Acoustical Assessment
Westgate West Costco Project
City of San José, California

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LIST OF ABBREVIATED TERMS

ADT	average daily traffic
ASTM	American Society for Testing and Materials
dBA	A-weighted sound level
CEQA	California Environmental Quality Act
CNEL	community equivalent noise level
DNL	day-night noise level
dB	decibel
L_{eq}	equivalent noise level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HVAC	heating ventilation and air conditioning
Hz	hertz
in/sec	inches per second
L_{max}	maximum noise level
µPa	micropascals
L_{min}	minimum noise level
PPV	peak particle velocity
RMS	root mean square
STC	Sound Transmission Class
sf	square feet
VdB	vibration velocity level

1 INTRODUCTION

This report documents the results of an Acoustical Assessment completed for the Westgate West Costco Project (proposed Project). The purpose of this Acoustical Assessment is to evaluate the Project's potential construction and operational noise and vibration levels associated with the Project and determine the level of impact the Project would have on the environment.

1.1 PROJECT LOCATION

The Project site is located at 5287 Prospect Road within an existing shopping center on the northeast corner of Lawrence Expressway and Prospect Road, in the City of San José. The 19.8-acre Project site is comprised of eight parcels and is bounded by Graves Avenue to the north, the Westgate Shopping Center to the east, Prospect Road to the south, and Lawrence Expressway to the west. Figure 1: Regional Map and Figure 2: Project Vicinity Map, depict the Project site in a regional and local context.

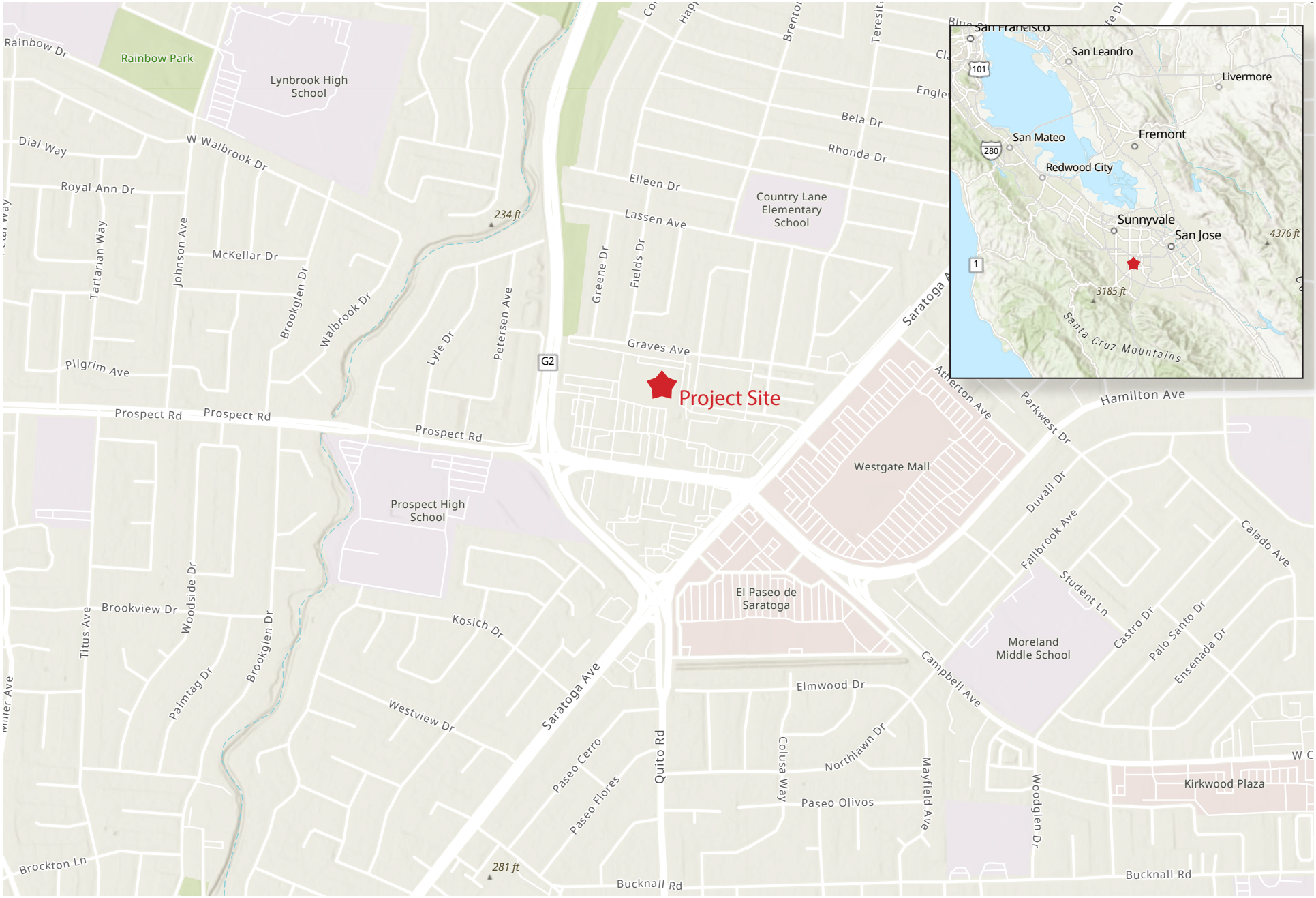
The site is currently developed with nine retail and restaurant buildings, a covered garden center, surface parking lots, and associated landscaping. The Project site includes approximately 250,113 square feet (sf) of existing buildings. The proposed Project's existing land use designation is Neighborhood/Community Commercial (NCC) and existing zoning designation is Commercial General (CG).

1.2 PROJECT DESCRIPTION

The Project proposes to demolish three existing buildings and the covered garden center resulting in the demolition of approximately 188,265 sf of buildings. Specifically, the following buildings would be demolished: the 16,708 sf building recently occupied by the UPS Store and Domino's Pizza, the 74,303 sf building (including the covered garden center area) previously occupied by the Orchard Supply Hardware store, and the 97,254 sf building on the northern portion of the site that was recently occupied by Ethan Allen and Smart & Final. Most of the space to be demolished is currently vacant, and remaining tenants may be relocated to existing space within the Westgate West Shopping Center.

The Project would construct an approximately 166,058 sf single-story, wholesale retail center ("Costco building"), including a tire shop and associated parking and landscaping on the northern portion of the Project site. The maximum height of the Costco building would be 40 feet, including the parapet for the rooftop parking. Rooftop parking would include lighting structures with a height of approximately 25-feet for nighttime visibility and security. Approximately 154,936 sf of the building would comprise of warehouse space. The remaining square footage would include the mechanical/fire room, an open vestibule, and vertical circulation (i.e., stairs/escalator). The proposed Project includes a rooftop parking deck and surface lot parking around the building. Rooftop parking would be accessed via a ramp on the south side of the proposed building. Landscaping would be installed throughout the surface parking lot and along the parking lot and building perimeter. As part of redevelopment of the Project site, loading and receiving activities will no longer occur at the rear (north side) of the buildings immediately adjacent to Graves Avenue. Instead, the receiving and loading docks for the proposed Costco building would be located at the southeast corner of the Costco building shielding residential uses along Graves Avenue from loading and receiving activities. Figure 3: Site Plan, shows the proposed layout of the Project site.

The Project site is designated as Neighborhood/Community Commercial (NCC) by the General Plan, which allows for commercial and retail uses. The Project site is zoned as Commercial General (CG). The Commercial General (CG) Zoning District also allows for commercial and retail uses including larger commercial centers and regional malls.



Source: USGS, 2022

Figure 1: Regional Map

Westgate West Costco Project
Acoustical Assessment

Not to scale

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Source: Nearmap, 2022

Figure 2: Project Vicinity Map

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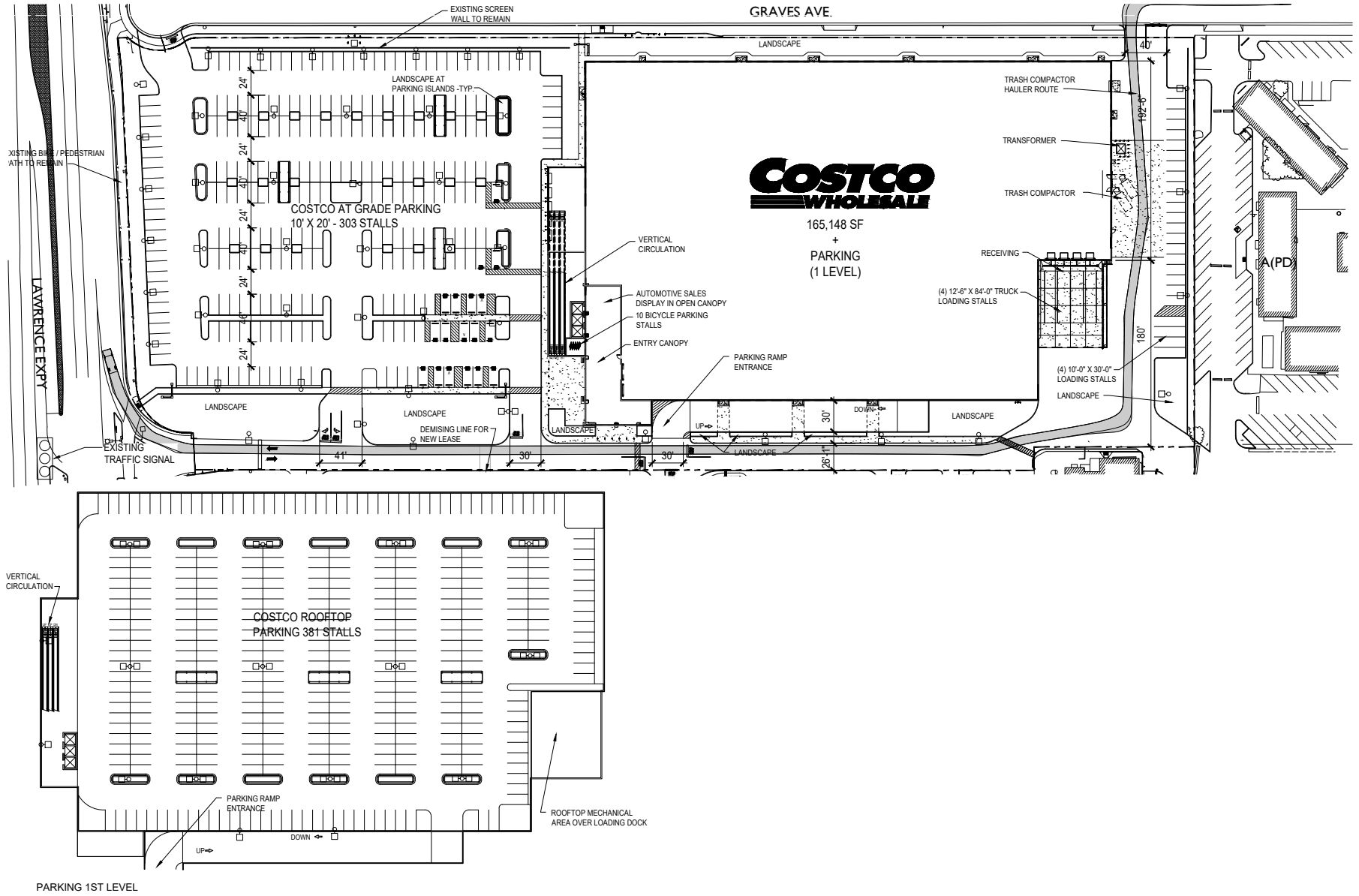

Source: MG2, 2022

Figure 3: Site Plan

Westgate West Costco Project
Acoustical Assessment

Not to scale

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2 ACOUSTIC FUNDAMENTALS

2.1 SOUND AND ENVIRONMENTAL NOISE

Acoustics is the science of sound. Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a medium (e.g., air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz).

Noise is defined as loud, unexpected, or annoying sound. The fundamental acoustics model consists of a noise source, receptor, and the propagation path between the two. The loudness of the noise source, obstructions, or atmospheric factors affecting the propagation path, determine the perceived sound level and noise characteristics at the receptor. Acoustics deal primarily with the propagation and control of sound. A typical noise environment consists of ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this ambient noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to continuous noise from traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a large range of numbers. To avoid this, the decibel (dB) scale was devised. The dB scale uses the hearing threshold of 20 micropascals (µPa) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels correspond closely to human perception of relative loudness. Table 1: Typical Noise Levels provides typical noise levels.

