) and stationary equipment (greater than 10-day duration) noise standards provided below on **Tables 3-3** and **Table 3-4**, respectively.

Table 3-3. Mobile Equipment Noise Limits

Type	Receiving Land Use Category	Time Period	Maximum Noise Levels (dBA L_{max})[1]
I	Single-Family Residential	Daytime (7:00 a.m. - 7:00 p.m.)	75
		Nighttime (7:00 p.m. - 7:00 a.m.)	60
II	Multi-Family Residential	Daytime (7:00 a.m. - 7:00 p.m.)	80
		Nighttime (7:00 p.m. - 7:00 a.m.)	65
III	Semi-Residential/ Commercial	Daytime (7:00 a.m. - 7:00 p.m.)	85
		Nighttime (7:00 p.m. - 7:00 a.m.)	70

[1] Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment, City of Lake Elsinore Municipal Code 17.176.080 (F) (Appendix 3.1).

Table 3-4. Stationary Equipment Noise Limits

Type	Receiving Land Use Category	Time Period	Maximum Noise Levels (dBA L_{max})[1]
I	Single-Family Residential	Daytime (7:00 a.m. - 7:00 p.m.)	60
		Nighttime (7:00 p.m. - 7:00 a.m.)	50
II	Multi-Family Residential	Daytime (7:00 a.m. - 7:00 p.m.)	65
		Nighttime (7:00 p.m. - 7:00 a.m.)	55
III	Semi-Residential/ Commercial	Daytime (7:00 a.m. - 7:00 p.m.)	70
		Nighttime (7:00 p.m. - 7:00 a.m.)	60

[1] Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment, City of Lake Elsinore Municipal Code 17.176.080 (F) (Appendix 3.1).

4.0 Study Methods and Procedures

A field investigation was conducted on June 24, 2020 to identify land uses that could be subject to traffic and construction noise impacts from the project. The geographical features of the project area relative to nearby existing and planned land uses were also identified. Short-term measurement locations were selected to represent noise-sensitive land uses within the project area.

4.1 Field Measurement Procedures

One (1) long term and seven (7) short-term noise measurements were taken at the proposed project site, as shown in Figure 3, to help determine background noise levels. Noise levels are in terms of A weighted decibel equivalent sound level. The following is a brief description of the measurement procedures utilized during field monitoring.

- Microphones were placed 5 feet above the ground elevation for all locations.
- Sound level meters were calibrated before and after each measurement.
- Following the calibration of equipment, a windscreen was placed over the microphone.
- Frequency weighting was set on "A" and slow response.
- Results of the noise measurements were recorded on field data sheets.
- During the noise measurements, any excessive noise contamination such as barking dogs, lawn mowers, and/or aircraft fly-overs were noted.
- Wind speed, temperature, humidity, and weather conditions were observed and documented.
- The following instruments were used for field noise measurements:
- Sound Level Meter – A Larson Davis (LD) 824 System sound level meter was used to measure existing noise levels. This sound level meter and its microphone conform to the Institute of Electronic and Electric Engineers and the American National Standards Institute standards for Type 1 instruments.
- Microphone System – LD Model 2560 1.27-centimeter (0.5-inch) pressure microphone; LD Model 900 microphone preamplifier.
- Acoustic Field Calibrator – LD Model CAL250 Precision Acoustic Calibrator.

4.1.1 Measurement Procedure and Criteria

Hourly noise levels were measured on October 21, 2020 to October 22, 2020 during typical weekday conditions over a 24-hour period to describe the existing noise environment and to describe the daytime and

nighttime hourly noise levels and calculate the 24-hour CNEL. The 24-hour, long term measurements, provide the hourly noise levels to calculate the CNEL for the project area. Short-term measurements, 30-mintues in durations, were also taken to obtain noise levels at surrounding land uses. Short and long-term noise measurements were taken using a Larson Davis Type 1 precision sound level meter. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphone were mounted, five feet above the ground and equipped with a windscreen during all measurements. The Larson Davis sound level meter was calibrated before the monitoring using a CAL200 calibrator. All noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

4.2 Construction Noise Methodology

This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are obtained from the FTA Noise and Vibration Manual (FTA, 2018). Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$.

The assessment of construction noise impacts must be relatively general at this phase of the project because many of the decisions affecting noise will be at the discretion of the contractor. However, an assessment based on the type of equipment expected to be used by the contractor can provide a reasonable estimate of potential noise impacts and the need for noise mitigation. A worst-case construction noise scenario was developed and the FHWA Road Construction Noise Model (RCNM) was used to estimate construction noise levels for mobile and stationary sources. Noise levels were estimated based on a worst-case scenario of the noisiest pieces of mobile source construction equipment (i.e. earthmoving equipment) operating simultaneously. Earthmoving equipment includes machinery such as backhoes, bulldozers, excavators, and front loaders. For the stationary sources, the noisiest piece of equipment that would be utilize is an air compressor during the architectural coating phase of construction.

The calculated noise level was then compared to the respective local noise regulation to determine if construction would cause a short-term noise impact at nearby residential land uses. Receiver distance to the construction activity along with the construction equipment operating at maximum load will have the greatest influence on construction noise levels experienced at residential land uses.

4.3 Operational Noise Methodology

Stationary Source Methodology

The SoundPLAN noise prediction model was used to calculate noise levels at the noise-sensitive receptors located around the Project site. Inputs to the SoundPLAN model included ground topography and ground type, noise source locations and heights, receiver locations, and sound power level data. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors). It should be noted that sound power measures the total acoustic energy emitted by a noise source and is irrespective of the distance from the source. Sound power is input into the SoundPLAN model to represent the total acoustic energy emitted by a specific noise source. Sound power levels in this report are reported as A-weighted decibel levels, noted as "dBA, PWL" per industry standards. The model then corrects the many factors (i.e., distance, terrain shielding, atmospheric absorption, etc.) that affect sound propagation from the noise source to the receiver location.

The primary non-transportation noise sources associated with the Project are HVAC equipment, on-site parking lot activities (i.e. car doors slamming, cars idling in the parking lot and parking lot circulation), gas-fueling, trash enclosure pickup and drive-thru speaker. In order to evaluate these noise sources at the nearest residential noise-sensitive receptors, the reference noise level of similar operational activities was obtained from the SoundPlan library. **Table 4-1.** provides the reference noise level measurements collected from similar existing operational noise sources. These reference noise levels were used to describe the anticipated operational noise levels generated from idling trucks, delivery truck activities, backup alarms, loading and unloading, air conditioning units, and parking lot vehicle movements.

Table 4-1. Reference Noise Levels

Source	Source Type	# of Units	Reference Level (L_{eq}, dBA)	Distance (ft)
Trash Enclosure pickup	Point Source	1	75	23
Refueling Station	Point Source	10	86	5
Drive-Thru Speaker	Point Source	1	72.3	3
HVAC	Point Source	1	67.7	3
Parking*	Area(SP Parking Tool)	34	-	3 car per hr / 1.5 per hr

* Daytime vs. Nighttime

Off-site Traffic Noise

The estimated roadway noise impacts from vehicular traffic were calculated using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model (TNM 2.5). TNM 2.5 is a computer model based on two FHWA reports: FHWA-PD-96-009 and FHWA-PD-96-010 (FHWA 1998a, 1998b). Key inputs to the traffic noise model include the locations of roadways, shielding features (e.g., topography and buildings), existing and proposed privacy walls, ground type, and receivers. Traffic inputs for the TNM2.5 were obtained from the Ortega Plaza Traffic Analysis prepared by Urban Crossroads (March 2022).

5.0 Existing Conditions

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to noise. Existing land uses within the project area include a school, Elsinore Naval & Military School, and residential homes along Morro Way and across the street from the project site along Hwy 74.

5.1 Noise Measurement Results

The existing noise environment of the project area was characterized by conducting long and short-term noise level measurements at representative noise-sensitive receiver locations.

5.1.1 Long-Term Measurements

Hourly noise levels were measured during typical weekday conditions over a 24-hour period to describe the existing noise environment and to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The 24-hour measurements provide the hourly noise levels to calculate the CNEL for the project area. Long term noise measurements were taken using a Larson Davis Type 1 precision sound level meter. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphone were mounted, five feet above the ground and equipped with a windscreen during all measurements. The Larson Davis sound level meter was calibrated before the monitoring using a CAL200 calibrator. All noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The 24-hour measured noise level was 72.1 L_{eq} dBA or 77 dBA CNEL. Noise measurement data is provided in Appendix A.

5.1.2 Short-Term Measurements

The primary source of noise in the project area is traffic on Jefferson Avenue. Short- term (30-minute) noise measurements were conducted to document existing noise levels at seven (7) representative sensitive receiver locations around the project site , shown in Figure 3. The noise level measurements were performed using a Larson Davis Model 824 Type 1 sound level meter. **Table 5-1** contains the results of these measurements and the physical location of the noise monitoring.

During the short-term measurements, field staff attended each meter. During the measurement period (30 minutes in duration), dominant noise sources were also identified and logged. The calibration of the meter was checked before and after the measurement using Larson-Davis Model CAL250 calibrator.

Table 5-1. Short-Term Measurement Results

Receiver ID	Location	Duration (Minute)	Measured L_{eq}, dBA
R-1	15887 Grand Avenue, Lake Elsinore, CA	30	55.6
R-2	1545 Morro Way, Lake Elsinore, CA	30	51.0
R-3	Ortega Hwy & Grand Avenue, Lake Elsinore, CA	30	70.2
R-4	Ortega Hwy & Grand Avenue, Lake Elsinore, CA	30	68.1
R-5	Ortega Hwy & Grand Avenue, Lake Elsinore, CA	30	74
R-6	15891 Grand Avenue, Lake Elsinore, CA	30	69.8
R-7	32975 Maxon Avenue, Lake Elsinore, CA	30	50.7

Source: Entech Consulting Group, June 2020

Figure 3. Short & Long-term Measurement Locations

Legend

- (ST) Short-term measurement/ (R) Sensitive Receiver
- (LT) Long-term measurement
- Project Site

N
W E
S

6.0 Thresholds of Significance

Appendix G of the 2019 California Environmental Quality Act (CEQA) Guidelines states that a project could have a noise impact if any of the following would occur:

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

b) Generation of excessive groundborne vibration or groundborne noise levels?

OPERATIONAL NOISE

If Project-related operational (stationary-source) noise levels exceed:

- the exterior noise level standard at nearby sensitive receiver locations identified on Table 3-1 by land use category (City of Lake Elsinore Municipal Code, Chapter 17.176 Noise Control) or

If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:

- are less than 60 dBA and the Project creates a readily perceptible 5 dBA or greater Project related noise level increase; or
- range from 60 to 65 dBA and the Project creates a barely perceptible 3 dBA or greater Project-related noise level increase; or
- already exceed 65 dBA, and the Project creates a community noise level increase of greater than 1.5 dBA (FICON, 1992).

CONSTRUCTION NOISE AND VIBRATION

If Project-related construction activities generate noise levels which exceed:

- the mobile or stationary equipment noise level limits described on Tables 3-2 and 3-3 (City of Lake Elsinore Municipal Code, Section 17.176.080(F)).
- If short-term Project generated construction vibration levels exceed the City of Lake Elsinore maximum acceptable vibration standard of 0.01 in/sec (RMS) at sensitive receiver locations (City of Lake Elsinore Municipal Code, Section 17.176.080(G)).

7.0 Noise Assessment

7.1 Construction-Related Noise

Construction noise represents a temporary impact on the ambient noise levels. Construction noise is primarily caused by diesel engines (trucks, dozers, backhoes), impacts (jackhammers, pile drivers, hoe rams), and backup alarms. Construction equipment can be stationary or mobile. Stationary equipment operates in one location for hours or days in a constant mode (generators, compressors) or generates variable noise operation (pile drivers, jackhammers) producing constant noise for a period of time. Mobile equipment moves around the site and is characterized by variations in power and location, resulting in significant variations in noise levels over time.

Although the construction schedule has not been developed for the project, it is anticipated construction activities involving stationary and mobile equipment will occur longer than 10 days. A worst-case scenario was developed to predict the maximum noise level based of typical mobile and stationary equipment usage during the construction of a convenience store with gas pumps, drive thru restaurants and a parking lot. **Table 7-1** lists typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor. It was determined that the site preparation phase, which includes demolition, excavation and grading of the site, tends to generate the highest noise levels from the noisiest construction equipment (i.e.) earthmoving equipment. Earthmoving equipment includes excavating machinery such as backhoes, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Demolition activities use large hydraulic equipment such as elevated work platforms, cranes, excavators, or bulldozers to pulled down buildings. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three or four minutes at lower power settings.

Table 7-1. Construction Equipment Noise

Equipment	Range of Maximum Noise Levels Measured (dBA at 50 feet)	Suggested Maximum Noise Levels for Analysis (dBA at 50 feet)
Rock Drills	83-99	**96**
Jack Hammers	75-85	**82**
Pneumatic Tools	78-88	**85**
Pumps	74-84	**80**
Dozers	77-90	**85**
Scrapers	83-91	**85**
Cranes	79-86	**82**
Portable Generators	71-87	**80**
Rollers	75-82	**80**
Tractors	77-82	**80**
Front-End Loaders	77-90	**85**
Hydraulic Backhoe	81-90	**85**
Hydraulic Excavators	81-90	**85**
Graders	79-89	**85**
Air Compressors	76-89	**85**
Trucks	81-87	**85**
Source: **Federal Transit Administration 1995.**		

Mobile Source Construction Noise

As shown in **Table 7-1**, most of the earth moving equipment will reach 85 dBA L_{max} at a distance of 50 feet. A worse-case scenario was developed to assess noise impacts during the grading phase utilizing the RCNM model. The RCNM model provides the noise levels for three pieces of grading equipment (a dozer, excavator, backhoe and a front loader) operating simultaneous at 40% of the time. Further, it is assumed that grading would occur within a distance of 50 feet to the closet project property boundary. The highest noise level that would be experienced at the property boundary is 72 dBA L_{max}. This noise level is less than the City of Lake Elsinore noise standard of 75 dBA. If construction occurs daily, between 8:00 p.m. to 7:00 a.m. the noise level would exceed the noise standard of 60 dBA L_{max}. Therefore, limiting the construction hours to daytime hours between 7:00am to 7:00pm on weekdays only, Monday through Friday, will reduce this impact to less than significant.

Stationary Source Construction Noise-Residential Land Use (less than significant with mitigation)

The construction noise level at the nearest residential property, R1, would be 52 dBA L_{max} at an average distance from the construction area of approximately 224 feet. This noise level is less than the City of Lake Elsinore residential construction noise standard of 60 dBA L_{eq}. If construction occurs daily, between 8:00 p.m. to 7:00 a.m. the noise level would exceed the noise standard of 50 dBA L_{max}. Therefore, limiting the construction hours to daytime hours between 7:00am to 7:00pm on weekdays only, Monday through Friday, will reduce this impact to less than significant.

7.2 Construction Vibration

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). Construction activities that would occur within the Project site include grading, building construction, paving, and painting. These activities have the potential to generate low levels of ground-borne vibration.

Using the vibration source level of construction equipment provided in **Table 7-2** and the construction vibration assessment methodology published by the FTA, it is possible to estimate the project vibration impacts. **Table 7-2** presents the expected project related vibration levels at the project's closest property boundary. This location is near the residential land uses adjacent to the project site to the east.

Table 7-2. Construction Equipment Vibration Levels

Noise Receiver	Distance to Property Line from Project Site Center	Large Bulldozer Reference Vibration Level PPV_{ref} (in/sec) at 25ft[1]	Peak Vibration PPV (in/sec) at 224 ft	Below Threshold City of Lake Elsinore Development Code Threshold (0.01 in/sec)
R-1	224 feet	0.089	0.006	Yes

[1] Reference noise level obtain from the FTA Noise and Vibration Manual, Table 7-4. (FTA, 2018)

Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference level of 0.080 in/sec at a distance of 25 feet. At 224 feet, construction vibration levels are expected to approach 0.006 in/sec. Using the construction vibration assessment annoyance criteria provided by the City's Development Code, the construction of the project site will not result in vibration impacts at the industrial business park adjacent to the project site to the west. Moreover, construction at the Project site will be restricted to daytime hours 7:00 am to 7:00pm on weekdays only, Monday through Friday, thereby eliminating potential vibration impact during the sensitive nighttime hours. Further, the predicted construction noise level is below the vibration threshold of 0.01 in/sec. Therefore, construction vibration impacts at the project's property boundary are less than significant.

7.3 Off-site Traffic Noise

The primary off-site noise from the project is attributable to increases in traffic. The Traffic Noise Model (TNM 2.5) was utilized to assess noise impacts at sensitive residential receiver locations within the project area to determine whether exterior noise levels would cause a substantial increase of greater than 3 dBA. The proposed Project, along with future regional growth and other projects to be developed within the Project vicinity, would result in the addition of vehicle trips that would increase traffic noise. Sensitive residential receivers R1- R7 were identified within the project area along on Ortega Highway and Grand Avenue.

The TNM modeling was performed for the following scenarios: existing (2021); existing plus project (2023); existing plus project plus cumulative projects (Urban Crossroads, 2023). The TNM model takes into account the posted vehicle speed, average daily traffic volume, the estimated vehicle mixes and sound-attenuating effects of intervening structures, barriers, vegetation, or topography. The model assumed "pavement" site propagation conditions. **Table 7-3** presents the Existing and Future Roadway Traffic Noise Levels for the

project. As shown in **Table 7-3**, the proposed project noise levels do not have noticeable increases above existing noise levels. Therefore, the increase is not considered significant.

Table 7-3. Traffic Noise Levels Near Sensitive Receiver Locations (dBA)

Receiver	Existing	Existing Plus Project (2023)	Increase over Existing	Existing Plus Project Plus Cumulative Projects (2023)	Increase over Existing
R1	63.7	64.1	0.4	64.8	1.8
R2	59.0	59.2	0.2	59.8	0.8
R3	64.8	65.0	0.2	65.5	0.7
R4	52.9	53.2	0.3	53.8	0.9

7.4 Stationary Noise

The reference noise levels for various operational noise sources provided in **Table 4-1** were utilized to calculate the predicted operational source noise levels at residential receiving properties, R1 through R7. A 7-foot tall 461-foot-long sound wall located along the property line near receiver R1 was incorporated as part of the project design to reduce noise impacts. The combined daytime Project operational noise levels at receivers R1 through R7 range from 34 to 48 dBA $L_{eq,}$ as shown in **Table 7-4** and **Figure 4**. The combined nighttime Project operational noise levels at receivers R1 through R7 range from 30 to 45 dBA $L_{eq,}$ as shown in **Table 7-5** and **Figure 5**. Therefore, operational noise levels associated with the Project will satisfy the City of Lake Elsinore Municipal Code exterior noise level standards of 50 dBA L_{50} for residential land uses, 60 dBA L_{50} nighttime for commercial land uses and nighttime exterior noise level standards of 40 dBA L_{50} for residential land uses, 55 dBA L_{50} nighttime for commercial land uses.

Table 7-4. Project Only Operational Noise levels

Receiver Location[1,2]	Project Noise Level (dBA, L_{eq})	Daytime (7AM - 10PM) Stationary Noise Limit (dBA, L_{50})[3]
R1	41	50.0
R2	34	50.0
R3	48	60.0
R4	41	50.0
R5	33	60.0
R6	45	60.0
R7	37	50.0

Notes:
[1] Figure 4 shows the receiver locations.
[2] R1,R2, R4 & R7 represents Residential receivers. R3, R5 & R6 represents commercial uses.
[3] Noise limit based on Section 17.176.060 of the City's Municipal Noise Ordinance.

Table 7-5. Project Only Operational Noise levels

Receiver Location[1,2]	Project Noise Level (dBA, L_{eq})	Nighttime (10PM - 7AM) Stationary Noise Limit (dBA, L_{eq})[3]
R1	38	40.0
R2	31	40.0
R3	45	55.0
R4	37	40.0
R5	30	55.0
R6	42	55.0
R7	37	40.0

Notes:
[1] Figure 5 shows the receiver locations.
[2] R1,R2, R4 & R7 represents Residential receivers. R3, R5 & R6 represents commercial uses.
[3] Noise limit based on Section 17.176.060 of the City's Municipal Noise Ordinance.

Figure 4. Ortega Plaza Noise Level Contours Daytime Scenario (7AM to 10PM)

Figure 5. Ortega Plaza Noise Level Contours Daytime Scenario (7AM to 10PM)

As shown in **Tables 7-6 and 7-7**, the combined Project only operational noise levels provided in **Table 7-4 and 7-5** were added to the average measured ambient noise level to determine the total combined operational noise level and the increase over existing ambient noise levels for daytime and nighttime. All noise levels increases are below the allowable significance threshold.

Table 7-6. Cumulative Daytime Operational Noise Levels (dBA, L_{50})

Receiver Location[1]	Existing Ambient Noise Level (dBA, L_{eq})	Project Noise Level (dBA, L_{eq})[2]	Total Combined Noise Level (dBA, L_{eq})	Change in Noise Level as Result of Project	Threshold	Threshold Exceeded?
R1	56	41	56	0.0	5	No
R2	51	34	51	0.0	5	No
R3	70	48	70	0.0	1.5	No
R4	68	41	68	0.0	1.5	No
R5	74	33	74	0.0	1.5	No
R6	70	45	70	0.0	1.5	No
R7	51	37	51	0.0	5	No

[1] As shown in Figure 3.
[2] Calculated from reference noise levels provided in Table 7-1.

Table 7-7. Cumulative Nighttime Operational Noise Levels (dBA, L_{50})

Receiver Location[1]	Existing Ambient Noise Level (dBA, L_{eq})	Project Noise Level (dBA, L_{eq})[2]	Total Combined Noise Level (dBA, L_{eq})	Change in Noise Level as Result of Project	Threshold	Threshold Exceeded?
R1	56	38	56	0.0	5	No
R2	51	31	51	0.0	5	No
R3	70	45	70	0.0	1.5	No
R4	68	37	68	0.0	1.5	No
R5	74	30	74	0.0	1.5	No
R6	70	42	70	0.0	1.5	No
R7	51	37	51	0.0	5	No

[1] As shown in Figure 3.
[2] Calculated from reference noise levels provided in Table 7-2.

8.0 Mitigation Measures

The following mitigation measures would reduce any noise level increases produced by the construction equipment to the nearby noise-sensitive land uses:

- *MM1: Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the hours of 7:00 a.m. and 8:00 p.m. on weekdays only, Monday through Friday. Construction is prohibited on weekends and holidays.*

- *MM2: During all project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receivers nearest the Project site.*

- *MM3: The construction contractor shall locate equipment staging in areas that will create a minimum distance of 200 feet between construction-related noise sources and noise-sensitive receivers nearest the Project site (i.e., the center of the site) during all Project construction. If construction occurs within 50 feet residential locations, temporary noise barriers should be erected.*

- *MM4: The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 7:00 a.m. and 8:00 p.m. on weekdays. Construction is prohibited on weekends and holidays).*

- *MM5:The construction contractor shall utilize an ultra-quiet air compressor with a L_{max} noise level to no more than 65 dBA.*

9.0 References

City of Lake Elsinore General Plan. *Noise Element.* December 13, 2011.

City of Lake Elsinore Municipal Code, Chapter Section 17.176.

Harris, Cyril. *Handbook of Acoustical* Measurements *and Noise Control,* Third Edition, 1991.

Urban Crossroad. Ortega Plaza Traffic Impact Analysis, March 2022

United States Department of Transportation, FHWA Roadway Construction Noise Model. RCNM. January 2006.

Appendix A: Long Term Monitoring Data

Ortega Plaza Site-CNEL Values						
	Background Leq and Hour Averaging DNL					
	Background		LEQ DNL is		LEQ DNL	
Hour	Leq		Leq +10		10^(D/10)	
0	63.37512074	10	73.37512074	21752645.08	21752645.08	
1	63.5617368	10	73.5617368	22707727.81	22707727.81	
2	67.94452756	10	77.94452756	62294937.77	62294937.77	
3	71.55990634	10	81.55990634	143215701.3	143215701.3	
4	72.70883652	10	82.70883652	186587975.4	186587975.4	
5	73.22898195	10	83.22898195	210328534.3	210328534.3	
6	73.57511017	10	83.57511017	227777602.2	227777602.2	
7	72.88565634		72.88565634	19434153.74	19434153.74	
8	73.51736664		73.51736664	22476912.95	22476912.95	
9	71.94065209		71.94065209	15633823.65	15633823.65	
10	73.56003826		73.56003826	22698848.51	22698848.51	
11	72.53532489		72.53532489	17928026.63	17928026.63	
12	73.03653101		73.03653101	20121164	20121164	
13	72.9474681		72.9474681	19712731.68	19712731.68	
14	73.8921706		73.8921706	24502875.88	24502875.88	
15	74.80260863		74.80260863	30217662.27	30217662.27	
16	74.23325297		74.23325297	26504846.74	26504846.74	
17	73.60068861		73.60068861	22912309.19	22912309.19	
18	72.75147942		72.75147942	18842908.61	18842908.61	
19	71.56224016	5	76.56224016	45313125.19	45313125.19	
20	69.90147232	5	74.90147232	30913432.67	30913432.67	
21	69.00260776	5	74.00260776	25133951.69	25133951.69	
22	67.29788609	10	77.29788609	53677046.2	53677046.2	
23	66.46163539	10	76.46163539	44275506.61	44275506.61	
				55623518.75	55623518.75	
			10LOG10 of (Average=)		77.45258459	77.45258459