Table 1: Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	– 110 –	Rock Band
Jet fly-over at 1,000 feet		
	– 100 –	
Gas lawnmower at 3 feet		
	– 90 –	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	– 80 –	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawnmower, 100 feet	– 70 –	Vacuum cleaner at 10 feet
Commercial area		Normal Speech at 3 feet
Heavy traffic at 300 feet	– 60 –	
		Large business office
Quiet urban daytime	– 50 –	Dishwasher in next room
Quiet urban nighttime	– 40 –	Theater, large conference room (background)
Quiet suburban nighttime		
	– 30 –	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	– 20 –	
		Broadcast/recording studio
	– 10 –	
Lowest threshold of human hearing	– 0 –	Lowest threshold of human hearing

Source: California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

Noise Descriptors

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The equivalent noise level (L_{eq}) represents the continuous sound pressure level over the measurement period, while the day-night noise level (DNL) and Community Equivalent Noise Level (CNEL) are measures of energy average during a 24-hour period, with dB weighted sound levels from 7:00 p.m. to 7:00 a.m. Most commonly, environmental sounds are described in terms of L_{eq} that has the same acoustical energy as the summation of all the time-varying events. Each is applicable to this analysis and defined Table 2: Definitions of Acoustical Terms.

Table 2: Definitions of Acoustical Terms

Term	Definitions
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in µPa (or 20 micronewtons per square meter), where 1 pascals is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in dB as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 µPa). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	The sound pressure level in dB as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
Maximum Noise Level (L_{max}) Minimum Noise Level (L_{min})	The maximum and minimum dBA during the measurement period.
Exceeded Noise Levels (L_1, L_{10}, L_{50}, L_{90})	The dBA values that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day-Night Noise Level (DNL)	A 24-hour average Leq with a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity at nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.4 dBA DNL.
Community Noise Equivalent Level (CNEL)	A 24-hour average Leq with a 5 dBA weighting during the hours of 7:00 a.m. to 10:00 a.m. and a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively. The logarithmic effect of these additions is that a 60 dBA 24-hour Leq would result in a measurement of 66.7 dBA CNEL.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends on its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

The A-weighted decibel (dBA) sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be used. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source.

A-Weighted Decibels

The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by dBA values. There is a strong correlation between dBA and the way the human ear perceives sound. For this reason, the dBA has become the standard tool of environmental noise assessment. All noise levels reported in this document are in terms of dBA, but are expressed as dB, unless otherwise noted.

Addition of Decibels

The dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic dB is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions. Under the dB scale, three sources of equal loudness together would produce an increase of approximately 5 dBA.

Sound Propagation and Attenuation

Sound spreads (propagates uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics. No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. For line sources, an overall attenuation rate of 3 dB per doubling of distance is assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The way older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted:

- Except in carefully controlled laboratory experiments, a 1-dBA change cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A minimum 5-dBA change is required before any noticeable change in community response would be expected. A 5-dBA increase is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Effects of Noise on People

Hearing Loss. While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance. Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The DNL as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. A noise level of about 55 dBA DNL is the threshold at which a substantial percentage of people begin to report annoyance[1].

2.2 GROUNDBORNE VIBRATION

Sources of groundborne vibrations include natural phenomena (earthquakes, volcanic eruptions, sea waves, landslides, etc.) or man-made causes (explosions, machinery, traffic, trains, construction equipment, etc.). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude, including Vibration Decibels (VdB), peak particle velocity (PPV), and the root mean square (RMS) velocity. VdB is the vibration

[1] Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

velocity level in the decibel scale. PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. The PPV and RMS vibration velocity amplitudes are used to evaluate human response to vibration.

Table 3: Human Reaction and Damage to Buildings from Vibration, displays the reactions of people and the effects on buildings produced by continuous vibration levels. The annoyance levels shown in the table should be interpreted with care since vibration may be found to be annoying at much lower levels than those listed, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows.

Ground vibration can be a concern in instances where buildings shake, and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for groundborne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment. For the purposes of this analysis, a PPV descriptor with units of inches per second (in/sec) is used to evaluate construction-generated vibration for building damage and human complaints.

Table 3: Human Reaction and Damage to Buildings from Vibration

Maximum PPV (in/sec)	Vibration Annoyance Potential Criteria	Vibration Damage Potential Threshold Criteria	FTA Vibration Damage Criteria
0.008	--	Extremely fragile historic buildings, ruins, ancient monuments	--
0.01	Barely Perceptible	--	--
0.04	Distinctly Perceptible	--	--
0.1	Strongly Perceptible	Fragile buildings	--
0.12	--	--	Buildings extremely susceptible to vibration damage
0.2	--	--	Non-engineered timber and masonry buildings
0.25	--	Historic and some old buildings	--
0.3	--	Older residential structures	Engineered concrete and masonry (no plaster)
0.4	Severe	--	--
0.5	--	New residential structures, Modern industrial/commercial buildings	Reinforced-concrete, steel or timber (no plaster)
PPV = peak particle velocity; in/sec = inches per second; FTA = Federal Transit Administration			
Source: California Department of Transportation, Transportation and Construction Vibration Guidance Manual, 2020 and Federal Transit administration, Transit Noise and Vibration Assessment Manual, 2018.			

3 REGULATORY SETTING

To limit population exposure to physically or psychologically damaging as well as intrusive noise levels, the Federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

3.1 STATE OF CALIFORNIA

California Government Code

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of "normally acceptable", "conditionally acceptable", "normally unacceptable", 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" up to 65 CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries, and churches are "normally acceptable" up to 70 CNEL, as are office buildings and business, commercial, and professional uses.

Title 24 – Building Code

The State's noise insulation standards are codified in the California Code of Regulations, Title 24: Part 1, Building Standards Administrative Code, and Part 2, California Building Code. These noise standards are applied to new construction in California for interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 65 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new multi-family residential buildings, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3.2 LOCAL

City of San José General Plan

The San José General Plan identifies goals, policies, and implementations in the Noise Element. The Noise Element provides a basis for comprehensive local programs to regulate environmental noise and protect citizens from excessive exposure. Table 4: Land-Use Compatibility Guidelines for Community Noise in San José highlights five land-use categories and the outdoor noise compatibility guidelines.

Table 4: Land-Use Compatibility Guidelines for Community Noise in San José

Land-Use Category	Exterior Noise Exposure (DNL), in dBA		
	Normally Acceptable[1]	Conditionally Acceptable[2]	Unacceptable[3]
Residential, Hotels and Motels, Hospitals, and Residential Care	Up to 60	>60 to 75	>75
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	Up to 65	>65 to 80	>80
Schools, Libraries, Museums, Meeting Halls, Churches	Up to 60	>60 to 75	>75
Office Buildings, Business Commercial, and Professional Offices	Up to 70	>70 to 80	>75
Sports Area, Outdoor Spectator Sports	Up to 70	>70 to 80	>65
Public and Quasi-Public Auditoriums, Concert Halls, Amphitheaters	N/A	>55 to 70	>70

1. 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.
2. Conditionally Acceptable – Specified land use may be permitted only after detailed analysis of the noise reduction requirements and noise mitigation features included in the design.
3. Unacceptable – New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies. Development will only be considered when technically feasibly mitigation is identified that is also compatible with relevant design guidelines.

Source: City of San José General Plan, *Table EC-1*, 2011.

The following lists applicable noise goals and targets that apply to the Project obtained from the Envision San José 2040 General Plan:

Goal EC-1: Community Noise Levels and Land Use Compatibility. Minimize the impact of noise on people through noise reduction and suppression techniques, and through appropriate land use policies.

Policy EC – 1.1: Locate new development in areas where noise levels are appropriate for the proposed uses. Consider federal, state and City noise standards and guidelines as a part of new development review uses. Consider federal, state and City noise standards and guidelines as a part of new development review. Applicable standards and guidelines for land uses in San José include:

Interior Noise Levels

The City's standard for interior noise Levels in residences, hotels, motels, residential care facilities, and hospitals is 45 dBA Day/Night Average Sound Level (DNL). Include appropriate site and building design, building construction and noise attenuation techniques in new development to meet this standard. For sites with exterior noise levels of 60 dBA DNL or more, an acoustical analysis following protocols in the City-adopted California Building Code is required to demonstrate that development projects can meet this standard. The acoustical analysis shall base required noise attenuation techniques on expected Envision San José 2040 General Plan traffic volumes to ensure land use compatibility and consistency over the life of this plan.

Exterior Noise Levels

The City's acceptable exterior noise level objective is 60 dBA DNL or less for residential and most institutional land uses (Table 4 above). The acceptable exterior noise level objective is established for the City, except in the environs of the Mineta San José International Airport and the Downtown, as described below:

For new multi-family residential projects and for the residential component of mixed-use development, use a standard of 60 dBA DNL in usable outdoor activity areas, excluding balconies and residential stoops and porches facing existing roadways. Some common use areas that meet the 60 dBA DNL exterior standard will be available to all residents. Use noise attenuation techniques such as shielding by buildings and structures for outdoor common use areas. On sites subject to aircraft overflights or adjacent to elevated roadways, use noise attenuation techniques to achieve the 60 dBA DNL standards for noise from sources other than aircraft and elevated roadway segments.

Policy EC – 1.2: Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would:

- Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain “Normally Acceptable”; or
- Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the “Normally Acceptable” level

Policy EC – 1.3: Mitigate noise generation of new nonresidential land uses to 55 dBA DNL at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.

Policy EC – 1.6: Regulate the effects of operational noise from existing and new industrial and commercial development on adjacent uses through noise standards in the City’s Municipal Code.

Policy EC – 1.7: Require construction operations within San José to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City’s Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would:

- Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.

For such large or complex projects, a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.

Policy EC – 1.13: Update noise limits and acoustical descriptors in the Zoning Code to clarify noise standards that apply to land uses throughout the City.

Policy EC – 1.14: Require acoustical analyses for proposed sensitive land uses in areas with exterior noise levels exceeding the City's noise and land use compatibility standards to base noise attenuation techniques on expected Envision General Plan traffic volumes to ensure land use compatibility and General Plan consistency.

Policy EC – 2.3: Require new development to minimize continuous vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, including ruins and ancient monuments or building that are documented to be structurally weakened, a continuous vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to a building. A continuous vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction. Equipment or activities typical of generating continuous vibration include but are not limited to: excavation equipment; static compaction equipment; vibratory pile drivers; pile-extraction equipment; and vibratory compaction equipment. Avoid use of impact pile drivers within 125 feet of any buildings, and within 300 feet of historical buildings, or buildings in poor condition. On a project-specific basis, this distance of 300 feet may be reduced where warranted by a technical study by a qualified professional that verifies that there will be virtually no risk of cosmetic damage to sensitive buildings from the new development during demolition and construction. Transient vibration impacts may exceed a vibration limit of 0.08 in/sec PPV only when and where warranted by a technical study by a qualified professional that verifies that there will be virtually no risk of cosmetic damage to sensitive buildings from the new development during demolition and construction.

City of San José Municipal Code

Section 20.100.450, Hours of Construction Within 500 Feet of a Residential Unit, of the San José Municipal Code (Municipal Code), specifies the following standard exceptions to the provisions of Section 20.100.450. Unless otherwise expressly allowed in a Development Permit or other planning approval, no applicant or agent of an applicant shall suffer or allow any construction activity on a site located within 500 feet of a residential unit before 7:00 a.m. or after 7:00 p.m., Monday through Friday, or at any time on weekends.

Table 5: City of San José Zoning Ordinance Noise Standards shows the San José standards for maximum noise level at the property.

Table 5: City of San José Zoning Ordinance Noise Standards

Land Use Types	Maximum Noise Level in Decibels at Property Line
Commercial use adjacent to a property used or zoned for residential purposes	55
Commercial use adjacent to a property used or zoned for commercial purposes or use other than commercial or residential purposes	60
Source: City of San José Municipal Code section 20.40.600.	

City of Saratoga

Because the Project site is adjacent to Prospect High School and commercial uses located within the City of Saratoga (south of Prospect Road), the pertinent noise standards and regulations for the City of Saratoga are provided below and discussed in the analysis below for informational purposes.

City of Saratoga Municipal Code

Standards established under the Saratoga Municipal Code (SMC) are used to analyze noise impacts originating from the Project. The City's Noise Control Ordinance (Article 7-30) purpose it to maintain or reduce noise levels in the City to avoid exposure to unacceptable or harmful noise generated by equipment and/or amplified sound that is subject to regulation and control by the City; maintain and preserve the quiet residential atmosphere of the City; implement the goals and policies contained in the Noise Element of the City's General Plan by addressing noise transfer between properties; promote land use compatibility by addressing noise exposure from existing and new noise sources; and prohibit noise which disturbs the peace and quiet of a neighborhood or causes discomfort or annoyance to persons of normal sensitivities. Saratoga's noise standards are shown in Table 6: Maximum Permissible Outdoor Noise Levels Generated (dBA).

Table 6: Maximum Permissible Outdoor Noise Levels Generated (dBA)

Land Use	Daytime (7:00 a.m. to 7:00 p.m.)		Evening (7:00 p.m. to 10:00 p.m.)		Nighttime (10:00 p.m. to 7:00 a.m.)	
	Average L_{eq}	Maximum L_{max}	Average L_{eq}	Maximum L_{max}	Average L_{eq}	Maximum L_{max}
Residential (Single and Multi-Family)	55	65	45	55	40	50
Open Space/Parks	60	70	50	55	45	50
Commercial/Office	65	75	60	70	55	60
Public and Quasi-Public Facilities	60	70	55	60	45	50
Source: City of Saratoga Municipal Code Noise Standards (7-30.040)						

Section 7-30.060 (a) limits construction to between the hours of 7:30 a.m. and 6:00 p.m. Monday through Friday and between 9:00 a.m. and 5:00 p.m. on Saturdays. Section 7-30.060 (a) also prohibits construction noise exceeding 100 dBA at any point twenty-five feet or more from the source of noise. Construction is not allowed on Sundays or weekday holidays unless it is a residential construction that does not require a City permit or which does not exceed 50 percent of the existing main or accessory structure. This construction is able to occur between 9:00 a.m. and 5:00 p.m. on Sundays and weekday holidays.

Gasoline powered garden tools (leaf blowers and chainsaws) may be utilized between 8:00 a.m. and 5:00 p.m. Monday through Friday and between 10:00 a.m. and 5:00 p.m. on Saturdays (7-30.060(c)). Per 7-30.070 all exhaust fans and mechanical equipment must be enclosed for the purpose of soundproofing.

4 EXISTING CONDITIONS

4.1 EXISTING NOISE SOURCES

The City of San José is impacted by various noise sources. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in most communities. Other sources of noise are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the City that generate stationary-source noise.

Noise Measurements

To determine the ambient noise levels in the Project area, seven short-term (10-minute) noise measurements and two long-term (24-hour) noise measurements were taken using a Larson Davis SoundExpert LxT Type I integrating sound level meter on May 10 through May 12, 2022; refer to Appendix A: Noise Data and Figure 4: Noise Measurement Locations.

Short-Term measurement 1 (ST-1), ST-2, ST-3, and ST-6 were taken to represent the ambient noise level at residences surrounding the Project site; ST-4 and ST-5 were taken to represent existing noise levels at the Project site; and ST-7 was taken to represent existing noise levels at Prospect High School. Long-Term measurement 1 (LT-1) and LT-2 were taken to represent existing noise levels at the Project site. The primary noise sources during the noise measurements were traffic along Grave Avenue, Saratoga Avenue, Lawrence Expressway, and stationary noise at commercial operations nearby. Table 7: Noise Measurements, provides the ambient noise levels measured at these locations.

Table 7: Noise Measurements

Site No.	Location	Daytime L_{eq} (dBA)[1]	Nighttime L_{eq} (dBA)[1]	L_{dn} (dBA)	Time	Duration	Date
ST-1	Adjacent to 1545 Greene Drive	53.1	-	-	1:03 p.m. - 1:13p.m.	10 minutes	5/10/2022
ST-2	Adjacent to 1545 Cameo Drive	59.4	-	-	1:16 p.m. - 1:26 p.m.	10 minutes	5/10/2022
ST-3	Adjacent to 5150 Graves Avenue	60.5	-	-	1:44 p.m. - 1:54 p.m.	10 minutes	5/10/2022
ST-4	Trader Joe's Parking Lot	56.4	-	-	2:01 p.m. to 2:11 p.m.	10 minutes	5/10/2022
ST-5	Taco Bell Parking Lot	60.9	-	-	2:15 p.m. - 2:25 p.m.	10 minutes	5/10/2022
ST-6	Adjacent to 1526 Crespi Drive	52.7	-	-	1:29 p.m. - 1:39 p.m.	10 minutes	5/10/2022
ST-7	Adjacent to Prospect High School	52.4	-	-	1:03 p.m. - 1:13 p.m.	10 minutes	5/10/2022
LT-1	Near the northern boundary of the Project Site, adjacent to Graves Avenue and existing loading docks.	61.0	55.8	64.0	3:59 p.m. - 4:06 p.m.	24 hours	5/10/2022-5/11/2022
LT-2	Adjacent to residential uses to the east of the Project Site.	54.3	50.9	58.4	4:50 p.m. - 5:00 p.m.	24 hours	5/11/2022-5/12/2022

Notes:
1. Daytime hours are from 7:00 a.m. to 10:00 p.m. and nighttime hours are from 10:00 p.m. to 7:00 a.m.

Source: Noise Measurements taken by Kimley-Horn on May 10-12, 2022.

Source: Nearmap, 2022

Figure 4: Noise Measurement Locations

Westgate West Costco Project
Acoustical Assessment

Not to scale

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Existing Mobile Noise

Existing roadway noise levels were calculated for the roadway segments in the Project vicinity. This task was accomplished using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and existing traffic volumes from the Project Transportation Analysis (Kittelson, 2022). The noise prediction model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (also referred to as energy rates) used in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans. The Caltrans data indicate that California automobile noise is 0.8 to 1.0 dBA higher than national levels and that medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels. The average daily noise levels along roadway segments in proximity to the Project site are included in Table 8: Existing Traffic Noise.

Table 8: Existing Traffic Noise

Roadway Segment	ADT	DNL[1] (dBa)
Prospect Road		
Lyde Dr. to Lawrence Expwy	38,000	69.0
Lawrence Expwy to Project Driveway	30,400	69.3
Project Driveway to Saratoga Ave.	32,900	69.6
Saratoga Ave. to Target Driveway	36,400	70.1
Saratoga Avenue		
Grave Ave. to Prospect Rd.	21,700	68.9
Prospect Rd. to Lawrence Expwy	22,300	69.0
Lawrence Expressway		
Prospect Rd. to Quito Rd.	24,300	71.2
Project Driveway to Prospect Rd.	35,100	72.8
Lassen Ave. to Project Driveway	37,700	73.0
Graves Avenue		
Saratoga Ave. to Lawrence Expwy	2,600	57.0
ADT = average daily trips; dBA = A-weighted decibels; DNL = day-night noise level		
Notes: 1. Traffic noise levels are at 100 feet from the roadway centerline. The actual sound level at any receptor location is dependent upon such factors as the source-to-receptor distance and the presence of intervening structures, barriers, and topography.		
Source: Based on data from the Transportation Analysis (Kittelson, 2022). Refer to Appendix A for traffic noise modeling assumptions and results.		

The Project site is primarily surrounded by residential and commercial uses. The existing mobile noise in the Project area are generated along Prospect Road (south of the Project site), Saratoga Avenue (east of the Project site), and Lawrence Expressway (west of the Project site).

Existing Stationary Noise

The primary sources of stationary noise in the Project vicinity are those associated with the nearby roadways and operations of nearby existing commercial uses surrounding of the Project site. The noise associated with these sources may represent a single-event noise occurrence, short-term noise, or long-term/continuous noise.

4.2 SENSITIVE RECEPTORS

Noise exposure standards and guidelines for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Residences, hospitals, schools, guest lodging, libraries, and churches are treated as the most sensitive to noise intrusion and therefore have more stringent noise exposure targets than do other uses, such as manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. As shown in Table 9: Sensitive Receptors, sensitive receptors near the Project site include schools, single-family residences, and multifamily residences. Additionally, Prospect High School is located southwest of the Project site. These distances are from the Project site to the sensitive receptor property line. Figure 5: Sensitive Receptors shows the sensitive receptors surrounding the Project site.

Table 9: Sensitive Receptors

Receptor Description	Distance and Direction from the Project Site[1]
Single-family residential community	50 feet north
Single-family residential community	160 feet west
Multifamily residential apartments	380 feet west
Prospect High School	480 feet southwest
Tender Hearts Christian Home Day Care	490 feet west
Multifamily residential community	580 feet east
Villa Fontana Retirement Community	715 feet west
Notes: 1. These distances are from the Project site to the sensitive receptor property line.	
Source: Google Earth, 2022.	

Source: Nearmap, 2022

Figure 5: Sensitive Receptors

Westgate West Costco Project
Acoustical Assessment

Not to scale

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5 SIGNIFICANCE CRITERIA AND METHODOLOGY

5.1 CEQA THRESHOLDS

Appendix G of the California Environmental Quality Act (CEQA) Guidelines contains analysis guidelines related to noise impacts. These guidelines have been used by the City to develop thresholds of significance for this analysis. A project would create a significant environmental impact if it would:

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

NOI-2 Generate excessive groundborne vibration or groundborne noise levels; and

NOI-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

5.2 METHODOLOGY

Construction

Construction noise estimates are based upon noise levels on typical noise levels generated by construction equipment published by the Federal Transit Administration (FTA) and FHWA. Construction noise is assessed in dBA L_{eq}. This unit is appropriate because L_{eq} can be used to describe noise level from operation of each piece of equipment separately, and levels can be combined to represent the noise level from all equipment operating during a given period. FHWA's Roadway Construction Noise Model (RCNM) was used to estimate construction noise at nearby sensitive receptors. For modeling purposes, construction equipment has been distributed evenly between the center of the construction site and the nearest receptor. To be conservative, the loudest and most used equipment was placed nearest the sensitive receptor. Noise level estimates do not account for the presence of intervening structures or topography, which may reduce noise levels at receptor locations. Therefore, the noise levels presented herein represent a conservative, reasonable worst-case estimate of actual temporary construction noise.

Operations

The analysis of the existing and future noise environments is based on noise prediction modeling and empirical observations. Reference noise level data are used to estimate the Project operational noise impacts from stationary sources. Noise levels are collected from field noise measurements and other published sources from similar types of activities are used to estimate noise levels expected with the Project's stationary sources. The reference noise levels are used to represent a worst-case noise environment as noise level from stationary sources can vary throughout the day. On-site operational noise levels from the proposed Project were evaluated using SoundPLAN. This program computes predicted noise levels at noise-sensitive areas through a series of adjustments to reference sound levels. SoundPLAN also accounts for topography, groundcover type, and intervening structures. Reference noise level data are used to estimate the Project operational noise impacts from stationary sources. The Without Project

and With Project traffic noise levels in the Project vicinity were calculated using the FHWA Highway Noise Prediction Model (FHWA-RD-77-108).

Vibration

Groundborne vibration levels associated with construction-related activities for the Project were evaluated utilizing typical groundborne vibration levels associated with construction equipment, obtained from FTA published data for construction equipment. Potential groundborne vibration impacts related to structural damage and human annoyance were evaluated, considering the distance from construction activities to nearby land uses and typically applied criteria for structural damage and human annoyance.

For a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec PPV is considered safe and would not result in any vibration damage. Human annoyance is evaluated in vibration decibels (VdB) (the vibration velocity level in decibel scale) and occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. The FTA's 2018 *Transit Noise and Vibration Impact Assessment Manual* (FTA Transit Noise and Vibration Manual) identifies 80 VdB as the threshold for buildings where people normally sleep.