Appendix B: Short-Term Measurements

FIELD NOISE MEASUREMENT

ENTECH CONSULTING GROUP
Planning • Environmental • Construction Management

Project: City of Lake Elsinore Ortega Plaza

ID

Site ID: R7 Engineer (s): Cammila Blasquez

Date: 06/24/2020 Start Time: 14:15

Property Owner: N/A

Address: 32975 Maxon Ave., Lake Elsinore, CA 92530

WEATHER

Temp. 95 °F Hum. 31 % R.H. Wind Spd: 9 mph

Sky: ☐ OVRCST ☑ PARTLY CLOUDY ☐ CLEAR ☑ SUNNY ☐ FOG ☐ RAIN ☐ OTHER: _____

Wind Dir.: NW N NE / W Calm E / SW S SE — (W)

SOUND

SLM ID: LD 824 Calibration: (Pre) 94.1 dBA (Post) 94.1 dBA

SLM Record ID: # 7 Duration: 30:00 L_{eq} 50.7 dBA

NOISE SOURCE

Contamination:
☑ Aircraft
☑ Rustling leaves
☐ Dogs barking
☐ Birds
☐ Children playing
☐ Other_____

Speed Estimated By:
☐ Radar ☐ Driving
☑ Other Speed Limit

Major Source: ☑ Traffic ☐ Rail ☐ Industrial ☐ Aircraft ☐ Other_____

Traffic Count Duration: -- : --

Dir.	Auto		M. Truck		H. Truck		Bus		Motorcycle	
	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)
-	-	40	-	40	-	40	-	40	-	40
-	-	40	-	40	-	40	-	40	-	40

FILING

Photo: Camera ID Galaxy S8 File #: TimePhoto_20200624_141223.jpg

Video: Camera ID - File #: -

TOPO & COMMENTS

Pavement: ☑ Hard ☐ Soft ☐ Mixed

Terrain: ☑ Flat ☐ Uneven ☐ Shape

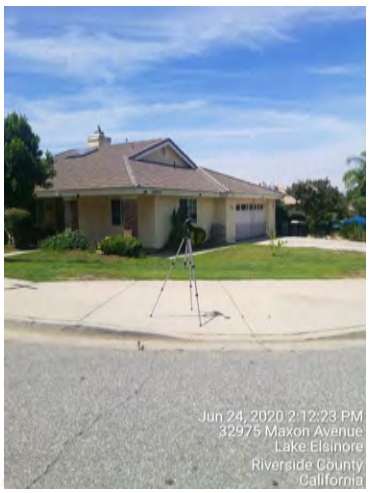
Land Use: Cu.____ Fu. ✓

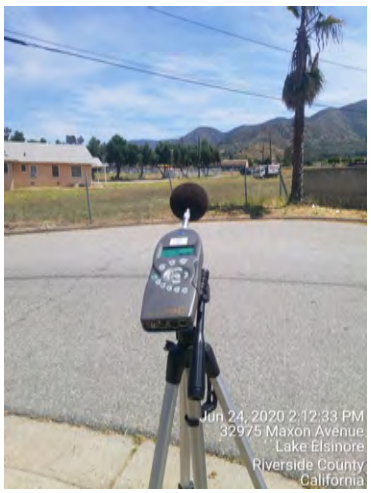
Δ Elev.

COMMENTS

Meter was located on residential sidewalk.

Meter was ≈ 700 ft from corner of Ortega Plaza.





FIELD NOISE MEASUREMENT

ENTECH CONSULTING GROUP

Project: City of Lake Elsinore Ortega Project

ID

Site ID: R6 Engineer (s): Cammila Blasquez

Date: 06/24/2020 Start Time: 13:15

Property Owner: N/A

Address: 15891 Grand Ave #3, Lake Elsinore, CA 92530

WEATHER

Temp. 94 °F Hum. 30 % R.H. Wind Spd: 4 mph

Wind Dir. NW N NE W Calm E SW S SE

Sky: ☐ OVRCST ☑ PARTLY CLOUDY ☐ CLEAR ☑ SUNNY ☐ FOG ☐ RAIN ☐ OTHER: _____

SOUND

SLM ID: LD 824 Calibration: (Pre) 94.1 dBA (Post) 94.1 dBA

SLM Record ID: # 6 Duration: 30:00 L_{eq} 69.8 dBA

NOISE SOURCE

Contamination:
- ☐ Aircraft
- ☐ Rustling leaves
- ☐ Dogs barking
- ☑ Birds
- ☐ Children playing
- ☐ Other_____

Speed Estimated By:
- ☐ Radar ☐ Driving
- ☑ Other Speed Limit

Major Source: ☑ Traffic ☐ Rail ☐ Industrial ☐ Aircraft ☐ Other_____

Traffic Count Duration: -- : --

Dir.	Auto		M. Truck		H. Truck		Bus		Motorcycle	
	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)
-	-	40	-	40	-	40	-	40	-	40
-	-	40	-	40	-	40	-	40	-	40

FILING

Photo: Camera ID Galaxy S8 File #: TimePhoto_20200624_131312.jpg

Video: Camera ID - File #: -

TOPO & COMMENTS

Pavement: ☐ Hard ☐ Soft ☑ Mixed

Terrain: ☑ Flat ☐ Uneven ☐ Shape

Land Use: Cu. ✓ Fu.____

Δ Elev.

COMMENTS

Meter located on dirt ground in front of fence surrounding the school.

Meter was ≈ 11 feet away from the road (Grand Ave.)

ENTECH CONSULTING GROUP

FIELD NOISE MEASUREMENT

Project: City of Lake Elsinore Ortega Project

ID

Site ID: R5 Engineer (s): Cammila Blasquez

Date: 06/24/2020 Start Time: 12:30

Property Owner: N/A

Address: Ortega Hwy and Grand Ave

WEATHER

Temp. 88 °F Hum. 35 % R.H. Wind Spd: 3 mph

Wind Dir. NW N NE W Calm E SW S SE

Sky: ☐ OVRCST ☑ PARTLY CLOUDY ☐ CLEAR ☑ SUNNY ☐ FOG ☐ RAIN ☐ OTHER: _____

SOUND

SLM ID: LD 824 Calibration: (Pre) 94.1 dBA (Post) 94.1 dBA

SLM Record ID: # 5 Duration: 30:00 L_{eq} 74.0 dBA

NOISE SOURCE

Contamination:
- ☐ Aircraft
- ☐ Rustling leaves
- ☐ Dogs barking
- ☑ Birds
- ☐ Children playing
- ☑ Other Pump Truck

Speed Estimated By:
- ☐ Radar ☐ Driving
- ☑ Other Speed Limit

Major Source: ☑ Traffic ☐ Rail ☐ Industrial ☐ Aircraft ☐ Other_____

Traffic Count Duration: -- : --

Dir.	Auto		M. Truck		H. Truck		Bus		Motorcycle	
	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)
-	-	40	-	40	-	40	-	40	-	40
-	-	40	-	40	-	40	-	40	-	40

FILING

Photo: Camera ID Galaxy S8 File #: Time Photo_20200624-123028.jpg

Video: Camera ID - File #: -

TOPO & COMMENTS

Pavement: ☐ Hard ☐ Soft ☑ Mixed

Terrain: ☑ Flat ☐ Uneven ☐ Shape

Land Use: Cu. ✓ Fu. ____

Δ Elev.

COMMENTS

Meter was located on even, dirt ground next to Grand Ave.

Meter was ≈ 6 ft away from road, right next to a fence.

FIELD NOISE MEASUREMENT

ENTECH CONSULTING GROUP

Project: City of Lake Elsinore Ortega Project

ID

Site ID: R4 Engineer (s): Cammila Blasquez

Date: 06/24/2020 Start Time: 11:50

Property Owner: N/A

Address: Ortega Hwy and Grand Ave.

WEATHER

Temp. 86 °F Hum. 38 % R.H. Wind Spd: 1 mph

Wind Dir. NW N NE W Calm E (SW) S SE

Sky: ☐ OVRCST ☑ PARTLY CLOUDY ☐ CLEAR ☑ SUNNY

☐ FOG ☐ RAIN ☐ OTHER: _____

SOUND

SLM ID: LD 824 Calibration: (Pre) 94.1 dBA (Post) 94.1 dBA

SLM Record ID: # 4 Duration: 30:00 L_{eq} 68.1 dBA

NOISE SOURCE

Contamination:
- ☐ Aircraft
- ☐ Rustling leaves
- ☐ Dogs barking
- ☐ Birds
- ☐ Children playing
- ☑ Other mower

Speed Estimated By:
- ☐ Radar ☐ Driving
- ☑ Other Speed Limit

Major Source: ☑ Traffic ☐ Rail ☐ Industrial ☐ Aircraft ☐ Other_____

Traffic Count Duration: -- : --

Dir.	Auto		M. Truck		H. Truck		Bus		Motorcycle	
	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)
-	-	40	-	40	-	40	-	40	-	40
-	-	40	-	40	-	40	-	40	-	40

FILING

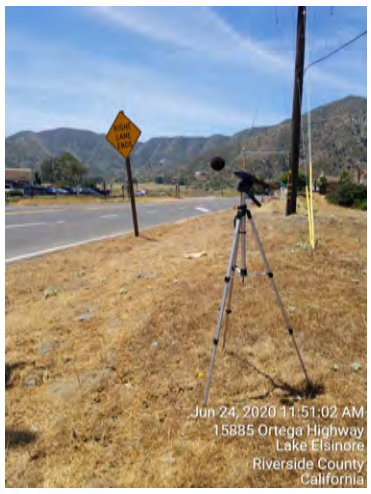
Photo: Camera ID Galaxy S8 File #: TimePhoto_20200624_115102.jpg

Video: Camera ID - File #: -

TOPO & COMMENTS

Pavement:	Terrain:	Land Use:
☐ Hard	☑ Flat	Cu. ✓
☐ Soft	☐ Uneven	Fu. ____
☑ Mixed	☐ Shape	

Δ Elev.



COMMENTS

Meter was on dirt, dead grass ground near the intersection. Slight decline towards the northwest.

Meter was ≈ 10-12 ft away from intersection.

FIELD NOISE MEASUREMENT

ENTECH CONSULTING GROUP
PLANNING · ENVIRONMENTAL · CONSTRUCTION MANAGEMENT

Project: City of Lake Elsinore Ortega Project

ID

Site ID: R3 Engineer (s): Cammila Blasquez

Date: 06/24/2020 Start Time: 11 : 15

Property Owner: N/A

Address: Ortega Hwy and Grand Ave

WEATHER

Temp. 88 °F Hum. 36 % R.H. Wind Spd: 3 mph

Wind Dir.: NW N NE / W Calm E / (SW) S SE

Sky: ☐ OVRCST ☑ PARTLY CLOUDY ☐ CLEAR ☑ SUNNY ☐ FOG ☐ RAIN ☐ OTHER: _____

SOUND

SLM ID: LD824 Calibration: (Pre) 94.1 dBA (Post) 94.1 dBA

SLM Record ID: # 3 Duration: 30 : 00 L_{eq} 67.5 dBA

NOISE SOURCE

Contamination:
- ☐ Aircraft
- ☑ Rustling leaves
- ☐ Dogs barking
- ☑ Birds
- ☐ Children playing
- ☐ Other_____

Speed Estimated By:
☐ Radar ☑ Driving ☐ Other_____

Major Source: ☑ Traffic ☐ Rail ☐ Industrial ☐ Aircraft ☐ Other_____

Traffic Count Duration: – – : – –

Dir.	Auto		M. Truck		H. Truck		Bus		Motorcycle	
	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)
–	–	55	–	55	–	55	–	55	–	55
–	–	55	–	55	–	55	–	55	–	55

FILING

Photo: Camera ID Galaxy S8 File #: TimePhoto_20200624_111612.jpg

Video: Camera ID – File #: –

TOPO & COMMENTS

Pavement:	Terrain:	Land Use:
☑ Hard	☑ Flat	Cu.____
☐ Soft	☐ Uneven	Fu. ✓
☐ Mixed	☐ Shape	

Δ Elev. 

COMMENTS

Meter was on hard sidewalk. Slight incline, but mostly flat.

Meter was ≈ 5 ft from road and ≈ 5 ft from residential wall.