5.3 SIGNIFICANCE CRITERIA

This report relies on the following standards and significance criteria to evaluate potential noise and vibration impacts from the proposed Project in accordance with the CEQA thresholds of significance outlined above:

Construction Noise

Per General Plan Policy EC-1.7, a significant noise impact would be identified if construction-related noise would temporarily increase ambient noise levels at sensitive receptors. The City of San José considers large or complex projects involving substantial noise-generating activities and lasting more than 12 months significant when within 500 feet of residential land uses or within 200 feet of commercial land uses or offices. Additionally, the FTA considers construction-related noise to be significant if construction noise levels exceed the 8-hour average construction noise standards of 80 dBA L_{eq} at residential uses, 85 dBA L_{eq} at commercial uses, and/or 90 dBA L_{eq} at industrial uses.

Operational Noise

Per General Plan Policy EC – 1.2, a significant permanent noise level increase would occur if the Project would result in: a) a noise level increase of 5 dBA DNL or greater, with a future noise level of less than 60 dBA DNL, or b) a noise level increase of 3 dBA DNL or greater, with a future noise level of 60 dBA DNL or greater. Additionally, a significant noise impact would be identified if the Project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan.

Section 20.30.700 of the City's Municipal Code establishes a limit of 55 dBA for commercial areas adjacent to residential areas and 60 dBA for commercial uses adjacent to commercial areas, when measured at the property line, however, the Municipal Code is not used as a criterion to determine the significance of project impacts under CEQA.

Vibration

General Plan Policy EC-2.3 relies on guidance developed by Caltrans to address vibration impacts from development projects in San José. A vibration limit of 12.7 millimeters per second (mm/sec; 0.5 inch/sec) PPV is used for buildings that are structurally sound and designed to modern engineering standards. A conservative vibration limit of five mm/sec (0.2 inches/sec) PPV has been used for buildings that are found to be structurally sound but where structural damage is a major concern. For historic buildings or buildings that are documented to be structurally weakened, a conservative limit of two mm/sec (0.08 inches/sec) PPV is used to provide the highest level of protection.

6 POTENTIAL IMPACTS AND MITIGATION

6.1 ACOUSTICAL IMPACTS

Threshold 6.1 Would the Project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

The proposed Project construction would result in approximately 21 months of substantial noise generating activities, including phases such as demolition, grading and building framing. Excavation, cut, and fill would be required as part of construction and soil hauling would be required as a part of construction, refer to Section 1.2: Project Description. According to the applicant, no pile-driving would be required during construction.

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods surrounding the construction site. Project construction would occur approximately 50 feet from the nearest sensitive receptor to the north. However, construction activities would occur throughout the Project site and would not be concentrated at a single point near sensitive receptors. Noise levels typically attenuate (or drop off) at a rate of 6 dB per doubling of distance from point sources, such as industrial machinery.

Construction activities associated with development of the Project would include demolition, site preparation, grading, paving, building construction, and architectural coating. Such activities could require concrete/industrial saws, excavators, and dozers during demolition; dozers and tractors/loaders/ backhoes during site preparation; graders, dozers, and tractors during grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, tractors, and paving equipment during paving; and air compressors during architectural coating. Grading and excavation phases of Project construction tend to be the shortest in duration and create the highest construction noise levels due to the operation of heavy equipment required to complete these activities. It should be noted that only a limited amount of equipment can operate near a given location at a particular time. Equipment typically used during this stage includes heavy-duty trucks, backhoes, bulldozers, excavators, front-end loaders, and scrapers. Operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Other primary sources of noise would be shorter-duration incidents, such as dropping large pieces of equipment or the hydraulic movement of machinery lifts, which would last less than one minute. Typical noise levels associated with individual construction equipment are listed in Table 10: Typical Construction Noise Levels.

Table 10: Typical Noise Levels from Construction Equipment

Equipment	Typical Noise Level (dBA)from Source
	50 feet
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pump	77
Roller	85
Saw	76
Scraper	85
Shovel	82
Truck	84
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.	

The Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) was used to calculate noise levels during construction activities; refer to Appendix A. RCNM is a computer program used to assess construction noise impacts and allows for user-defined construction equipment and user-defined noise limit criteria. Noise levels were calculated for each construction phase and are based on the equipment used, distance to the nearest property/receptor, and acoustical use factor for equipment.

Table 11: Project Construction Noise Levels shows the Project's exterior construction noise levels would range from approximately 47.4 dBA L_{eq} and 70.3 dBA L_{eq} at the nearest receptors and would not exceed the FTA's 8-hour construction noise standards of 80 dBA L_{eq} for residential uses and/or 85 dBA L_{eq} for commercial uses. In addition, General Plan Policy EC-1.7 requires the Project to use best available noise suppression devices and techniques, and limit construction hours in accordance with Municipal Code Section 20.100.450 to reduce construction noise levels at nearby noise-sensitive uses.

Table 11: Project Construction Noise Levels

Construction Phase	Receptor Location			Modeled Noise Level, dBA $L_{eq(8\text{-}hour)}$ [2]	FTA Noise Standard, dBA L_{eq} [3]	Exceeds Noise Standard?
	Land Use	Direction	Distance (feet) [1]			
Demolition	Residences	North	330	68.2	80	No
	Residences	West	650	62.3	80	No
	Residences	East	1,030	58.3	85	No
	Commercial	East/South	315	68.6	85/100[5]	No
	Commercial[4]	South	610	62.9	85/100[5]	No[6]
	School[4]	Southwest	945	59.1	80	No[6]
Site Preparation	Residences	North	330	65.6	80	No
	Residences	West	650	59.7	80	No
	Residences	East	1,030	55.7	85	No
	Commercial	East/South	315	66.0	85/100[5]	No
	Commercial[4]	South	610	60.3	85/100[5]	No[6]
	School[4]	Southwest	945	56.5	80	No[6]
Grading	Residences	North	330	69.9	80	No
	Residences	West	650	64.0	80	No
	Residences	East	1,030	60.0	85	No
	Commercial	East/South	315	70.3	85/100[5]	No
	Commercial[4]	South	610	64.5	85/100[5]	No[6]
	School[4]	Southwest	945	60.7	80	No[6]
Building Construction	Residences	North	330	66.5	80	No
	Residences	West	650	60.6	80	No
	Residences	East	1,030	56.6	85	No
	Commercial	East/South	315	66.9	85/100[5]	No
	Commercial[4]	South	610	61.1	85/100[5]	No[6]
	School[4]	Southwest	945	57.3	80	No[6]
Paving	Residences	North	330	60.3	80	No
	Residences	West	650	54.4	80	No
	Residences	East	1,030	50.4	85	No
	Commercial	East/South	315	60.7	85/100[5]	No
	Commercial[4]	South	610	54.9	85/100[5]	No[6]
	School[4]	Southwest	945	51.1	80	No[6]
Architectural Coating	Residences	North	330	57.3	80	No
	Residences	West	650	51.4	80	No
	Residences	East	1,030	47.4	85	No
	Commercial	East/South	315	57.7	85/100[5]	No
	Commercial[4]	South	610	52.0	85/100[5]	No[6]
	School[4]	Southwest	945	48.2	80	No[6]

1. Distance is from the nearest receptor to the main construction activity area on the Project site. Not all equipment would operate at the closest distance to the receptor.
2. Modeled noise levels conservatively assume the simultaneous operation of all pieces of equipment.
3. The FTA Noise and Vibration Manual establishes construction noise standards of 80 dBA $L_{eq(8\text{-}hour)}$ for residential uses and 85 dBA $L_{eq(8\text{-}hour)}$ for commercial uses. The nearest school (Prospect High School) was conservatively evaluated for impacts using the FTA's 80 dBA $L_{eq(8\text{-}hour)}$ standard for residential uses.
4. Receptor is located within the City of Saratoga.
5. SMC Section 7-30.060(a) establishes a construction noise standard of 100 dBA at 25 feet or more from the source.
6. Based on the Inverse Square Law, the modeled construction noise levels would not exceed 100 dBA at 25 feet and would comply with SMC Section 7-30.060(a).

Source: Federal Highway Administration, Roadway Construction Noise Model, 2006. Refer to Appendix A for noise modeling results.

Project construction would result in substantial noise-generating activities for more than 12 months within 500 feet of residential uses (to the north) and 200 feet of commercial uses (to the east/south), which the City considers to be a potentially significant construction noise impact in accordance with General Plan Policy EC-1.7. As such, in compliance with General Plan Policy EC-1.7, Mitigation Measure NOI-1 (MM NOI-1) would require the Project applicant to prepare a Construction Noise Logistics Plan to minimize potential construction noise effects to the adjacent residential and commercial uses.

As noted in General Plan Policy EC-1.7, implementation of a Construction Noise Logistics Plan would "…reduce noise impacts on neighboring residents and other uses." Therefore, with implementation of the required MM NOI-1 and best management practices, the Project would comply with General Plan Policy EC-1.7 and would ensure construction period noise effects would be less than significant.

Nighttime Construction

The Project proposes nighttime construction for up to 5 days, which would include 24-hour concrete pouring only. The City does not have noise limits for construction occurring outside of the allowable hours of construction. As discussed in the Section 2.1: Sound and Environmental Noise, noise levels above 45 dBA would affect sleep. Standard construction, which assumes windows to be shut, would result in an exterior-to-interior reduction of approximately 25 dBA.[2]

Existing ambient noise levels during the nighttime hours (10:00 p.m. to 7:00 a.m.) at LT-1 are measured to be 53.8 dBA $L_{eq,}$ which equates to an interior noise level of approximately 28.8 dBA $L_{eq.}$[3] In general, a noise increase of less than 3 dBA is barely perceptible to people, while a minimum 5-dBA change is required before any noticeable change in community response would be expected. Since the noise-sensitive receptors located in the Project vicinity are currently exposed to nighttime noise levels up to 55.8 dBA L_{eq}, construction noise levels that are at or below the existing ambient nighttime noise level with plus 3 dBA and/or below an interior noise level of 45 dBA would be unlikely to cause sleep disturbance. For the nearest residences to the north, east, and west of the Project site, a conservative nighttime limit of 58.8 dBA L_{eq} is used in this analysis. The nearby commercial uses would not be impacted by nighttime construction since operational hours of these buildings would occur during daytime hours only.

Nighttime construction activities would consist of concrete pouring only, which would include concrete trucks and pumps. Based on the nature of concrete pouring and the type of equipment to be used, it is assumed that all noise-generating activities from the equipment would occur on the ground level during the nighttime construction work. FHWA's RCNM was used to calculate the hourly average noise levels for nighttime concrete pouring. Assuming one truck and one pump would represent the worst-case conditions, an hourly average noise level of 78 dBA L_{eq} would be generated during nighttime work, as measured at a distance of 50 feet. Increasing the number of trucks to two would increase the hourly average noise level by 1 dBA.

The concrete trucks and pumps used during nighttime construction, would be set back approximately 100 feet from the nearest residential property line to the north. Assuming one concrete truck and one pump would operate approximately 100 feet from the residential property line, hourly average noise levels be

[2] United States Department of Housing and Urban Development, *Noise Guidebook,* 2009, available at https://www.hudexchange.info/resource/313/hud-noise-guidebook.

[3] Ibid.

approximately 71.6 dBA L_{eq} at the nearest residential property line and would exceed the nighttime noise limit by 12.8 dBA.

The concrete truck and pump used during nighttime construction would be set back approximately 615 feet from the nearest residential property line to the west and east. Assuming one concrete truck and one pump and shielding from the buildings, hourly average noise levels would be approximately 55.8 dBA L_{eq} at the nearest residential property line. As such, the nighttime noise limit of 58.8 dBA L_{eq} is not expected to be exceeded at the residential uses to the east and west during nighttime construction activities.

As discussed above, nighttime construction activities would potentially result in a significant impact at the single-family residences north of the Project site. Therefore, Mitigation Measure NOI-2 (MM NOI-2) would be required to would reduce potential nighttime construction noise impacts. MM NOI-2 would require all concrete trucks and pumps used during nighttime construction to be set back at a minimum of 90 feet from the nearest residential property line to the north. Additionally, MM NOI-2 would restrict all nighttime concrete pouring activities until the northern, western, and eastern building walls are constructed, providing a 14 dBA L_{eq} reduction[4] in nighttime construction noise levels. With implementation of MM NOI-2, hourly average noise levels would be 58.5 dBA L_{eq} at the nearest residential property line to the north of the Project site and would not exceed the nighttime noise limit of 58.8 dBA L_{eq} or the interior noise limit of 45 dBA.[5] Therefore, impacts associated with nighttime construction activities would be reduced to a less than significant level.

Construction Traffic Noise

Construction is estimated to be approximately 21 months. Construction noise may be generated by large trucks moving materials to and from the Project site. Large trucks would be necessary to deliver building materials as well as remove dump materials. Excavation, cut and fill would be required. Based on the California Emissions Estimator Model (CalEEMod) default assumptions for this Project, the Project would generate the highest number of daily trips during the site preparation and building construction phases. The model estimates that the Project would generate up to 18 worker trips and 18 daily hauling trips (4,755 hauling trips over 262 days) for site preparation for a total of approximately 36 daily vehicle trips during site preparation. Building construction would have approximately 235 trips and 98 vendor trips for a total of 333 daily vehicle trips. The model estimates that the Project would generate up to 1,606 hauling trips during the grading phase which would last approximately 173 days. This would be approximately 9 daily hauling trips. Because of the logarithmic nature of noise levels, a doubling of the traffic volume would result in a noise level increase of 3 dBA.[6] Prospect Road between Lawrence Expressway to the Project driveway has an average daily trip volume of 30,400 vehicles. Therefore, a maximum of 542 daily Project construction trips would not double the existing traffic volume per day. Construction related traffic noise would not be noticeable and would not create a significant noise impact.

California establishes noise limits for vehicles licensed to operate on public roads using a pass-by test procedure. Pass-by noise refers to the noise level produced by an individual vehicle as it travels past a fixed location. The pass-by procedure measures the total noise emissions of a moving vehicle with a

[4] Based on noise attenuation rates from SoundPlan 5.1.
[5] Assuming an exterior-to-interior reduction of approximately 25 dBA for standard construction practices.
[6] Per General Plan Policy EC-1.2.

microphone. When the vehicle reaches the microphone, the vehicle is at full throttle acceleration at an engine speed calculated for its displacement.

For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dB at 15 meters from the centerline. According to the FHWA, dump trucks typically generate noise levels of 77 dBA and flatbed trucks typically generate noise levels of 74 dBA, at a distance of 50 feet from the truck (FHWA, Roadway Construction Noise Model, 2006). However, it should be noted that construction would be temporary in nature and the Project would implement best management practices (see MM NOI-1) and include a Construction Noise Logistics Plan to limit construction noise and impacts. Therefore, construction related traffic noise would not be noticeable and would not create a significant noise impact.

City of Saratoga Construction Noise Analysis

The City of San José does not require the following information to determine the level of significance of Project impacts, but is provided in this analysis for informational purposes to help the decision makers in their consideration of the proposed Project.

For receptors located in the City of Saratoga (i.e., Prospect High School and commercial uses to the south of the Project site), this report utilizes the FTA construction noise standards identified above and SMC Section 7-30.060(a) (prohibiting construction noise levels of 100 dBA at 25 feet or more from the source) to evaluate construction noise impacts. As shown in Table 11, construction noise levels at the two identified receptors within the City of Saratoga (Prospect High School and commercial uses to the south) would not exceed the applicable noise standards in the FTA Noise and Vibration Manual or SMC Section 7-30.060(a). Therefore, construction noise impacts at the nearest receptors within the City of Saratoga would be less than significant.

Operations

Implementation of the Project would create new sources of noise in the Project vicinity. The major noise sources associated with the Project that would potentially impact existing and future nearby sensitive receptors include the following:

- Off-site traffic noise;
- Mechanical equipment (i.e., trash compactors, air conditioners, tire center/vehicle maintenance equipment, etc.);
- Activities at the loading areas (i.e., maneuvering and idling trucks, loading/unloading, and equipment noise);
- Parking areas (i.e., car door slamming, car radios, engine start-up, and car pass-by);
- Landscape maintenance activities; and
- Trash/Recycling pickups.

As discussed above, the closest sensitive receptors are located approximately 50 feet to the north of the Project site. Per General Plan Policy EC-1.3 and EC-1.6, noise generated by new nonresidential land uses should not exceed 55 dBA DNL at the property lines of adjacent existing or planned noise-sensitive uses. Further, the City of San José General Plan Policy EC-1.2, establishes incremental noise standards of 5 dBA where noise levels would remain “Normally Acceptable” and 3 dBA where noise levels would equal

or exceed the "Normally Acceptable" level for land uses sensitive to increased noise levels. Normally acceptable levels are 60 dBA for residential uses.

Section 20.30.700 of the City's Municipal Code establishes a limit of 55 dBA for commercial areas adjacent to residential areas and 60 dBA for commercial uses adjacent to commercial areas. Although the Municipal Code is not used as a criterion to determine the significance of Project impacts under CEQA, the operational noise for the proposed Project should be addressed with respect to the City's Municipal Code threshold of 55 dBA to minimize disturbance to the existing and future residences surrounding the Project site. Impacts associated with each major noise source is discussed in more detail below.

Traffic Noise

Implementation of the Project would generate increased traffic volumes along study roadway intersections and access points. As noted in the Transportation Analysis (Kittelson, 2022), primary trips were assigned to study intersections and access points using the proposed trip distribution and typical routes to and from the site. The Project is expected to generate a net of 5,813 average daily trips, which would result in noise increases on Project area roadways. In general, a traffic noise increase of less than 3 dBA is barely perceptible to people, while a 5-dBA increase is readily noticeable (Caltrans, 2013). Generally, traffic volumes on Project area roadways would have to approximately double for the resulting traffic noise levels to increase by 3 dBA. Permanent increases in ambient noise levels of less than 3 dBA are considered to be less than significant, and therefore, traffic volume increases that are less than double do not result in a noise impact.

Table 12: Existing and Project Traffic Noise, the existing traffic-generated noise level on Project area roadways is between 57.0 dBA DNL and 73.0 dBA DNL at 100 feet from the centerline. As previously described, DNL is 24-hour average noise level with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Table 12: Existing and Project Traffic Noise

Roadway Segment	Existing Conditions		With Project		Change from No Project Conditions	Significant Impact?
	ADT	dBA DNL[1]	ADT	dBA DNL[1]		
Prospect Road						
Lyde Dr. to Lawrence Expwy	38,000	69.0	39,075	69.1	0.1	**No**
Lawrence Expwy to Project Driveway	30,400	69.3	33,126	69.6	0.6	**No**
Project Driveway to Saratoga Ave.	32,900	69.6	36,576	70.1	0.5	**No**
Saratoga Ave. to Target Driveway	36,400	70.1	37,450	70.2	0.1	**No**
Saratoga Avenue						
Grave Ave. to Prospect Rd.	21,700	68.9	22,901	69.2	0.3	**No**
Prospect Rd. to Lawrence Expwy	22,300	69.0	23,439	69.3	0.3	**No**
Lawrence Expressway						
Prospect Rd. to Quito Rd.	24,300	71.2	25,588	71.4	0.2	**No**
Project Driveway to Prospect Rd.	35,100	72.8	34,750	72.7	0.0	**No**
Lassen Ave. to Project Driveway	37,700	73.0	39,463	73.2	0.2	**No**
Graves Avenue						
Saratoga Ave. to Lawrence Expwy	2,600	57.0	4,088	59.0	2.0	**No**
ADT = average daily trips; dBA = A-weighted decibels; DNL= day-night noise levels						

Roadway Segment	Existing Conditions		With Project		Change from No Project Conditions	Significant Impact?
	ADT	dBA DNL[1]	ADT	dBA DNL[1]		
1. Traffic noise levels are at 100 feet from the roadway centerline. The actual sound level at any receptor location is dependent upon such factors as the source-to-receptor distance and the presence of intervening structures, barriers, and topography.						
Source: Based on data from the Transportation Analysis (Kittelson, 2022). Refer to Appendix A for traffic noise modeling assumptions and results.						

Traffic noise levels for roadways primarily affected by the Project were calculated using the FHWA's Highway Noise Prediction Model (FHWA-RD-77-108). Traffic noise modeling was conducted for conditions with and without the Project, based on traffic volumes (Kittelson, 2022). As shown in Table 12, Existing Plus Project noise levels 100 feet from the centerline would range from 59.0 dBA to 73.2 dBA. The Project would have the highest increase of 2.0 dBA on Graves Avenue between Saratoga Avenue and Lawrence Expressway. However, the 2.0 dBA increase in under the perceptible 3.0 dBA noise level increase per GP Policy EC-1.1. Therefore, the Project would not have a significant impact on existing traffic noise levels.

Table 13: Background Year and Background Year Plus Project Traffic Noise, shows the Background conditions or Background Year traffic. As shown in Table 13, Background Year Plus Project roadway noise levels with the Project would range from 59.8 dBA to 73.7 dBA. Project traffic would traverse and disperse over Project area roadways, where existing ambient noise levels already exist. Future development associated with the Project would result in additional traffic on adjacent roadways, thereby increasing vehicular noise near existing and proposed land uses. The Project would have the highest increase of 2.7 dBA on Graves Avenue between Saratoga Avenue and Lawrence Expressway. However, the 2.7 dBA increase in under the perceptible 3.0 dBA noise level increase per GP Policy EC-1.1. Therefore, impacts are less than significant.

Table 13: Background Year and Background Year Plus Project Traffic Noise

Roadway Segment	Background Conditions		With Project		Change from No Project Conditions	Significant Impact?
	ADT	dBA DNL[1]	ADT	dBA DNL[1]		
Prospect Road						
Lyde Dr. to Lawrence Expwy	38,263	69.0	39,338	70.0	1.0	**No**
Lawrence Expwy to Project Driveway	30,610	69.3	33,336	70.3	1.0	**No**
Project Driveway to Saratoga Ave.	33,154	69.6	36,830	70.7	1.1	**No**
Saratoga Ave. to Target Driveway	36,680	70.1	37,730	70.9	0.8	**No**
Saratoga Avenue						
Grave Ave. to Prospect Rd.	21,957	68.9	23,158	69.8	0.9	**No**
Prospect Rd. to Lawrence Expwy	22,540	69.1	23,679	69.9	0.8	**No**
Lawrence Expressway						
Prospect Rd. to Quito Rd.	24,561	71.2	25,849	72.0	0.8	**No**
Project Driveway to Prospect Rd.	35,342	72.8	34,992	73.2	0.4	**No**
Lassen Ave. to Project Driveway	38,147	73.0	39,910	73.7	0.7	**No**
Graves Avenue						
Saratoga Ave. to Lawrence Expwy	2,631	57.0	4,119	59.8	2.8	**No**
ADT = average daily trips; dBA = A-weighted decibels; DNL= day-night noise levels						
1. Traffic noise levels are at 100 feet from the roadway centerline. The actual sound level at any receptor location is dependent upon such factors as the source-to-receptor distance and the presence of intervening structures, barriers, and topography.						
Source: Based on data from the Transportation Analysis (Kittelson, 2022). Refer to Appendix A for traffic noise modeling assumptions and results.						

On-Site Noise Sources

Implementation of the Project would create new sources of noise in the Project vicinity from mechanical equipment, truck loading areas, parking lot noise, on-site vehicle circulation, landscape maintenance activities, and trash/recycling pickups. Each stationary source is discussed in more detail below.

Mechanical Equipment

The nearest sensitive receptors are the residences located north of the Project site along Graves Avenue, and the residences to the east along Canneto Drive/Graves Avenue. Potential stationary noise sources related to long-term operation of the Project would include mechanical equipment such as rooftop heating, ventilation, and air conditioning (HVAC) units, an electrical transformer, two trash compactors, cargo forklifts, and vehicle maintenance equipment (e.g., pneumatic tools) at the Costco Tire Center. The reference noise levels and location of mechanical equipment to be used at the Project site are provided below:

- *Rooftop HVAC:* 52 dBA at 50 feet[7], located on the rooftop parking level above the loading dock area in the southeastern portion of the Costco building. This equipment would run continuously to regulate the temperature of the building.

- *Electrical Transformer*: 67 dBA at 3 feet[8], located on the eastern facade of the Costco building. This equipment would run continuously for operations of the building.

- *Trash Compactors (2)*: 70.4 dBA at 10 feet[9], located on the eastern facade of the Costco building. This equipment would be used periodically and on an as needed basis during normal daytime hours (7:00 a.m. to 10:00 p.m.).