ENTECH CONSULTING GROUP

FIELD NOISE MEASUREMENT

Project: City of Lake Elsinore Ortega Project

ID

Site ID: R2 Engineer (s): Cammila Blasquez

Date: 06/24/2020 Start Time: 10 : 40

Property Owner: N/A

Address: 1545 Morro Way, Lake Elsinore, CA 92530

WEATHER

Temp. 81 °F Hum. 46 % R.H. Wind Spd: 1 mph

Wind Dir. NW N NE W Calm E (SW) S SE

Sky: ☐ OVRCST ☑ PARTLY CLOUDY ☐ CLEAR ☑ SUNNY ☐ FOG ☐ RAIN ☐ OTHER: _____

SOUND

SLM ID: LD 824 Calibration: (Pre) 94.1 dBA (Post) 94.1 dBA

SLM Record ID: # 2 Duration: 30 : 00 L_{eq} 47.5 dBA

NOISE SOURCE

Contamination:
- ☑ Aircraft
- ☐ Rustling leaves
- ☑ Dogs barking
- ☑ Birds
- ☐ Children playing
- ☐ Other_____

Speed Estimated By:
☐ Radar ☐ Driving
☑ Other Speed Limit

Major Source: ☑ Traffic ☐ Rail ☐ Industrial ☐ Aircraft ☐ Other_____

Traffic Count Duration: — — : — —

Dir.	Auto		M. Truck		H. Truck		Bus		Motorcycle	
	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)
—	—	40	—	40	—	40	—	40	—	40
—	—	40	—	40	—	40	—	40	—	40

FILING

Photo: Camera ID Galaxy S8 File #: —

Video: Camera ID — File #: —

TOPO & COMMENTS

Pavement: ☑ Hard ☐ Soft ☐ Mixed

Terrain: ☑ Flat ☐ Uneven ☐ Shape

Land Use: Cu.____ Fu. ✓

Δ Elev.

COMMENTS

Noise Meter was on residential sidewalk.

Meter was ≈ 115 ft from project area.

Did not take pictures since residents were outside.

Source: Google Earth

ENTECH CONSULTING GROUP

FIELD NOISE MEASUREMENT

Project: City of Lake Elsinore Ortega Project

ID

Site ID: R1 Engineer (s): Cammila Blasquez

Date: 06/24/2020 Start Time: 10:05

Property Owner: N/A

Address: 15887 Grand Ave., Lake Elsinore, CA 92530

WEATHER

Temp. 82 °F Hum. 44 % R.H. Wind Spd: 1 mph

Wind Dir. NW N NE / W Calm E / (SW) S SE

Sky: ☐ OVRCST ☑ PARTLY CLOUDY ☐ CLEAR ☑ SUNNY ☐ FOG ☐ RAIN ☐ OTHER: _____

SOUND

SLM ID: LD 824 Calibration: (Pre) 94.1 dBA (Post) 94.1 dBA

SLM Record ID: # 1 Duration: 30:00 L_{eq} 55.6 dBA

NOISE SOURCE

Contamination:
- ☐ Aircraft
- ☐ Rustling leaves
- ☐ Dogs barking
- ☑ Birds
- ☐ Children playing
- ☑ Other refrigeration

Speed Estimated By:
- ☐ Radar ☐ Driving
- ☑ Other Speed Limit

Major Source: ☑ Traffic ☐ Rail ☐ Industrial ☐ Aircraft ☐ Other _____

Traffic Count Duration: — — : — —

Dir.	Auto		M. Truck		H. Truck		Bus		Motorcycle	
	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)	Count	Speed (mph)
—	—	40	—	40	—	40	—	40	—	40
—	—	40	—	40	—	40	—	40	—	40

FILING

Photo: Camera ID _____ File #: _____

Video: Camera ID — File #: —

TOPO & COMMENTS

Pavement: ☐ Hard ☐ Soft ☑ Mixed

Terrain: ☑ Flat ☐ Uneven ☐ Shape

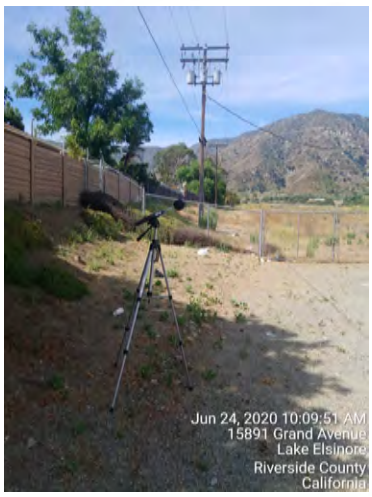
Land Use: Cu. ✓ Fu. ✓

Δ Elev.

COMMENTS

Meter was located on gravel parking lot in Ortega Plaza.

Meter was ≈ 6 feet from backyard of residential house.



Appendix C: RCNM Model Output

Construction Mobile Source Noise Level at Nearest Residential Land Use

Case Description:	**Oretga Plaza**							
				---- Receptor #1 ----				
		Baselines (dBA)						
Description	Land Use							
Worst Case Construction	Residential							
				Equipment				
				Spec	Actual	Receptor	Estimated	
		Impact		Lmax	Lmax	Distance	Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)	
Grader		No	40	85		224	0	
Backhoe		No	40		77.6	224	0	
Dozer		No	40		81.7	224	0	
				Results				
		Calculated (dBA)			Noise Limits (dBA)			
				Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Grader		72	71	N/A	N/A	N/A	N/A	N/A
Backhoe		64.5	63.6	N/A	N/A	N/A	N/A	N/A
Dozer		68.6	67.7	N/A	N/A	N/A	N/A	N/A
	Total	72	73.2	N/A	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.						

Construction Stationary Source Noise at Residential Locations

			Roadway Construction Noise Model (RCNM),Version 1.1					
Case Description:	Ortega Plaza							
				---- Receptor #1 ----				
		Baselines (dBA)						
Description	Land Use							
Worst Case Construction	Residential							
				Equipment				
				Spec	Actual	Receptor	Estimated	
		Impact		Lmax	Lmax	Distance	Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)	
Ultra-Quiet Air Compressor		No	40		65	224	0	
				Results				
		Calculated (dBA)			Noise Limits (dBA)			
				Day		Evening		Night
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Ultra-Quiet Air Compressor		52	51	N/A	N/A	N/A	N/A	N/A
	Total	52	51	N/A	N/A	N/A	N/A	N/A
		*Calculated Lmax is the Loudest value.						

Appendix D: Sound Plan Data

Ortega Plaza
Octave spectra of the sources in dB(A) - 002 - Ortega Plaza: Outdoor SP - Night

Name	Source type	I or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Drive-Thru	Line	56.55			26.7	44.3	0.0	0.0		0	Drive-Thru	Idiling Car 3'	27.9	29.4	32.2	37.2	37.8	39.0	35.5	27.5	20.9
Drive-Thru Speaker	Point				71.2	71.2	0.0	0.0		0	Speaker	Drive Thru Speaker	42.7	49.8	56.9	64.1	68.2	64.1	58.2	49.4	43.9
Garbage	Point				94.0	94.0	0.0	0.0		0	Garbage	Garbage	63.0	70.8	87.9	86.9	88.8	86.7	81.7	72.7	60.7
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
HVAC	Point				60.0	60.0	0.0	0.0		0	HVAC	HVAC @ 3ft	36.3	45.2	47.9	52.7	54.4	54.2	51.2	46.8	35.1
Gas Canopy - Parking	PLot	324.53			51.9	77.0	0.0	0.0		0	Convenience Store	Typical spectrum	60.3	71.9	64.4	68.9	69.0	69.4	66.7	60.5	47.7
Parking	PLot	153.46			55.1	77.0	0.0	0.0		0	Convenience Store	Typical spectrum	60.3	71.9	64.4	68.9	69.0	69.4	66.7	60.5	47.7
Parking	PLot	196.97			56.7	79.6	0.0	0.0		0	Convenience Store	Typical spectrum	63.0	74.6	67.1	71.6	71.7	72.1	69.4	63.2	50.4
Parking	PLot	113.62			55.5	76.0	0.0	0.0		0	Convenience Store	Typical spectrum	59.4	71.0	63.5	68.0	68.1	68.5	65.8	59.6	46.8
Parking	PLot	35.35			54.5	70.0	0.0	0.0		0	Convenience Store	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
Parking	PLot	18.50			54.3	67.0	0.0	0.0		0	Convenience Store	Typical spectrum	50.3	61.9	54.4	58.9	59.0	59.4	56.7	50.5	37.7

Ortega Plaza
Contribution level - 002 - Ortega Plaza: Outdoor SP - Night

Source	Source group	Source ty	Tr. lane	Leq,n dB(A)	A dB	
Receiver R1 Fl G Lr,lim dB(A) Leq,n 37.6 dB(A)						
Parking	Default parking lot noise	PLot		18.6	0.0	
Parking	Default parking lot noise	PLot		15.6	0.0	
Parking	Default parking lot noise	PLot		15.6	0.0	
Parking	Default parking lot noise	PLot		25.3	0.0	
Parking	Default parking lot noise	PLot		24.0	0.0	
HVAC	Default industrial noise	Point		5.3	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		21.6	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		31.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		30.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		20.0	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		19.4	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.6	0.0	
Garbage	Default industrial noise	Point			0.0	
Drive-Thru	Default industrial noise	Line		4.6	0.0	
Drive-Thru Speaker	Default industrial noise	Point		10.9	0.0	
Receiver R2 Fl G Lr,lim dB(A) Leq,n 31.4 dB(A)						
Parking	Default parking lot noise	PLot		25.8	0.0	
Parking	Default parking lot noise	PLot		18.8	0.0	
Parking	Default parking lot noise	PLot		9.1	0.0	
Parking	Default parking lot noise	PLot		19.3	0.0	
Parking	Default parking lot noise	PLot		16.1	0.0	
HVAC	Default industrial noise	Point		-1.7	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		16.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		20.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		19.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.4	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.0	0.0	
Garbage	Default industrial noise	Point			0.0	
Drive-Thru	Default industrial noise	Line		-9.4	0.0	
Drive-Thru Speaker	Default industrial noise	Point		-5.9	0.0	
Receiver R3 Fl G Lr,lim dB(A) Leq,n 45.3 dB(A)						
Parking	Default parking lot noise	PLot		26.7	0.0	

Source	Source group	Source ty	Tr. lane	Leq,n dB(A)	A dB	
Parking	Default parking lot noise	PLot		21.2	0.0	
Parking	Default parking lot noise	PLot		18.2	0.0	
Parking	Default parking lot noise	PLot		27.5	0.0	
Parking	Default parking lot noise	PLot		33.2	0.0	
HVAC	Default industrial noise	Point		1.5	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		30.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		33.6	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		33.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		34.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		34.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		34.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		34.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		35.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		35.4	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		34.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		34.9	0.0	
Garbage	Default industrial noise	Point			0.0	
Drive-Thru	Default industrial noise	Line		-1.1	0.0	
Drive-Thru Speaker	Default industrial noise	Point		5.1	0.0	
Receiver R4 Fl G Lr,lim dB(A) Leq,n 37.5 dB(A)						
Parking	Default parking lot noise	PLot		23.7	0.0	
Parking	Default parking lot noise	PLot		16.7	0.0	
Parking	Default parking lot noise	PLot		13.1	0.0	
Parking	Default parking lot noise	PLot		22.9	0.0	
Parking	Default parking lot noise	PLot		24.7	0.0	
HVAC	Default industrial noise	Point		-1.3	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		21.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		27.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		27.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		27.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		27.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		26.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		26.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		26.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		26.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		25.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		25.1	0.0	
Garbage	Default industrial noise	Point			0.0	
Drive-Thru	Default industrial noise	Line		-4.6	0.0	
Drive-Thru Speaker	Default industrial noise	Point		6.6	0.0	
Receiver R5 Fl G Lr,lim dB(A) Leq,n 30.5 dB(A)						
Parking	Default parking lot noise	PLot		11.6	0.0	
Parking	Default parking lot noise	PLot		7.2	0.0	
Parking	Default parking lot noise	PLot		4.5	0.0	

Source	Source group	Source ty	Tr. lane	Leq,n dB(A)	A dB	
Parking	Default parking lot noise	PLot		14.2	0.0	
Parking	Default parking lot noise	PLot		12.2	0.0	
HVAC	Default industrial noise	Point		-1.8	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		16.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		12.0	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		12.0	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		12.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		12.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		13.0	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		13.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		15.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		17.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		25.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		26.0	0.0	
Garbage	Default industrial noise	Point			0.0	
Drive-Thru	Default industrial noise	Line		-12.2	0.0	
Drive-Thru Speaker	Default industrial noise	Point		-7.1	0.0	
Receiver R6 Fl G Lr,lim dB(A) Leq,n 41.5 dB(A)						
Parking	Default parking lot noise	PLot		23.7	0.0	
Parking	Default parking lot noise	PLot		18.6	0.0	
Parking	Default parking lot noise	PLot		15.1	0.0	
Parking	Default parking lot noise	PLot		20.7	0.0	
Parking	Default parking lot noise	PLot		29.6	0.0	
HVAC	Default industrial noise	Point		2.1	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		27.6	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		30.5	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		30.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		31.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		31.5	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		32.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		32.5	0.0	
Garbage	Default industrial noise	Point			0.0	
Drive-Thru	Default industrial noise	Line		2.2	0.0	
Drive-Thru Speaker	Default industrial noise	Point		-7.4	0.0	

Ortega Plaza
Contribution spectra - 002 - Ortega Plaza: Outdoor SP - Night

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Receiver R1 Fl G Lr,lim dB(A) Leq,n 37.6 dB(A)																													
Drive-Thru	Leq,n	4.6	-18.8	-36.0	-30.2	-15.5	-14.7	-12.6	-16.6	-12.9	-15.3	-8.2	-13.3	-11.6	-7.7	-8.0	-4.3	-6.5	-6.9	-6.3	-7.6	-5.2	-4.6	-8.6	-11.8	-16.5	-21.9	-27.2	-34.5
Drive-Thru Speaker	Leq,n	10.9	-40.1	-38.1	-32.7	-30.4	-18.9	-17.8	-21.6	-15.8	-12.0	-8.7	-9.4	-4.9	-4.0	-0.2	0.7	3.1	4.8	1.3	1.4	-3.2	-3.6	-6.8	-7.2	-20.0	-18.9	-26.7	-31.7
Garbage	Leq,n																												
Gas Canopy - Car Door Shut	Leq,n	18.9		0.0			7.5			5.5			12.1			15.6			11.2			2.3			-9.4			-25.5	
Gas Canopy - Car Door Shut	Leq,n	18.9		-0.1			7.4			5.4			12.0			15.6			11.2			2.6			-9.4			-25.6	
Gas Canopy - Car Door Shut	Leq,n	18.7		-0.4			7.2			5.2			11.9			15.4			11.0			2.5			-9.8			-26.4	
Gas Canopy - Car Door Shut	Leq,n	18.6		-0.4			7.1			5.1			11.8			15.3			11.0			2.4			-9.9			-26.5	
Gas Canopy - Car Door Shut	Leq,n	29.7		2.6			12.1			12.1			19.7			26.6			24.6			18.1			8.4			-8.9	
Gas Canopy - Car Door Shut	Leq,n	30.8		2.9			12.3			12.4			20.0			26.8			26.8			20.5			10.5			-6.7	
Gas Canopy - Car Door Shut	Leq,n	31.3		2.9			12.4			12.4			20.0			27.5			27.1			20.6			10.6			-6.6	
Gas Canopy - Car Door Shut	Leq,n	19.4		0.3			7.9			5.9			12.9			16.1			11.5			2.7			-8.9			-24.7	
Gas Canopy - Car Door Shut	Leq,n	20.0		0.4			8.0			5.9			13.7			16.9			11.9			2.9			-8.9			-24.6	
Gas Canopy - Car Door Shut	Leq,n	29.7		2.6			12.1			12.1			19.7			26.6			24.6			18.1			8.4			-8.9	
HVAC	Leq,n	5.3	-45.2	-39.5	-35.8	-23.2	-18.6	-25.2	-17.8	-16.5	-18.2	-11.3	-11.5	-9.7	-8.9	-8.1	-4.3	-2.5	-6.7	-4.9	-3.8	-6.1	-5.5	-9.1	-9.1	-12.5	-14.6	-22.8	-32.4
Gas Canopy - Parking	Leq,n	21.6					9.1			16.4			10.0			13.0			14.0			14.6			9.3			-6.6	
Parking	Leq,n	25.3					12.3			20.1			14.2			17.9			17.6			17.2			12.6			-1.1	
Parking	Leq,n	24.0					10.5			18.0			12.3			17.0			16.8			16.7			11.9			-2.3	
Parking	Leq,n	18.6					6.9			13.9			8.0			11.2			10.5			9.8			4.0			-12.1	
Parking	Leq,n	15.6					3.3			11.1			4.9			8.3			7.5			6.9			1.3			-13.7	
Parking	Leq,n	15.6					1.6			9.7			4.2			8.6			8.4			8.3			3.6			-11.1	
Receiver R2 Fl G Lr,lim dB(A) Leq,n 31.4 dB(A)																													
Drive-Thru	Leq,n	-9.4	-24.9	-42.3	-36.7	-22.2	-21.8	-20.5	-26.9	-23.8	-27.7	-24.3	-29.5	-28.1	-25.1	-24.8	-20.8	-20.6	-21.1	-20.7	-21.7	-19.4	-19.4	-23.8	-27.7	-32.4	-39.7	-47.9	-59.9
Drive-Thru Speaker	Leq,n	-5.9	-47.0	-45.2	-40.0	-38.1	-26.9	-26.2	-29.6	-24.3	-23.3	-22.4	-24.0	-20.2	-19.9	-15.6	-15.4	-13.3	-12.4	-16.6	-17.2	-22.7	-24.9	-29.2	-31.0	-45.4	-45.9	-56.0	-64.6
Garbage	Leq,n																												
Gas Canopy - Car Door Shut	Leq,n	18.2		-0.3			8.7			6.7			8.3			14.8			11.3			2.2			-12.2			-37.3	
Gas Canopy - Car Door Shut	Leq,n	18.1		-0.4			8.6			6.6			8.2			14.8			11.3			2.2			-12.3			-37.5	
Gas Canopy - Car Door Shut	Leq,n	18.1		-0.8			8.3			6.3			8.2			14.8			11.3			2.2			-12.5			-38.2	
Gas Canopy - Car Door Shut	Leq,n	18.0		-0.9			8.2			6.2			8.1			14.8			11.3			2.2			-12.5			-38.4	
Gas Canopy - Car Door Shut	Leq,n	18.9		0.9			10.0			8.2			8.9			15.2			12.2			3.1			-11.0			-34.6	
Gas Canopy - Car Door Shut	Leq,n	19.7		1.5			10.8			9.2			9.4			15.8			13.3			4.3			-9.5			-32.4	
Gas Canopy - Car Door Shut	Leq,n	20.1		1.6			11.0			9.7			9.7			16.1			14.0			5.1			-8.7			-31.4	
Gas Canopy - Car Door Shut	Leq,n	18.3		0.1			9.1			7.1			8.4			14.9			11.5			2.4			-11.9			-36.4	
Gas Canopy - Car Door Shut	Leq,n	18.4		0.2			9.3			7.3			8.5			14.9			11.5			2.5			-11.8			-36.1	
Gas Canopy - Car Door Shut	Leq,n	18.7		0.7			9.8			8.0			8.8			15.1			11.9			2.9			-11.2			-35.0	
HVAC	Leq,n	-1.7	-52.5	-46.6	-42.7	-29.8	-24.8	-30.9	-23.0	-21.0	-22.1	-20.2	-20.3	-18.4	-17.5	-14.3	-10.4	-8.8	-13.1	-11.4	-10.6	-13.3	-13.3	-17.8	-18.9	-24.0	-28.6	-40.3	-54.8

Ortega Plaza
Contribution spectra - 002 - Ortega Plaza: Outdoor SP - Night

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Gas Canopy - Parking	Leq,n	16.1					8.2			14.1			1.1			4.7			3.2			2.2			-6.9			-28.4	
Parking	Leq,n	19.3					9.3			16.2			3.6			8.8			10.6			10.4			4.3			-11.7	
Parking	Leq,n	16.1					8.2			13.9			2.1			5.7			4.0			1.5			-7.1			-27.6	
Parking	Leq,n	25.8					12.1			20.3			8.0			14.5			19.3			20.4			14.6			-2.5	
Parking	Leq,n	18.8					6.2			14.4			1.1			7.2			11.8			12.2			6.7			-9.9	
Parking	Leq,n	9.1					0.1			7.0			-5.1			-2.1			-1.7			-3.9			-12.2			-31.2	
Receiver R3 FI G Lr,lim dB(A) Leq,n 45.3 dB(A)																													
Drive-Thru	Leq,n	-1.1	-22.8	-40.1	-34.3	-19.5	-18.7	-16.9	-22.3	-18.5	-21.7	-22.4	-27.7	-25.3	-19.7	-19.9	-15.6	-11.7	-11.8	-11.0	-11.6	-9.0	-8.6	-12.5	-15.9	-21.1	-27.3	-34.0	-43.6
Drive-Thru Speaker	Leq,n	5.1	-44.8	-42.8	-37.5	-35.3	-23.8	-22.7	-27.3	-21.5	-19.9	-21.8	-23.0	-19.1	-12.9	-9.3	-8.4	-1.9	-0.2	-3.6	-3.3	-8.0	-9.4	-13.1	-14.2	-28.2	-29.1	-40.0	-49.5
Garbage	Leq,n																												
Gas Canopy - Car Door Shut	Leq,n	35.3		9.1			19.3			20.3			20.3			29.9			32.1			26.2			16.6			2.2	
Gas Canopy - Car Door Shut	Leq,n	35.4		9.1			19.3			20.4			20.4			30.0			32.2			26.3			16.7			2.3	
Gas Canopy - Car Door Shut	Leq,n	34.8		9.5			19.7			20.8			20.9			29.5			31.5			25.6			16.2			2.6	
Gas Canopy - Car Door Shut	Leq,n	34.9		9.5			19.7			20.8			20.9			29.5			31.6			25.7			16.3			2.7	
Gas Canopy - Car Door Shut	Leq,n	34.2		7.9			18.1			19.1			18.7			28.7			31.2			25.2			15.4			0.0	
Gas Canopy - Car Door Shut	Leq,n	33.7		7.3			17.5			18.5			17.9			28.1			30.8			24.8			14.8			-1.1	
Gas Canopy - Car Door Shut	Leq,n	33.6		7.2			17.4			18.4			17.8			27.9			30.7			24.7			14.7			-1.3	
Gas Canopy - Car Door Shut	Leq,n	34.8		8.6			18.8			19.8			19.6			29.4			31.7			25.8			16.1			1.3	
Gas Canopy - Car Door Shut	Leq,n	34.8		8.5			18.7			19.7			19.5			29.3			31.7			25.7			16.0			1.1	
Gas Canopy - Car Door Shut	Leq,n	34.3		8.0			18.2			19.2			18.8			28.8			31.3			25.3			15.5			0.2	
HVAC	Leq,n	1.5	-47.8	-42.0	-38.2	-25.4	-20.5	-26.6	-18.8	-16.8	-17.9	-16.1	-16.1	-14.1	-13.2	-12.2	-8.3	-6.4	-10.5	-8.7	-7.5	-9.8	-9.3	-13.0	-13.0	-16.7	-19.3	-28.1	-38.7
Gas Canopy - Parking	Leq,n	30.8					17.4			26.4			12.4			16.8			23.1			25.2			20.5			7.7	
Parking	Leq,n	27.5					14.0			22.5			8.3			16.2			21.0			21.7			16.1			0.0	
Parking	Leq,n	33.2					18.1			28.9			15.3			21.6			26.2			26.8			21.9			8.2	
Parking	Leq,n	26.7					13.8			22.6			8.6			15.0			19.5			20.2			15.2			1.0	
Parking	Leq,n	21.2					7.6			16.3			2.3			9.7			14.7			15.2			9.8			-5.4	
Parking	Leq,n	18.2					4.5			13.2			-0.9			6.6			11.9			12.3			6.9			-8.6	
Receiver R4 FI G Lr,lim dB(A) Leq,n 37.5 dB(A)																													
Drive-Thru	Leq,n	-4.6	-28.5	-45.8	-40.1	-25.4	-24.6	-22.8	-28.7	-24.6	-25.1	-20.3	-24.7	-22.8	-18.6	-18.6	-14.8	-15.7	-15.3	-14.6	-15.4	-13.1	-13.1	-17.5	-21.5	-27.5	-34.9	-43.3	-55.5
Drive-Thru Speaker	Leq,n	6.6	-48.7	-46.6	-41.1	-38.8	-27.1	-25.8	-28.5	-22.4	-18.0	-15.5	-16.1	-11.3	-9.1	-5.3	-4.2	-1.4	1.1	-2.4	-2.2	-7.0	-8.5	-12.2	-13.6	-27.9	-29.1	-40.4	-50.7
Garbage	Leq,n																												
Gas Canopy - Car Door Shut	Leq,n	26.3		-0.8			8.9			8.3			11.6			23.2			21.8			15.2			3.4			-18.6	
Gas Canopy - Car Door Shut	Leq,n	26.2		-0.9			8.8			8.2			11.4			23.1			21.7			15.1			3.2			-18.9	
Gas Canopy - Car Door Shut	Leq,n	25.2		-1.1			8.6			7.9			11.0			21.3			21.3			14.7			2.7			-20.0	
Gas Canopy - Car Door Shut	Leq,n	25.1		-1.2			8.5			7.8			10.9			21.2			21.2			14.6			2.5			-20.3	
Gas Canopy - Car Door Shut	Leq,n	27.3		-0.2			9.6			9.3			12.7			24.2			22.7			16.7			5.0			-15.6	