- *Cargo Forklifts*: 85 dBA at 3 feet[10], located on the eastern facade of the Costco building. Forklifts would be used for unloading activities from approximately 4:00 a.m. to closing.

- *Tire Center/Vehicle Maintenance Equipment*: 78.2 dBA at 50 feet[11], located on the west side of the Costco building at the Costco Tire Center. Noise generated at the Costco Tire Center would only occur during Costco's normal daytime operating (between 9:00 a.m. and 8:30 p.m.).

Each of the stationary noise sources discussed above were modeled in SoundPLAN and conservatively assumed to operate simultaneously during their scheduled operating hours.

[7] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.

[8] National Electrical Manufactures Association, *Transformers, Regulators, and Reactors TR 1-1993,* 1993.

[9] RECON, *Noise Analysis for the Centerpointe 78 Project*, July 2, 2015.

[10] Noise Testing Workplace Noise Consultants, *Warehouse & Forklift Workplace Noise Levels*, https://www.noisetesting.info/blog/warehouse-forklift-workplace-noise-levels/, accessed on July 5, 2022.

[11] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.

Truck Loading Area Noise

During truck loading and unloading activities, noise would be generated by the trucks' diesel engines, exhaust systems, and brakes during low gear shifting' braking activities; backing up toward the docks; dropping down the dock ramps; and maneuvering away from the docks. Truck loading/unloading activities would occur on the northern portion of the Costco building. The nearest residences are located approximately 105 feet to the north of the dock-high doors. Truck and loading dock noise is typically 70 dBA at 50 feet.[12] Truck loading/unloading operations at the Project site were modeled as an area source on the southeastern façade of the Costco building. It is noted the loading dock doors would be surrounded with protective aprons, gaskets, or similar improvements that, when a trailer is docked, would serve as a noise barrier between the interior Costco building activities and the exterior loading area. This would attenuate noise emanating from interior activities, and as such, noise from interior loading and associated activities would not be perceptible at the nearest sensitive receptors. In addition, the intervening Costco building on the Project site would act as a buffer and reduce truck loading/unloading noise levels at the nearest residences to the north; however, the upper floors of the residences to the east (along Canneto Drive/Graves Avenue) would have a direct line of sight to the truck loading area.

Parking Areas

The Project would provide approximately 4 truck docks and 1,294 vehicle parking spaces. Parking stalls would be located on the southern and western sides of the proposed Costco building, and there would also be a rooftop parking lot above the Costco building. Customers and/or employees would access the rooftop parking via an up-ramp located on the southern façade of the Costco building along the Lawrence Parkway access driveway. Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are usually based on a time-averaged scale such as the CNEL scale. The maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys range from 53 to 61 dBA[13] and may be an annoyance to adjacent noise-sensitive receptors. However, parking noise events would be instantaneous and short-term in duration. Additionally, parking noise also occurs at the Project site and adjacent properties to the east, south, and west under existing conditions. Parking, driveway, and noise from on-site vehicle circulation would be consistent with existing noise in the vicinity and would be partially masked by background traffic noise from motor vehicles traveling along Lawrence Expressway to the west of the Project site and Prospect Road to the south of the Project site. Noise from on-site parking lot movements were modeled in SoundPLAN and were assumed to occur throughout the Project site.

Trash/Recycling Truck Pickups

The proposed Project would involve weekly trash/recycling pickups from slow-moving trucks during normal daytime hours (i.e., from 7:00 a.m. to 10:00 p.m.). Trash/recycling pickup would occur in the northeastern portion of the Project site on the eastern façade of the Costco building at the proposed trash compactor area. Low speed truck noise results from a combination of engine, exhaust, and tire noise as well as the intermittent sound from releases of compressed air associated with truck air brakes. trash/recycling activities noise is typically 75 dBA at 50 feet.[14] It is noted that trash/recycling operations occur at the Project site (in a similar location to the proposed Project) under existing conditions and would be short-term and irregular and are considered part of standard operations in the area. Noise from

[12] Urban Crossroads, *Lake Elsinore Walmart 2015 Noise Impact Analysis*, 2015.
[13] Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.
[14] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values,* July 6, 2010.

trash/recycling activities were modeled in SoundPLAN as a point source in the northeastern portion of the Project site adjacent to the trash compactors.

On-Site Vehicle Circulation

Noise from employee/customer and truck delivery movements on the proposed site were modeled in SoundPLAN. Employee/customer vehicles accessing the site and some truck deliveries are anticipated to occur during normal daytime hours (between 7:00 am and 10:00 pm); however, most truck deliveries would occur during nighttime hours (primarily between the hours of 2:00 a.m. and 10:00 a.m.). On-site vehicle movements from employee/customer automobiles and heavy trucks were modeled as mobile traffic noise sources using trip generation data from the Project Transportation Analysis.

Combined On-Site Noise Levels

The noise levels associated with mechanical equipment, truck loading operations, parking lot noise, and on-site vehicle circulation were modeled with the SoundPLAN software. SoundPLAN allows computer simulations of noise situations, and creates noise contour maps using reference noise levels, topography, point and area noise sources, mobile noise sources, and intervening structures. Inputs to the SoundPLAN model included ground topography and ground type, existing and proposed intervening structures, noise source locations and heights, receiver locations, and sound power level data. The SoundPLAN run for Project operations conservatively assumes the simultaneous operation of all on-site noise sources by time period.

Utilizing the reference noise level data described above, SoundPLAN was used to calculate noise levels at the nearest sensitive receptors surrounding the Project site. It should be noted that predicted noise levels are conservative estimates since it was assumed that all equipment and operational activity at the Project site would occur in a simultaneous manner during the daytime and nighttime hours. In reality, it is anticipated that most of these noise sources would occur intermittently throughout the day and night (except for rooftop HVAC and electrical transformer which would operate in a steady-state manner). The modeled noise levels also account for noise attenuation from the existing perimeter wall on the northern property boundary, as well as existing buildings, structures, and walls surrounding the Project site. The modeled Project noise levels are provided in Table 14: Project Operational Noise Levels, Figure 6: Project Noise Contours.

Table 14: Project Operational Noise Levels

Receptor No.	Land Use	City	Modeled Noise Level – Daytime (dBA L_{eq})		Modeled Noise Level – Nighttime (dBA L_{eq})		Modeled Noise Level – 24-hour (dBA L_{dn})	
			1st Floor	2nd Floor	1st Floor	2nd Floor	1st Floor	2nd Floor
1	Residential	San Jose	52.2	53.5	33.8	34.6	50.5	51.8
2	Residential	San Jose	54.0	-	35.4	-	52.3	-
3	Residential	San Jose	50.0	-	36.7	-	49.1	-
4	Residential	San Jose	43.0	-	34.4	-	43.6	-
5	Residential	San Jose	42.6	-	34.8	-	43.6	-
6	Residential	San Jose	42.5	-	35.3	-	43.8	-
7	Residential	San Jose	42.5	-	36.2	-	44.3	-
8	Residential	San Jose	42.4	-	36.4	-	44.4	-

Receptor No.	Land Use	City	Modeled Noise Level – Daytime (dBA L_{eq})		Modeled Noise Level – Nighttime (dBA L_{eq})		Modeled Noise Level – 24-hour (dBA L_{dn})	
			1st Floor	2nd Floor	1st Floor	2nd Floor	1st Floor	2nd Floor
9	Residential	San Jose	43.0	-	38.1	-	45.6	-
10	Residential	San Jose	43.6	-	40.1	-	47.2	-
11	Residential	San Jose	50.1	-	48.6	-	55.2	-
12	Residential	San Jose	51.0	-	49.7	-	56.3	-
13	Residential	San Jose	50.1	-	48.7	-	55.3	-
14	Residential	San Jose	49.7	-	48.2	-	54.9	-
15	Residential	San Jose	45.5	47.9	44.2	46.6	50.8	53.2
16	Residential	San Jose	42.2	45.2	41.3	44.2	47.8	50.8
17	Residential	San Jose	41.4	44.9	40.6	44.1	47.2	50.7
18	Residential	San Jose	42.5	45.6	41.7	44.9	48.3	51.4
19	Residential	San Jose	45.3	47.3	44.8	46.6	51.3	53.1
20	Residential	San Jose	46.5	47.7	46.3	47.3	52.7	53.8
21	Residential	San Jose	45.5	46.7	45.3	46.4	51.7	52.8
22	Residential	San Jose	44.4	45.7	44.2	45.4	50.6	51.8
23	Institutional	Saratoga	41.5	-	27.8	-	40.4	-
24	Commercial	Saratoga	40.6	-	31.0	-	40.8	-
25	Commercial	Saratoga	41.2	-	39.4	-	46.1	-
26	Residential	Saratoga	40.0	-	24.5	-	38.6	-
27	Residential	Saratoga	36.6	-	29.0	-	37.7	-
28	Residential	Saratoga	33.2	-	31.2	-	38.0	-
29	Commercial	San Jose	54.1	-	53.0	-	59.6	-
30	Commercial	San Jose	56.3	-	55.3	-	61.9	-
31	Commercial	San Jose	58.6	-	58.0	-	64.5	-
32	Commercial	San Jose	58.8	-	58.6	-	65.0	-
33	Commercial	San Jose	58.0	-	57.9	-	64.3	-
34	Commercial	San Jose	56.5	-	56.4	-	62.8	-
35	Commercial	San Jose	54.6	-	54.3	-	60.7	-
36	Commercial	San Jose	53.8	-	53.5	-	60.0	-
37	Commercial	San Jose	52.9	-	52.5	-	59.0	-
38	Commercial	San Jose	52.4	-	51.9	-	58.4	-

Source: SoundPLAN Essential version 5.1. See Appendix A for noise modeling data and results.

Section 20.30.700 of the City's Municipal Code establishes a limit of 55 dBA for commercial areas adjacent to residential areas and 60 dBA for commercial uses adjacent to commercial areas. As shown in Table 14, Project-generated noise levels at the nearest residential uses would range from 33.8 dBA L_{eq} to 54.0 dBA L_{eq} and would not exceed the City's Municipal Code noise limit of 55 dBA for residential areas. Further, Project-generated noise levels at the nearest commercial uses would reach a maximum of 58.8 dBA L_{eq} and would not exceed the City's Municipal Code noise limit of 60 dBA for commercial areas.

Table 15: Composite Project Operational shows Project noise levels from all sources combined with existing ambient levels at the nearest sensitive receptors. It is noted that the Project would not be considered a new commercial land use since commercial uses occupy the Project site (in a similar location to the proposed Project) under existing conditions. As discussed in Section 5.3: Significance Criteria, a 5 dBA L_{dn} increase where noise levels would remain "Normally Acceptable", and 3 dBA L_{dn} increase where noise levels would equal or exceed the "Normally Acceptable" is considered a significant impact in accordance with General Plan Policy EC-1.2.

As shown in Table 15, the maximum increase in 24-hour ambient noise levels from the Project would be 1.3 dBA L_{dn} at receptor 20 (a residence to the east of the Project site) and would not exceed the incremental noise standards established in General Plan Policy EC-1.2 and EC-1.3. The Project would not exceed the incremental noise standards from General Plan Policy EC-1.2 at any other residential uses in the Project vicinity; see Table 15. Additionally, the maximum increase in daytime and nighttime ambient noise levels would be 0.7 dBA L_{eq} and 1.6 dBA L_{eq}, respectively, and would not be perceptible (a noise increase of 3 dBA is considered barely perceptible to the human ear). Therefore, the Project's operational noise levels would not result in a significant increase over existing ambient noise levels at the nearest noise-sensitive uses. Impacts would be less than significant in this regard.