Ortega Plaza
Contribution spectra - 002 - Ortega Plaza: Outdoor SP - Night

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Gas Canopy - Car Door Shut	Leq,n	27.8		0.1			9.9			9.7			15.6			24.6			23.0			16.7			5.4			-14.5	
Gas Canopy - Car Door Shut	Leq,n	27.9		0.1			9.9			9.8			15.7			24.7			23.2			16.7			5.5			-14.3	
Gas Canopy - Car Door Shut	Leq,n	26.6		-0.6			9.2			8.7			12.0			23.6			22.1			15.6			3.9			-17.4	
Gas Canopy - Car Door Shut	Leq,n	26.8		-0.5			9.2			8.8			12.1			23.7			22.2			16.0			4.3			-17.0	
Gas Canopy - Car Door Shut	Leq,n	27.2		-0.3			9.5			9.2			12.6			24.1			22.6			16.6			4.9			-15.9	
HVAC	Leq,n	-1.3	-53.8	-47.9	-44.1	-31.2	-26.3	-32.5	-24.7	-22.9	-21.2	-17.8	-18.0	-16.2	-15.3	-14.5	-10.7	-9.1	-13.0	-10.7	-9.8	-12.5	-12.5	-16.9	-18.1	-23.2	-28.0	-39.9	-54.9
Gas Canopy - Parking	Leq,n	21.1					8.1			15.5			5.8			11.8			14.1			15.3			8.7			-10.5	
Parking	Leq,n	22.9					8.3			16.3			10.6			15.9			16.3			16.3			10.1			-7.2	
Parking	Leq,n	24.7					9.6			17.1			12.4			18.1			18.6			18.4			11.6			-8.6	
Parking	Leq,n	23.7					8.8			17.1			10.5			16.8			17.0			17.1			11.5			-3.9	
Parking	Leq,n	16.7					2.0			10.0			4.4			9.7			9.9			10.0			4.2			-12.4	
Parking	Leq,n	13.1					-1.4			6.5			0.8			6.2			6.4			6.5			0.4			-16.7	
Receiver R5 FI G Lr,lim dB(A) Leq,n 30.5 dB(A)																													
Drive-Thru	Leq,n	-12.2	-25.8	-43.2	-37.7	-23.2	-22.4	-21.1	-26.9	-23.8	-27.8	-24.4	-30.4	-29.5	-26.5	-27.5	-24.3	-25.3	-26.4	-25.0	-26.3	-24.5	-25.3	-30.4	-35.3	-42.1	-49.9	-58.3	-70.0
Drive-Thru Speaker	Leq,n	-7.1	-47.5	-45.6	-40.4	-38.3	-27.0	-26.2	-31.8	-26.3	-25.2	-24.5	-25.9	-22.1	-21.6	-18.6	-18.4	-13.8	-12.9	-17.1	-17.7	-23.3	-25.6	-30.1	-32.1	-47.1	-49.0	-61.0	-71.6
Garbage	Leq,n																												
Gas Canopy - Car Door Shut	Leq,n	15.8		-0.1			8.8			6.4			5.9			10.8			9.1			0.0			-14.6			-39.2	
Gas Canopy - Car Door Shut	Leq,n	17.7		0.1			9.4			7.7			7.0			12.8			12.2			3.4			-11.0			-35.9	
Gas Canopy - Car Door Shut	Leq,n	25.9		2.6			12.7			12.4			11.0			20.1			22.8			16.5			5.0			-17.2	
Gas Canopy - Car Door Shut	Leq,n	26.0		2.6			12.8			12.5			11.0			20.2			22.9			16.6			5.0			-17.1	
Gas Canopy - Car Door Shut	Leq,n	12.8		-2.7			5.3			2.2			4.0			8.0			6.2			-3.1			-18.0			-42.6	
Gas Canopy - Car Door Shut	Leq,n	12.0		-3.1			4.9			1.8			3.7			7.7			3.9			-5.4			-20.3			-44.6	
Gas Canopy - Car Door Shut	Leq,n	12.0		-3.2			4.8			1.8			3.7			7.7			3.9			-5.4			-20.3			-44.8	
Gas Canopy - Car Door Shut	Leq,n	13.2		-1.5			6.4			3.2			4.4			8.5			5.1			-4.2			-18.8			-42.7	
Gas Canopy - Car Door Shut	Leq,n	13.0		-1.7			6.2			3.0			4.4			8.5			4.9			-4.3			-19.0			-43.0	
Gas Canopy - Car Door Shut	Leq,n	12.8		-2.7			5.3			2.2			4.0			8.1			6.2			-3.1			-17.9			-42.4	
HVAC	Leq,n	-1.8	-51.5	-45.7	-41.9	-29.1	-24.3	-30.5	-22.7	-20.8	-21.8	-20.0	-20.1	-18.1	-17.2	-16.3	-12.5	-8.8	-13.0	-11.3	-10.3	-12.9	-12.8	-17.1	-18.1	-23.0	-27.3	-38.8	-53.0
Gas Canopy - Parking	Leq,n	16.8					7.2			13.8			-0.6			2.0			7.4			9.3			2.6			-17.8	
Parking	Leq,n	14.2					6.2			11.9			0.7			2.7			2.9			2.1			-8.0			-33.4	
Parking	Leq,n	12.2					5.0			9.9			-2.9			-0.4			0.5			-0.5			-7.6			-27.9	
Parking	Leq,n	11.6					3.6			9.2			-1.4			0.7			-0.7			0.0			-10.8			-38.7	
Parking	Leq,n	7.2					-1.1			4.7			-6.2			-4.1			-3.4			-4.4			-14.8			-41.3	
Parking	Leq,n	4.5					-3.8			2.1			-9.0			-7.0			-6.3			-7.3			-17.6			-43.5	
Receiver R6 FI G Lr,lim dB(A) Leq,n 41.5 dB(A)																													
Drive-Thru	Leq,n	2.2	-19.7	-36.7	-30.8	-15.9	-15.0	-13.0	-17.9	-13.9	-17.0	-17.6	-22.6	-20.7	-16.5	-16.5	-12.3	-8.8	-8.9	-8.0	-8.7	-6.0	-5.4	-9.0	-12.0	-16.5	-21.8	-27.2	-35.0
Drive-Thru Speaker	Leq,n	-7.4	-45.1	-43.3	-38.2	-36.2	-25.1	-24.4	-29.4	-24.2	-23.2	-26.0	-27.6	-23.9	-22.2	-19.2	-19.1	-14.4	-13.4	-17.5	-17.9	-23.1	-24.9	-28.7	-29.8	-43.5	-43.5	-53.0	-60.3

Ortega Plaza
Contribution spectra - 002 - Ortega Plaza: Outdoor SP - Night

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Garbage	Leq,n																												
Gas Canopy - Car Door Shut	Leq,n	31.3		6.6			16.8			17.7			17.0			25.9			28.0			22.2			12.3			-3.4	
Gas Canopy - Car Door Shut	Leq,n	31.5		6.7			16.9			17.9			17.2			26.1			28.2			22.4			12.6			-3.0	
Gas Canopy - Car Door Shut	Leq,n	32.3		7.5			17.7			18.7			18.1			26.9			29.0			23.1			13.5			-1.4	
Gas Canopy - Car Door Shut	Leq,n	32.5		7.7			17.8			18.9			18.4			27.2			29.2			23.3			13.7			-1.1	
Gas Canopy - Car Door Shut	Leq,n	29.8		5.5			15.7			16.2			15.2			24.2			26.5			20.6			10.4			-6.8	
Gas Canopy - Car Door Shut	Leq,n	29.2		5.1			15.3			15.7			14.6			23.6			26.0			20.0			9.7			-8.1	
Gas Canopy - Car Door Shut	Leq,n	29.1		5.0			15.2			15.6			14.4			23.4			25.9			19.9			9.5			-8.4	
Gas Canopy - Car Door Shut	Leq,n	30.7		6.1			16.3			17.1			16.2			25.1			27.4			21.4			11.5			-4.8	
Gas Canopy - Car Door Shut	Leq,n	30.5		6.0			16.2			16.9			16.0			24.9			27.2			21.3			11.3			-5.1	
Gas Canopy - Car Door Shut	Leq,n	29.9		5.6			15.8			16.4			15.3			24.3			26.7			20.7			10.6			-6.5	
HVAC	Leq,n	2.1	-46.1	-40.3	-36.5	-23.7	-18.9	-25.0	-17.3	-15.5	-16.6	-14.9	-15.0	-13.1	-12.2	-11.3	-7.4	-5.6	-9.8	-8.1	-7.1	-9.5	-9.1	-12.9	-13.2	-17.0	-19.6	-28.5	-39.0
Gas Canopy - Parking	Leq,n	27.6					15.5			24.0			9.3			12.7			19.1			21.3			16.4			2.3	
Parking	Leq,n	20.7					9.4			15.8			2.6			10.2			14.2			14.2			7.6			-11.9	
Parking	Leq,n	29.6					17.0			25.8			12.2			18.0			22.2			22.7			17.9			4.6	
Parking	Leq,n	23.7					11.1			19.1			4.6			11.1			17.3			17.6			11.3			-7.4	
Parking	Leq,n	18.6					5.6			13.7			-0.7			5.7			12.3			12.7			6.6			-11.5	
Parking	Leq,n	15.1					2.2			10.3			-3.4			2.3			8.8			9.1			3.1			-14.8	

Ortega Plaza
Octave spectra of the sources in dB(A) - 001 - Ortega Plaza: Outdoor SP - Day

Name	Source type	I or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Drive-Thru	Line	56.55			26.7	44.3	0.0	0.0		0	Drive-Thru	Idiling Car 3'	27.9	29.4	32.2	37.2	37.8	39.0	35.5	27.5	20.9
Drive-Thru Speaker	Point				71.2	71.2	0.0	0.0		0	Speaker	Drive Thru Speaker	42.7	49.8	56.9	64.1	68.2	64.1	58.2	49.4	43.9
Garbage	Point				94.0	94.0	0.0	0.0		0	Garbage	Garbage	63.0	70.8	87.9	86.9	88.8	86.7	81.7	72.7	60.7
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
Gas Canopy - Car Door Shut	Point				81.3	81.3	0.0	0.0		0	Convenience Store	Car Door Shut	62.1	65.7	71.2	78.0	76.1	70.1	62.4	54.3	43.9
HVAC	Point				60.0	60.0	0.0	0.0		0	HVAC	HVAC @ 3ft	36.3	45.2	47.9	52.7	54.4	54.2	51.2	46.8	35.1
Gas Canopy - Parking	PLot	324.53			51.9	77.0	0.0	0.0		0	Convenience Store	Typical spectrum	60.3	71.9	64.4	68.9	69.0	69.4	66.7	60.5	47.7
Parking	PLot	153.46			55.1	77.0	0.0	0.0		0	Convenience Store	Typical spectrum	60.3	71.9	64.4	68.9	69.0	69.4	66.7	60.5	47.7
Parking	PLot	196.97			56.7	79.6	0.0	0.0		0	Convenience Store	Typical spectrum	63.0	74.6	67.1	71.6	71.7	72.1	69.4	63.2	50.4
Parking	PLot	113.62			55.5	76.0	0.0	0.0		0	Convenience Store	Typical spectrum	59.4	71.0	63.5	68.0	68.1	68.5	65.8	59.6	46.8
Parking	PLot	35.35			54.5	70.0	0.0	0.0		0	Convenience Store	Typical spectrum	53.4	65.0	57.5	62.0	62.1	62.5	59.8	53.6	40.8
Parking	PLot	18.50			54.3	67.0	0.0	0.0		0	Convenience Store	Typical spectrum	50.3	61.9	54.4	58.9	59.0	59.4	56.7	50.5	37.7

Ortega Plaza
Contribution level - 001 - Ortega Plaza: Outdoor SP - Day

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
Receiver R1 Fl G dB(A) Leq,d 40.8 dB(A)						
Parking	Default parking lot noise	PLot		21.6	0.0	
Parking	Default parking lot noise	PLot		18.6	0.0	
Parking	Default parking lot noise	PLot		18.7	0.0	
Parking	Default parking lot noise	PLot		28.3	0.0	
Parking	Default parking lot noise	PLot		27.0	0.0	
HVAC	Default industrial noise	Point		8.3	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		24.6	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		34.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		33.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		32.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		32.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		23.0	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		22.4	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.6	0.0	
Garbage	Default industrial noise	Point		24.8	0.0	
Drive-Thru	Default industrial noise	Line		7.6	0.0	
Drive-Thru Speaker	Default industrial noise	Point		16.9	0.0	
Receiver R2 Fl G dB(A) Leq,d 34.4 dB(A)						
Parking	Default parking lot noise	PLot		28.8	0.0	
Parking	Default parking lot noise	PLot		21.8	0.0	
Parking	Default parking lot noise	PLot		12.1	0.0	
Parking	Default parking lot noise	PLot		22.3	0.0	
Parking	Default parking lot noise	PLot		19.1	0.0	
HVAC	Default industrial noise	Point		1.3	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		19.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		23.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		22.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.4	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		21.0	0.0	
Garbage	Default industrial noise	Point		12.7	0.0	
Drive-Thru	Default industrial noise	Line		-6.4	0.0	
Drive-Thru Speaker	Default industrial noise	Point		0.1	0.0	
Receiver R3 Fl G dB(A) Leq,d 48.3 dB(A)						
Parking	Default parking lot noise	PLot		29.8	0.0	

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
Parking	Default parking lot noise	PLot		24.2	0.0	
Parking	Default parking lot noise	PLot		21.2	0.0	
Parking	Default parking lot noise	PLot		30.5	0.0	
Parking	Default parking lot noise	PLot		36.2	0.0	
HVAC	Default industrial noise	Point		4.5	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		33.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		36.6	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		36.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		37.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		37.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		37.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		37.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		38.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		38.4	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		37.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		37.9	0.0	
Garbage	Default industrial noise	Point		25.8	0.0	
Drive-Thru	Default industrial noise	Line		1.9	0.0	
Drive-Thru Speaker	Default industrial noise	Point		11.1	0.0	
Receiver R4 Fl G dB(A) Leq,d 40.6 dB(A)						
Parking	Default parking lot noise	PLot		26.7	0.0	
Parking	Default parking lot noise	PLot		19.7	0.0	
Parking	Default parking lot noise	PLot		16.1	0.0	
Parking	Default parking lot noise	PLot		25.9	0.0	
Parking	Default parking lot noise	PLot		27.8	0.0	
HVAC	Default industrial noise	Point		1.7	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		24.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		30.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		30.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		30.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		30.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		28.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		28.1	0.0	
Garbage	Default industrial noise	Point		21.2	0.0	
Drive-Thru	Default industrial noise	Line		-1.6	0.0	
Drive-Thru Speaker	Default industrial noise	Point		12.6	0.0	
Receiver R5 Fl G dB(A) Leq,d 33.5 dB(A)						
Parking	Default parking lot noise	PLot		14.6	0.0	
Parking	Default parking lot noise	PLot		10.2	0.0	
Parking	Default parking lot noise	PLot		7.5	0.0	

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
Parking	Default parking lot noise	PLot		17.2	0.0	
Parking	Default parking lot noise	PLot		15.2	0.0	
HVAC	Default industrial noise	Point		1.2	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		19.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		15.0	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		15.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		15.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		15.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		16.0	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		16.2	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		18.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		20.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.0	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		29.0	0.0	
Garbage	Default industrial noise	Point		10.2	0.0	
Drive-Thru	Default industrial noise	Line		-9.2	0.0	
Drive-Thru Speaker	Default industrial noise	Point		-1.0	0.0	
Receiver R6 Fl G dB(A) Leq,d 44.5 dB(A)						
Parking	Default parking lot noise	PLot		26.7	0.0	
Parking	Default parking lot noise	PLot		21.6	0.0	
Parking	Default parking lot noise	PLot		18.1	0.0	
Parking	Default parking lot noise	PLot		23.7	0.0	
Parking	Default parking lot noise	PLot		32.7	0.0	
HVAC	Default industrial noise	Point		5.1	0.0	
Gas Canopy - Parking	Default parking lot noise	PLot		30.6	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		32.1	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		32.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		32.8	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		32.9	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		33.5	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		33.7	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		34.4	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		34.5	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		35.3	0.0	
Gas Canopy - Car Door Shut	Default industrial noise	Point		35.6	0.0	
Garbage	Default industrial noise	Point		17.1	0.0	
Drive-Thru	Default industrial noise	Line		5.2	0.0	
Drive-Thru Speaker	Default industrial noise	Point		-1.4	0.0	

Ortega Plaza
Contribution spectra - 001 - Ortega Plaza: Outdoor SP - Day

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Receiver R1 Fl G dB(A) Leq,d 40.8 dB(A)																													
Drive-Thru	Leq,d	7.6	-15.8	-33.0	-27.2	-12.5	-11.7	-9.6	-13.5	-9.9	-12.3	-5.2	-10.3	-8.6	-4.7	-5.0	-1.3	-3.5	-3.9	-3.3	-4.6	-2.2	-1.6	-5.6	-8.8	-13.5	-18.9	-24.1	-31.5
Drive-Thru Speaker	Leq,d	16.9	-34.0	-32.0	-26.7	-24.4	-12.8	-11.7	-15.6	-9.8	-6.0	-2.7	-3.4	1.1	2.1	5.8	6.7	9.1	10.8	7.4	7.4	2.8	2.4	-0.8	-1.2	-14.0	-12.9	-20.7	-25.7
Garbage	Leq,d	24.8		-23.9			-4.6			-0.8			19.3			17.7			19.8			17.2			10.8			-5.5	
Gas Canopy - Car Door Shut	Leq,d	21.9		3.0			10.5			8.5			15.1			18.6			14.2			5.3			-6.4			-22.5	
Gas Canopy - Car Door Shut	Leq,d	21.9		2.9			10.5			8.4			15.1			18.6			14.2			5.6			-6.4			-22.6	
Gas Canopy - Car Door Shut	Leq,d	21.7		2.6			10.2			8.2			14.9			18.4			14.0			5.5			-6.8			-23.4	
Gas Canopy - Car Door Shut	Leq,d	21.6		2.6			10.1			8.1			14.8			18.4			14.0			5.5			-6.9			-23.5	
Gas Canopy - Car Door Shut	Leq,d	32.7		5.6			15.1			15.1			22.8			29.6			27.6			21.1			11.5			-5.9	
Gas Canopy - Car Door Shut	Leq,d	33.9		5.9			15.4			15.4			23.0			29.8			29.8			23.5			13.5			-3.7	
Gas Canopy - Car Door Shut	Leq,d	34.3		5.9			15.4			15.4			23.0			30.5			30.1			23.6			13.6			-3.6	
Gas Canopy - Car Door Shut	Leq,d	22.4		3.3			10.9			8.9			15.9			19.1			14.5			5.7			-5.9			-21.7	
Gas Canopy - Car Door Shut	Leq,d	23.0		3.4			11.0			9.0			16.7			19.9			14.9			5.9			-5.9			-21.6	
Gas Canopy - Car Door Shut	Leq,d	32.7		5.6			15.1			15.1			22.7			29.6			27.6			21.1			11.4			-5.9	
HVAC	Leq,d	8.3	-42.2	-36.4	-32.8	-20.2	-15.6	-22.2	-14.8	-13.5	-15.2	-8.3	-8.5	-6.7	-5.9	-5.1	-1.3	0.5	-3.7	-1.8	-0.8	-3.1	-2.5	-6.1	-6.1	-9.5	-11.6	-19.8	-29.4
Gas Canopy - Parking	Leq,d	24.6					12.1			19.4			13.1			16.0			17.0			17.6			12.3			-3.6	
Parking	Leq,d	28.3					15.3			23.2			17.2			20.9			20.6			20.2			15.6			1.9	
Parking	Leq,d	27.0					13.6			21.0			15.3			20.0			19.8			19.7			14.9			0.7	
Parking	Leq,d	21.6					9.9			16.9			11.0			14.2			13.5			12.8			7.0			-9.1	
Parking	Leq,d	18.6					6.3			14.1			7.9			11.3			10.5			9.9			4.3			-10.7	
Parking	Leq,d	18.7					4.6			12.7			7.2			11.6			11.4			11.3			6.6			-8.1	
Receiver R2 Fl G dB(A) Leq,d 34.4 dB(A)																													
Drive-Thru	Leq,d	-6.4	-21.9	-39.3	-33.7	-19.2	-18.8	-17.5	-23.8	-20.7	-24.7	-21.3	-26.5	-25.1	-22.0	-21.8	-17.8	-17.5	-18.1	-17.7	-18.7	-16.4	-16.4	-20.7	-24.7	-29.4	-36.7	-44.9	-56.9
Drive-Thru Speaker	Leq,d	0.1	-40.9	-39.2	-34.0	-32.0	-20.9	-20.2	-23.6	-18.3	-17.3	-16.4	-17.9	-14.2	-13.9	-9.6	-9.4	-7.3	-6.3	-10.6	-11.2	-16.7	-18.9	-23.2	-25.0	-39.3	-39.9	-50.0	-58.6
Garbage	Leq,d	12.7		-27.9			-9.0			-6.2			7.5			7.4			7.4			2.0			-9.1			-32.3	
Gas Canopy - Car Door Shut	Leq,d	21.2		2.7			11.7			9.7			11.3			17.8			14.3			5.2			-9.2			-34.3	
Gas Canopy - Car Door Shut	Leq,d	21.1		2.6			11.6			9.6			11.3			17.8			14.3			5.2			-9.3			-34.5	
Gas Canopy - Car Door Shut	Leq,d	21.1		2.2			11.3			9.3			11.2			17.8			14.3			5.2			-9.4			-35.2	
Gas Canopy - Car Door Shut	Leq,d	21.0		2.2			11.2			9.3			11.1			17.8			14.3			5.2			-9.5			-35.4	
Gas Canopy - Car Door Shut	Leq,d	21.9		3.9			13.0			11.2			11.9			18.2			15.2			6.1			-8.0			-31.5	
Gas Canopy - Car Door Shut	Leq,d	22.7		4.5			13.8			12.2			12.4			18.8			16.3			7.4			-6.5			-29.4	
Gas Canopy - Car Door Shut	Leq,d	23.1		4.6			14.0			12.7			12.7			19.1			17.0			8.1			-5.7			-28.3	
Gas Canopy - Car Door Shut	Leq,d	21.3		3.1			12.1			10.2			11.5			17.9			14.5			5.4			-8.9			-33.3	
Gas Canopy - Car Door Shut	Leq,d	21.4		3.2			12.3			10.3			11.5			18.0			14.5			5.5			-8.8			-33.1	
Gas Canopy - Car Door Shut	Leq,d	21.7		3.7			12.8			11.0			11.8			18.1			15.0			5.9			-8.2			-31.9	
HVAC	Leq,d	1.3	-49.5	-43.6	-39.7	-26.8	-21.8	-27.9	-20.0	-18.0	-19.1	-17.2	-17.3	-15.4	-14.5	-11.3	-7.4	-5.8	-10.1	-8.4	-7.6	-10.3	-10.3	-14.8	-15.9	-21.0	-25.6	-37.3	-51.7