Figure 6: Project Noise Contours

Table 15: Composite Project Operational Noise

Receptor No.	Land Use	DAYTIME				NIGHTTIME				24-Hour (L_{dn})					
		Daytime Ambient Noise Level (dBA L_{eq})[1]	Composite Project Operations	Ambient + Project (dBA L_{eq})	Increase Over Daytime Ambient (dBA L_{eq})	Nighttime Ambient Noise Level (dBA L_{eq})[1]	Composite Project Operations	Ambient + Project (dBA L_{eq})	Increase Over Nighttime Ambient (dBA L_{eq})	Existing Ambient Noise Level (dBA L_{dn})	Composite Project Operations	Ambient + Project (dBA L_{eq})	Increase Over Ambient (dBA L_{dn})	Incremental Threshold[2]	Exceed Threshold?
1	Residential	62.5	53.5	63.0	0.5	55.8	34.6	55.8	0.0	64.0	51.8	64.3	0.3	3.0	NO
2	Residential	62.5	54.0	63.1	0.6	55.8	35.4	55.8	0.0	64.0	52.3	64.3	0.3	3.0	NO
3	Residential	62.5	50.0	62.7	0.2	55.8	36.7	55.9	0.1	64.0	49.1	64.1	0.1	3.0	NO
4	Residential	62.5	43.0	62.5	0.0	55.8	34.4	55.8	0.0	64.0	43.6	64.0	0.0	3.0	NO
5	Residential	62.5	42.6	62.5	0.0	55.8	34.8	55.8	0.0	64.0	43.6	64.0	0.0	3.0	NO
6	Residential	62.5	42.5	62.5	0.0	55.8	35.3	55.8	0.0	64.0	43.8	64.0	0.0	3.0	NO
7	Residential	62.5	42.5	62.5	0.0	55.8	36.2	55.8	0.0	64.0	44.3	64.0	0.0	3.0	NO
8	Residential	62.5	42.4	62.5	0.0	55.8	36.4	55.8	0.0	64.0	44.4	64.0	0.0	3.0	NO
9	Residential	62.5	43.0	62.5	0.0	55.8	38.1	55.9	0.1	64.0	45.6	64.1	0.1	3.0	NO
10	Residential	62.5	43.6	62.6	0.1	55.8	40.1	55.9	0.1	64.0	47.2	64.1	0.1	3.0	NO
11	Residential	62.5	50.1	62.7	0.2	55.8	48.6	56.6	0.8	64.0	55.2	64.5	0.5	3.0	NO
12	Residential	62.5	51.0	62.8	0.3	55.8	49.7	56.8	1.0	64.0	56.3	64.7	0.7	3.0	NO
13	Residential	62.5	50.1	62.7	0.2	55.8	48.7	56.6	0.8	64.0	55.3	64.5	0.5	3.0	NO
14	Residential	62.5	49.7	62.7	0.2	55.8	48.2	56.5	0.7	64.0	54.9	64.5	0.5	3.0	NO
15	Residential	55.5	47.9	56.2	0.7	50.9	46.6	52.3	1.4	58.4	53.2	59.5	1.1	5.0	NO
16	Residential	55.5	45.2	55.9	0.4	50.9	44.2	51.7	0.8	58.4	50.8	59.1	0.7	5.0	NO
17	Residential	55.5	44.9	55.9	0.4	50.9	44.1	51.7	0.8	58.4	50.7	59.1	0.7	5.0	NO
18	Residential	55.5	45.6	55.9	0.4	50.9	44.9	51.9	1.0	58.4	51.4	59.2	0.8	5.0	NO
19	Residential	55.5	47.3	56.1	0.6	50.9	46.6	52.3	1.4	58.4	53.1	59.5	1.1	5.0	NO
20	Residential	55.5	47.7	56.2	0.7	50.9	47.3	52.5	1.6	58.4	53.8	59.7	1.3	5.0	NO
21	Residential	55.5	46.7	56.0	0.5	50.9	46.4	52.2	1.3	58.4	52.8	59.5	1.1	5.0	NO
22	Residential	55.5	45.7	55.9	0.4	50.9	45.4	52.0	1.1	58.4	51.8	59.3	0.9	5.0	NO

1. See Table 8 for ambient noise level data.
2. Incremental noise threshold per City of San José General Plan Policy EC-1.2, which establishes incremental noise standards of 5 dBA where noise levels would remain "Normally Acceptable" and 3 dBA where noise levels would equal or exceed the "Normally Acceptable" level for land uses sensitive to increased noise levels. Normally acceptable levels are 60 dBA for residential uses. Although the normally acceptable standard for industrial and commercial office uses is 70 dBA, it is not considered a land use sensitive to increased noise levels per Policy EC-1.2.

Source: SoundPLAN version 5.1. See Appendix A for noise modeling data and results.

Landscape Maintenance Activities

Development and operation of the Project would also include new landscaping that would require periodic maintenance. However, landscape maintenance activities would operate during daytime hours for brief periods of time as allowed by the City's Municipal Code and would not permanently increase ambient noise levels in the Project vicinity and would be consistent with activities that currently occur on-site and at the surrounding uses. Due to the infrequent and intermittent nature of landscaping activities, this noise source was not included in the SoundPLAN model which is used to evaluate the Project's operational noise impacts in this analysis in compliance with General Plan Policy EC – 1.2. As such, the Project would result in a less than significant noise with regard to landscape maintenance activities.

City of Saratoga Operational Noise Analysis

The City of San José does not require the following information to determine the level of significance of Project impacts, but is provided in this analysis for informational purposes to help the decision makers in their consideration of the proposed Project.

For receptors located in the City of Saratoga (i.e., Prospect High School and commercial uses to the south of the Project site), this report utilizes the noise standards in SMC Section 7-30.040 to assess on-site operational noise impacts from the proposed Project. As indicated in Table 14, the Project's on-site operational noise levels would reach approximately 41.5 dBA L_{eq} at Prospect High School and 41.2 dBA L_{eq} at the commercial uses to the south located within the City of Saratoga. As such, noise levels from on-site operations at the Project site would not exceed the City of Saratoga's most stringent nighttime noise standards of 45 dBA L_{eq} for public and quasi-public facilities or 55 dBA L_{eq} for commercial uses. Noise levels at Prospect High School and the commercial uses south of the Project site are expected to be similar to existing ambient levels with implementation of the Project, and a noticeable change would not occur. A less than significant impact would occur in this regard.

The closest residential uses within in the City of Saratoga are located approximately 920 feet to the south of the Project site. On-site operational noise levels from the Project would range between 33.2 dBA L_{eq} and 40.0 dBA L_{eq} during the daytime, and between 24.5 dBA L_{eq} and 31.2 dBA L_{eq} during the nighttime hours at the nearest City of Saratoga residential uses. As such, the Project's on-site operational noise levels would not exceed the City of Saratoga's 55 dBA L_{eq} daytime noise standard or 40 dBA L_{eq} nighttime noise standard for residential uses. Additionally, operational noise levels would be further masked by background traffic noise from motor vehicles traveling along Lawrence Expressway to the north of the residential uses. Noise levels at residential uses to south, Prospect High School, and the commercial uses south of the Project site are expected to be similar to existing ambient levels with implementation of the Project, and a noticeable change would not occur. A less than significant impact would occur in this regard.

Mitigation Measures:

MM NOI-1 Construction Noise Measures

Prior to Grading Permit issuance, the Applicant shall demonstrate, to the satisfaction of the City of San José Director of Public Works or City Engineer that the Project complies with the following:

- Prohibit pile driving.

- Prohibit unnecessary idling of internal combustion engines. Post signs at gates and other places where vehicles may congregate reminding operators of the State's Airborne Toxic Control Measure (ATCM) limiting idling to no more than 5 minutes.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the Project site.
- Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other State required noise attenuation devices.
- Property owners and occupants located within 300 feet of the Project boundary shall be sent a notice, at least 15 days prior to commencement of construction activities, regarding the construction schedule of the proposed Project. A sign, legible at 50 feet shall also be posted at the Project construction site. All notices and signs shall be reviewed and approved by the Director of Planning, Building and Code Enforcement or Director's designee, prior to mailing or posting and shall indicate the dates and duration of construction activities, as well as provide a contact name and a telephone number for the Noise Disturbance Coordinator where residents can inquire about the construction process and register complaints.
- Prior to issuance of any Grading or Building Permit, the Contractor shall provide evidence that at all times during construction activities and on-site construction staff member will be designated as a Noise Disturbance Coordinator. The Noise Disturbance Coordinator is responsible for responding to complaints about construction noise. When a complaint is received, the Noise Disturbance Coordinator shall determine the cause (e.g., starting too early, bad muffler, etc.), implement reasonable measures to resolve the complaint, and document actions taken. All notices sent to residential units within 300 feet of the construction site and all signs posted at the construction site, shall include the contact name and the telephone number for the Noise Disturbance Coordinator.

MM NOI-2 Extended Construction Hours

The City of San José requires approval of construction occurring outside of the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday or anytime on weekends, within 500 feet of existing residential land uses. The following measures would reduce noise impacts at nearby noise-sensitive receptors:

- Limit the active equipment during nighttime (10:00 p.m. to 7:00 a.m.) to as few pieces of equipment as possible.
- To the extent consistent with applicable regulations and safety considerations, operation of back-up beepers shall be avoided near sensitive receptors between 7:00 p.m. and 7:00 a.m., and/or the work sites shall be arranged in a way that avoids the need for any reverse motions of trucks or the sounding of any reverse motion alarms during nighttime work. If these measures are not feasible, equipment and trucks operating during the nighttime

hours with reverse motion alarms must be outfitted with SAE J994 Class D alarms (ambient-adjusting, or "smart alarms" that automatically adjust the alarm to 5 dBA above the ambient near the operating equipment).

- The northern, eastern, and western building walls shall be erected prior to the commencement of nighttime concrete pouring, which would provide an approximate 14 dBA L_{eq} reduction in nighttime construction noise levels.
- Prohibit concrete trucks and pumps along Graves Avenue within 90 feet of the nearest residential property line during all nighttime activities.
- Residences or other noise-sensitive land uses within 500 feet of construction sites should be notified of the nighttime construction schedule occurring between 7:00 p.m. and 7:00 a.m. and on weekends ("off hours construction"), in writing, at least 15 days prior to the beginning of off hours construction. This notification shall specify the anticipated dates for all off hour construction and provide the contact information for the Noise Disturbance Coordinator.
- Designate a Noise Disturbance Coordinator o be responsible for responding within 48 hours to any local complaints including about off hour construction noise. Any nuisance complaint reported during nighttime operations (7:00 p.m. and 7:00 a.m.) shall be deemed an urgent issue and shall be responded to immediately. The Coordinator would determine the cause of the noise complaints (e.g., starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. Conspicuously post a telephone number for the Coordinator at the construction site. Additionally, a log of noise complaints and responses shall be maintained and made available to the City upon request.

Level of Significance: Less than significant impact with mitigation.

Threshold 6.2 Would the Project generate excessive groundborne vibration or groundborne noise levels?

Construction

Increases in groundborne vibration levels attributable to the Project would be primarily associated with construction-related activities. Construction on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The FTA has published standard vibration velocities for construction equipment operations. In general, depending on the building category of the nearest buildings adjacent to the potential pile driving area, the potential construction vibration damage criteria vary. For example, for a building constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.50 inch per

second (in/sec) peak particle velocity (PPV) is considered safe and would not result in any construction vibration damage. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on soil composition and underground geological layer between vibration source and receiver.

Table 16: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet, 50 feet, and 100 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in Table 16, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during Project construction range from 0.0008 to 0.0239 in/sec PPV at 50 feet from the source of activity. The nearest sensitive receptor is approximately 50 feet from the active construction zone and would not experience perceptible vibration levels.

Table 16: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity At 25 feet (in/sec)	Peak Particle Velocity At 50 feet (in/sec)	Peak Particle Velocity At 100 feet (in/sec)
Large Bulldozer	0.089	0.0239	0.0111
Loaded Trucks	0.076	0.0204	0.0095
Rock Breaker	0.059	0.0159	0.0074
Jackhammer	0.035	0.0094	0.0002
Small Bulldozer/Tractors	0.003	0.0008	0.0004
1. Calculated using the following formula: PPVequip = PPVref x (25/D)1.5, where: PPVequip = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPVref = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, 2018; D = the distance from the equipment to the receiver.			
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.			

As shown in Table 16, the highest vibration levels are achieved with the large bulldozer operations. This construction activity is expected to take place during grading. Project construction would be approximately 50 feet from the closest sensitive receptor. At this distance, construction equipment vibration velocities would not exceed the FTA's 0.20 PPV threshold. Additionally, per General Plan Policy EC-2.3, continuous vibration limits shall not exceed 0.08 PPV for sensitive historical structures and 0.20 PPV for normal conventional construction.[15] In general, other construction activities would occur throughout the Project site and would not be concentrated at the point closest to the nearest structure. Therefore, vibration impacts associated with the Project would be less than significant.