Ortega Plaza
Contribution spectra - 001 - Ortega Plaza: Outdoor SP - Day

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Gas Canopy - Parking	Leq,d	19.1					11.2			17.1			4.2			7.7			6.3			5.2			-3.9			-25.4	
Parking	Leq,d	22.3					12.3			19.2			6.6			11.8			13.6			13.4			7.3			-8.7	
Parking	Leq,d	19.1					11.2			16.9			5.1			8.7			7.0			4.5			-4.1			-24.6	
Parking	Leq,d	28.8					15.1			23.3			11.0			17.5			22.3			23.4			17.7			0.5	
Parking	Leq,d	21.8					9.2			17.5			4.1			10.2			14.8			15.2			9.7			-6.9	
Parking	Leq,d	12.1					3.1			10.0			-2.1			0.9			1.4			-0.8			-9.2			-28.2	
Receiver R3 Fl G dB(A) Leq,d 48.3 dB(A)																													
Drive-Thru	Leq,d	1.9	-19.8	-37.1	-31.3	-16.5	-15.7	-13.9	-19.3	-15.5	-18.7	-19.4	-24.7	-22.3	-16.7	-16.9	-12.6	-8.6	-8.8	-7.9	-8.5	-5.9	-5.6	-9.5	-12.9	-18.1	-24.3	-31.0	-40.6
Drive-Thru Speaker	Leq,d	11.1	-38.8	-36.8	-31.5	-29.2	-17.7	-16.7	-21.3	-15.5	-13.9	-15.7	-17.0	-13.0	-6.9	-3.2	-2.4	4.1	5.8	2.4	2.7	-2.0	-3.4	-7.0	-8.2	-22.2	-23.0	-34.0	-43.5
Garbage	Leq,d	25.8		-22.6			-2.6			1.9			14.8			17.8			22.4			19.9			12.2			-5.9	
Gas Canopy - Car Door Shut	Leq,d	38.3		12.1			22.3			23.3			23.3			32.9			35.1			29.2			19.6			5.2	
Gas Canopy - Car Door Shut	Leq,d	38.4		12.1			22.3			23.4			23.4			33.0			35.2			29.3			19.7			5.3	
Gas Canopy - Car Door Shut	Leq,d	37.8		12.5			22.7			23.8			23.9			32.5			34.5			28.6			19.2			5.6	
Gas Canopy - Car Door Shut	Leq,d	37.9		12.5			22.7			23.8			23.9			32.5			34.6			28.7			19.4			5.7	
Gas Canopy - Car Door Shut	Leq,d	37.2		10.9			21.1			22.1			21.7			31.7			34.2			28.2			18.4			3.0	
Gas Canopy - Car Door Shut	Leq,d	36.7		10.3			20.5			21.5			20.9			31.1			33.8			27.8			17.8			1.9	
Gas Canopy - Car Door Shut	Leq,d	36.6		10.2			20.4			21.4			20.8			31.0			33.7			27.7			17.7			1.7	
Gas Canopy - Car Door Shut	Leq,d	37.9		11.6			21.8			22.8			22.6			32.4			34.7			28.8			19.1			4.3	
Gas Canopy - Car Door Shut	Leq,d	37.8		11.5			21.7			22.7			22.5			32.3			34.7			28.7			19.0			4.1	
Gas Canopy - Car Door Shut	Leq,d	37.3		11.0			21.2			22.2			21.8			31.8			34.3			28.3			18.5			3.2	
HVAC	Leq,d	4.5	-44.8	-39.0	-35.2	-22.3	-17.5	-23.6	-15.7	-13.8	-14.9	-13.0	-13.1	-11.1	-10.2	-9.2	-5.3	-3.4	-7.5	-5.6	-4.5	-6.8	-6.2	-9.9	-10.0	-13.7	-16.3	-25.1	-35.7
Gas Canopy - Parking	Leq,d	33.9					20.4			29.4			15.4			19.8			26.1			28.2			23.5			10.7	
Parking	Leq,d	30.5					17.0			25.5			11.3			19.2			24.0			24.7			19.1			3.0	
Parking	Leq,d	36.2					21.1			31.9			18.3			24.6			29.2			29.8			25.0			11.2	
Parking	Leq,d	29.8					16.8			25.6			11.7			18.0			22.5			23.2			18.2			4.0	
Parking	Leq,d	24.2					10.6			19.3			5.3			12.7			17.7			18.3			12.8			-2.4	
Parking	Leq,d	21.2					7.5			16.2			2.1			9.6			14.9			15.4			9.9			-5.6	
Receiver R4 Fl G dB(A) Leq,d 40.6 dB(A)																													
Drive-Thru	Leq,d	-1.6	-25.5	-42.8	-37.1	-22.3	-21.6	-19.8	-25.7	-21.6	-22.1	-17.3	-21.7	-19.8	-15.6	-15.6	-11.8	-12.6	-12.3	-11.6	-12.4	-10.1	-10.1	-14.5	-18.5	-24.5	-31.8	-40.3	-52.5
Drive-Thru Speaker	Leq,d	12.6	-42.7	-40.6	-35.1	-32.7	-21.1	-19.8	-22.5	-16.4	-11.9	-9.5	-10.1	-5.3	-3.1	0.8	1.8	4.6	7.1	3.7	3.8	-0.9	-2.5	-6.2	-7.5	-21.9	-23.1	-34.4	-44.6
Garbage	Leq,d	21.2		-29.3			-9.7			-5.3			15.3			14.0			16.5			13.8			5.0			-15.8	
Gas Canopy - Car Door Shut	Leq,d	29.3		2.2			11.9			11.3			14.6			26.2			24.8			18.2			6.4			-15.6	
Gas Canopy - Car Door Shut	Leq,d	29.2		2.1			11.8			11.2			14.5			26.1			24.7			18.1			6.2			-15.8	
Gas Canopy - Car Door Shut	Leq,d	28.2		1.9			11.6			10.9			14.0			24.3			24.3			17.7			5.7			-17.0	
Gas Canopy - Car Door Shut	Leq,d	28.1		1.8			11.5			10.8			13.9			24.2			24.2			17.6			5.6			-17.3	
Gas Canopy - Car Door Shut	Leq,d	30.3		2.8			12.6			12.3			15.7			27.2			25.7			19.7			8.1			-12.6	

Ortega Plaza
Contribution spectra - 001 - Ortega Plaza: Outdoor SP - Day

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Gas Canopy - Car Door Shut	Leq,d	30.8		3.1			12.9			12.7			18.6			27.6			26.1			19.7			8.4			-11.5	
Gas Canopy - Car Door Shut	Leq,d	30.9		3.2			12.9			12.8			18.8			27.7			26.2			19.7			8.5			-11.2	
Gas Canopy - Car Door Shut	Leq,d	29.7		2.4			12.2			11.7			15.0			26.6			25.1			18.6			6.9			-14.4	
Gas Canopy - Car Door Shut	Leq,d	29.8		2.5			12.2			11.8			15.1			26.7			25.2			19.0			7.3			-14.0	
Gas Canopy - Car Door Shut	Leq,d	30.2		2.8			12.5			12.2			15.6			27.1			25.6			19.6			7.9			-12.9	
HVAC	Leq,d	1.7	-50.8	-44.9	-41.0	-28.2	-23.3	-29.5	-21.7	-19.9	-18.1	-14.8	-15.0	-13.2	-12.3	-11.5	-7.7	-6.1	-10.0	-7.7	-6.8	-9.5	-9.5	-13.9	-15.0	-20.2	-25.0	-36.9	-51.9
Gas Canopy - Parking	Leq,d	24.1					11.1			18.5			8.8			14.8			17.1			18.3			11.7			-7.5	
Parking	Leq,d	25.9					11.4			19.3			13.6			18.9			19.3			19.3			13.1			-4.2	
Parking	Leq,d	27.8					12.6			20.1			15.4			21.1			21.6			21.4			14.6			-5.6	
Parking	Leq,d	26.7					11.8			20.1			13.5			19.8			20.0			20.1			14.6			-0.9	
Parking	Leq,d	19.7					5.0			13.0			7.4			12.7			13.0			13.1			7.2			-9.4	
Parking	Leq,d	16.1					1.6			9.5			3.8			9.2			9.4			9.5			3.4			-13.7	
Receiver R5 Fl G dB(A) Leq,d 33.5 dB(A)																													
Drive-Thru	Leq,d	-9.2	-22.8	-40.2	-34.7	-20.2	-19.4	-18.1	-23.9	-20.8	-24.8	-21.4	-27.4	-26.5	-23.5	-24.5	-21.3	-22.3	-23.4	-22.0	-23.3	-21.5	-22.3	-27.4	-32.3	-39.0	-46.9	-55.3	-67.0
Drive-Thru Speaker	Leq,d	-1.0	-41.4	-39.6	-34.4	-32.3	-21.0	-20.2	-25.7	-20.3	-19.2	-18.5	-19.9	-16.1	-15.6	-12.6	-12.3	-7.8	-6.9	-11.1	-11.7	-17.2	-19.5	-24.0	-26.1	-41.1	-43.0	-55.0	-65.6
Garbage	Leq,d	10.2		-30.8			-11.8			-9.2			5.8			2.7			5.4			0.0			-12.0			-39.2	
Gas Canopy - Car Door Shut	Leq,d	18.8		2.9			11.8			9.4			8.9			13.9			12.1			3.0			-11.6			-36.2	
Gas Canopy - Car Door Shut	Leq,d	20.7		3.1			12.4			10.7			10.0			15.8			15.2			6.4			-8.0			-32.9	
Gas Canopy - Car Door Shut	Leq,d	29.0		5.6			15.8			15.5			14.0			23.1			25.8			19.5			8.0			-14.2	
Gas Canopy - Car Door Shut	Leq,d	29.0		5.6			15.8			15.5			14.0			23.2			25.9			19.6			8.0			-14.1	
Gas Canopy - Car Door Shut	Leq,d	15.8		0.3			8.3			5.2			7.0			11.0			9.2			-0.1			-15.0			-39.5	
Gas Canopy - Car Door Shut	Leq,d	15.1		-0.1			7.9			4.8			6.7			10.7			6.9			-2.4			-17.3			-41.6	
Gas Canopy - Car Door Shut	Leq,d	15.0		-0.2			7.8			4.8			6.7			10.7			6.9			-2.4			-17.3			-41.8	
Gas Canopy - Car Door Shut	Leq,d	16.2		1.5			9.4			6.2			7.4			11.5			8.1			-1.1			-15.8			-39.7	
Gas Canopy - Car Door Shut	Leq,d	16.0		1.3			9.2			6.0			7.4			11.5			8.0			-1.3			-16.0			-40.0	
Gas Canopy - Car Door Shut	Leq,d	15.8		0.3			8.3			5.2			7.1			11.1			9.2			-0.1			-14.9			-39.4	
HVAC	Leq,d	1.2	-48.5	-42.7	-38.9	-26.1	-21.3	-27.5	-19.6	-17.7	-18.8	-17.0	-17.0	-15.1	-14.2	-13.3	-9.5	-5.8	-10.0	-8.3	-7.3	-9.9	-9.8	-14.1	-15.0	-20.0	-24.3	-35.8	-50.0
Gas Canopy - Parking	Leq,d	19.8					10.3			16.8			2.4			5.0			10.5			12.3			5.6			-14.8	
Parking	Leq,d	17.2					9.2			14.9			3.7			5.7			5.9			5.2			-5.0			-30.3	
Parking	Leq,d	15.2					8.0			12.9			0.1			2.6			3.5			2.5			-4.6			-24.9	
Parking	Leq,d	14.6					6.6			12.2			1.6			3.7			2.3			3.0			-7.8			-35.7	
Parking	Leq,d	10.2					1.9			7.7			-3.2			-1.1			-0.4			-1.3			-11.8			-38.3	
Parking	Leq,d	7.5					-0.8			5.1			-6.0			-3.9			-3.3			-4.3			-14.6			-40.5	
Receiver R6 Fl G dB(A) Leq,d 44.5 dB(A)																													
Drive-Thru	Leq,d	5.2	-16.7	-33.7	-27.8	-12.9	-12.0	-10.0	-14.9	-10.9	-14.0	-14.6	-19.6	-17.7	-13.4	-13.5	-9.3	-5.8	-5.9	-5.0	-5.7	-2.9	-2.4	-6.0	-9.0	-13.5	-18.8	-24.2	-32.0
Drive-Thru Speaker	Leq,d	-1.4	-39.0	-37.3	-32.1	-30.2	-19.1	-18.4	-23.4	-18.1	-17.1	-20.0	-21.6	-17.9	-16.2	-13.2	-13.0	-8.4	-7.4	-11.4	-11.9	-17.0	-18.8	-22.7	-23.8	-37.5	-37.5	-47.0	-54.3

Ortega Plaza
Contribution spectra - 001 - Ortega Plaza: Outdoor SP - Day

Source	Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Garbage	Leq,d	17.1		-26.1			-6.5			-2.5			11.4			10.3			12.5			8.3			-1.6			-23.1	
Gas Canopy - Car Door Shut	Leq,d	34.4		9.6			19.8			20.7			20.0			28.9			31.0			25.2			15.4			-0.3	
Gas Canopy - Car Door Shut	Leq,d	34.5		9.8			19.9			20.9			20.2			29.1			31.2			25.4			15.6			0.0	
Gas Canopy - Car Door Shut	Leq,d	35.3		10.5			20.7			21.7			21.2			30.0			32.0			26.1			16.5			1.6	
Gas Canopy - Car Door Shut	Leq,d	35.6		10.7			20.9			21.9			21.4			30.2			32.2			26.3			16.8			2.0	
Gas Canopy - Car Door Shut	Leq,d	32.8		8.5			18.7			19.2			18.2			27.2			29.6			23.6			13.4			-3.8	
Gas Canopy - Car Door Shut	Leq,d	32.3		8.1			18.3			18.7			17.6			26.6			29.0			23.0			12.7			-5.1	
Gas Canopy - Car Door Shut	Leq,d	32.1		8.0			18.2			18.6			17.4			26.4			28.9			22.9			12.5			-5.4	
Gas Canopy - Car Door Shut	Leq,d	33.7		9.1			19.3			20.1			19.2			28.1			30.4			24.4			14.5			-1.8	
Gas Canopy - Car Door Shut	Leq,d	33.5		9.0			19.2			19.9			19.0			28.0			30.2			24.3			14.3			-2.1	
Gas Canopy - Car Door Shut	Leq,d	32.9		8.6			18.8			19.4			18.4			27.3			29.7			23.7			13.6			-3.5	
HVAC	Leq,d	5.1	-43.1	-37.3	-33.5	-20.6	-15.8	-22.0	-14.3	-12.4	-13.6	-11.9	-12.0	-10.1	-9.2	-8.3	-4.4	-2.6	-6.8	-5.0	-4.0	-6.5	-6.1	-9.9	-10.2	-14.0	-16.6	-25.5	-36.0
Gas Canopy - Parking	Leq,d	30.6					18.5			27.0			12.3			15.7			22.1			24.3			19.4			5.3	
Parking	Leq,d	23.7					12.4			18.8			5.6			13.2			17.2			17.2			10.6			-8.9	
Parking	Leq,d	32.7					20.0			28.8			15.2			21.0			25.2			25.7			20.9			7.6	
Parking	Leq,d	26.7					14.2			22.1			7.6			14.1			20.3			20.6			14.3			-4.4	
Parking	Leq,d	21.6					8.6			16.8			2.3			8.8			15.3			15.7			9.6			-8.5	
Parking	Leq,d	18.1					5.2			13.3			-0.4			5.3			11.8			12.1			6.1			-11.8	