Operations

Once operational, the Project would not be a significant source of groundborne vibration. Groundborne vibration surrounding the Project currently result from heavy-duty vehicular travel (e.g., refuse trucks, heavy duty trucks, delivery trucks, and transit buses) on the nearby local roadways. Operations of the proposed Project would include activities associated with a Costco building (i.e., parking, activities at the loading area, trash/recycling pickup, etc.) that typically would not cause excessive ground-borne vibrations. 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

[15] It should be noted that there are no historical structures in the Project area and therefore the City's 0.08 PPV continuous vibration standard does not apply.

roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity. According to the FTA's Transit Noise and Vibration Impact Assessment, trucks rarely create vibration levels that exceed 70 VdB (equivalent to 0.012 inches per second PPV) when they are on roadways. Therefore, trucks operating at the Project site or along surrounding roadways would not exceed FTA thresholds or General Plan Policy EC-2.3 for building damage or annoyance. Impacts would be less than significant in this regard.

City of Saratoga Vibration Noise Analysis

Due to the distance between the Project site and the nearest City of Saratoga uses (over 350 feet away), vibration levels from the Project would be imperceptible and are not evaluated in this report.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold 6.3 For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

The nearest airport to the Project site is the Norman Y. Mineta San José International Airport located approximately 5.6 miles northeast of the Project site. The Project site lies outside of the 65 dBA CNEL noise contours shown in the Norman Y. Mineta San José International Airport Master Plan Update Project report published in October 2019.[16] Although aircraft-related noise would occasionally be audible at the Project site, noise from aircraft would not substantially increase ambient noise levels. Exterior noise levels resulting from aircraft would be compatible with the proposed Project. By ensuring compliance with the City's normally acceptable noise level standards, interior noise levels would also be considered acceptable with aircraft noise. Therefore, the Project would not expose people residing or working in the Project area to excessive airport- or airstrip-related noise levels and no mitigation is required.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

[16] City of San José, *Norman Y. Mineta San José International Airport Master Plan Update, Noise Assessment for the Master Plan Environmental Impact Report,* October 2019.

6.2 CUMULATIVE NOISE IMPACTS

Noise by definition is a localized phenomenon, and drastically reduces as distance from the source increases. Cumulative noise impacts involve development of the Project in combination with ambient growth and other related development projects. As noise levels decrease as distance from the source increases, only projects in the nearby area could combine with the Project to potentially result in cumulative noise impacts.

Cumulative Construction Noise

The Project's construction activities, when properly mitigated, would not result in a substantial temporary increase in ambient noise levels. The City permits construction hours within 500 feet of a residential unit are limited to the hours of 7:00 a.m. to 7:00 p.m. on Monday through Friday, unless otherwise allowed in a Development Permit or other planning approval. The Project would contribute to other proximate construction noise impacts if construction activities were conducted concurrently. However, based on the noise analysis above, the Project's construction-related noise impacts would be less than significant following implementation of best management practices, mitigation measures, and compliance with General Plan Policy EC-1.7 and Municipal Code.

Construction activities at other planned and approved projects would be required to take place during daytime hours, and the City and Project applicants would be required to evaluate construction noise impacts and implement mitigation, if necessary, to minimize noise impacts. Each Project would be required to comply with the applicable City of San José Municipal Code limitations on allowable hours of construction. Therefore, Project construction would not contribute to cumulative impacts and impacts in this regard are not cumulatively considerable.

Cumulative Operational Noise

Cumulative noise impacts describe how much noise levels are projected to increase over existing conditions with the development of the Project and other foreseeable projects. Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to buildout of the Project and other projects in the vicinity. However, noise from generators and other stationary sources could also generate cumulative noise levels.

Stationary Noise

As discussed above, impacts from the Project's operations would be less than significant. Due to site distance, intervening land uses, and the fact that noise dissipates as it travels away from its source, noise impacts from on-site activities and other stationary sources would be limited to the Project site and vicinity. No known past, present, or reasonably foreseeable projects would compound or increase the operational noise levels generated by the Project. Thus, cumulative operational noise impacts from related projects, in conjunction with Project-specific noise impacts, would not be cumulatively significant.

Traffic Noise

A project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds perception level (i.e., auditory level increase) threshold. Cumulative increases in traffic noise levels were estimated by comparing the Existing Plus Project and Background Year scenarios to existing conditions.

The following criteria is used to evaluate the combined effect of the cumulative noise increase.

- Combined Effect. The cumulative with Project noise level ("Background Year With Project") would cause a significant cumulative impact if a 3.0 dB increase over "Existing" conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use. Although there may be a significant noise increase due to the Project in combination with other related projects (combined effects), it must also be demonstrated that the Project has an incremental effect. In other words, a significant portion of the noise increase must be due to the Project.

The following criteria have been used to evaluate the incremental effect of the cumulative noise increase.

- Incremental Effects. The "Background Year With Project" causes a 1.0 dBA increase in noise over the "Opening Year Without Project" noise level.

A significant impact would result only if both the combined and incremental effects criteria have been exceeded. Noise by definition is a localized phenomenon and reduces as distance from the source increases. Consequently, only the Project and growth due to occur in the general area would contribute to cumulative noise impacts.

Table 17: Cumulative Plus Project Conditions Predicted Traffic Noise Levels identifies the traffic noise effects along roadway segments in the vicinity of the Project site for "Existing," "Background Year Without Project," and "Background Year With Project," conditions, including incremental and net cumulative impacts.

First, it must be determined whether the "Background Year With Project" increase above existing conditions (Combined Effects) is exceeded. As indicated in Table 17, the Project has no street segments that exceed the combined effects criterion. Under the Incremental Effects criteria, cumulative noise impacts are defined by determining if the forecast ambient ("Background Year Without Project") noise level is increased by 1 dB or more. As indicated above, the Project does not exceed the Incremental Effects criteria for any roadway segment analyzed.

Table 17: Cumulative Plus Project Conditions Predicted Traffic Noise Levels

Roadway Segment	Existing dBA DNL[1]	Background Year Without Project dBA DNL[1]	Background Year With Project dBA DNL[1]	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
				dBA Difference: Existing and Background Year With Project	dBA Difference: Background Year Without and With Project	
Prospect Road						
Lyde Dr. to Lawrence Expwy	69.0	69.0	70.0	1.0	1.0	No
Lawrence Expwy to Project Driveway	69.3	69.3	70.3	1.0	1.0	No
Project Driveway to Saratoga Ave.	69.6	69.6	70.7	0.9	1.1	No
Saratoga Ave. to Target Driveway	70.1	70.1	70.9	0.8	0.8	No
Saratoga Avenue						
Grave Ave. to Prospect Rd.	68.9	68.9	69.8	0.9	0.9	No
Prospect Rd. to Lawrence Expwy	69.0	69.1	69.9	0.9	0.8	No
Lawrence Expressway						
Prospect Rd. to Quito Rd.	71.2	71.2	72.0	0.8	0.8	No
Project Driveway to Prospect Rd.	72.8	72.8	73.2	0.4	0.4	No

Roadway Segment	Existing dBA DNL[1]	Background Year Without Project dBA DNL[1]	Background Year With Project dBA DNL[1]	Combined Effects	Incremental Effects	Cumulatively Significant Impact?
				dBA Difference: Existing and Background Year With Project	dBA Difference: Background Year Without and With Project	
Lassen Ave. to Project Driveway	73.0	73.0	73.7	0.7	0.7	No
Graves Avenue						
Saratoga Ave. to Lawrence Expwy	57.0	57.0	59.8	2.8	2.8	No
ADT = average daily trips; dBA = A-weighted decibels; DNL= day-night noise levels						
1. Traffic noise levels are at 100 feet from the roadway centerline. The actual sound level at any receptor location is dependent upon such factors as the source-to-receptor distance and the presence of intervening structures, barriers, and topography.						
Source: Based on data from the Transportation Analysis (Kittelson, 2022). Refer to Appendix A for traffic noise modeling assumptions and results.						

Therefore, the Project's cumulative noise contribution would be less than significant. Based on the significance criteria set forth in this Report, no roadway segments would result in significant impacts because they would not exceed the City's threshold for noise at nearby sensitive receptors. The Project would not result in long-term mobile noise impacts based on Project-generated traffic as well as cumulative and incremental noise levels. Therefore, the Project, in combination with cumulative background traffic noise levels, would result in a less than significant cumulative impact. The Project's contribution to noise levels would not be cumulatively considerable.

7 REFERENCES

1. California Department of Transportation, *California Vehicle Noise Emission Levels*, 1987.
2. California Department of Transportation, *Traffic Noise Analysis Protocol*, 2020.
3. California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 2013.
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5. City of San José, *Envision San José 2040 General Plan*, 2011.
6. City of San José, *Envision San José 2040 General Plan FEIR*, 2011.
7. City of San José, *San José Municipal Code*, codified through Ordinance No. 30769, adopted May 24, 2022. (Supp. No. 40, Update 3).
8. City of San José, *Norman Y. Mineta San José International Airport Master Plan Update*, *Noise Assessment for the Master Plan Environmental Impact Report,* October 2019.
9. City of Saratoga, *Code of the City of Saratoga, California*, codified through Ordinance No. 390, passed May 18, 2022 (Supp. No. 50).
10. City of Saratoga, *General Plan Noise Element,* March 5, 2014.
11. Cyril M. Harris, *Handbook of Noise Control*, Second Edition, 1979.
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13. Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden. *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.
14. Federal Highway Administration, *Roadway Construction Noise Model*, 2006.
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16. Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, 1992.
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18. Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.
19. Kittelson & Associates, *SW San José Costco Transportation Analysis*, May 2022.
20. National Electrical Manufactures Association, *Transformers, Regulators, and Reactors TR 1-1993,* 1993.
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22. RECON, *Noise Analysis for the Centerpointe 78 Project*, July 2, 2015.
23. United States Environmental Protection Agency, *Protective Noise Levels (EPA 550/9-79-100)*, 1979.
24. Urban Crossroads, *Lake Elsinore Walmart 2015 Noise Impact Analysis*, 2015.

Appendix A

Noise Data

Noise Measurement Field Data

Project:	Westgate West	**Job Number:**	90013031
Site No.:	ST-1	**Date:**	5/10/2022
Analyst:	Sophie La Herran	**Time:**	1:03 PM
Location:	Adjacent to 1545 Green Drive		
Noise Sources:	Traffic from nearby roadways		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
53.1	46.7	68.1	102.1

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°F
Wind (mph):	15
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	36%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	831_Data.004	Computer's File Name	831_0002335-20220510 140324-831_Data.004.ldbin
Meter	831		
Firmware	2.403		
User		Location	
Description			
Note			
Start Time	2022-05-10 14:03:24	Duration	0:10:00.0
End Time	2022-05-10 14:13:24	Run Time	0:10:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	53.1 dB		
LAE	80.8 dB	SEA	--- dB
EA	13.5 µPa²h		
EA8	646.4 µPa²h		
EA40	3.2 mPa²h		
LZ_{peak}	111.5 dB	2022-05-10 14:08:24	
LAS_{max}	68.1 dB	2022-05-10 14:05:24	
LAS_{min}	46.7 dB	2022-05-10 14:07:11	
LA_{eq}	53.1 dB		
LC_{eq}	67.9 dB	LC_{eq} - LA_{eq}	14.9 dB
LAI_{eq}	57.5 dB	LAI_{eq} - LA_{eq}	4.5 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	2	0:00:05.2
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
53.1 dB	53.1 dB	0.0 dB

LDEN	LDay	LEve	LNight
53.1 dB	53.1 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	53.1 dB		67.9 dB		81.2 dB	
$LS_{(max)}$	68.1 dB	2022-05-10 14:05:24	85.3 dB	2022-05-10 14:08:24	101.3 dB	2022-05-10 14:08:25
$LF_{(max)}$	74.5 dB	2022-05-10 14:13:11	90.3 dB	2022-05-10 14:08:24	106.5 dB	2022-05-10 14:08:24
$LI_{(max)}$	79.8 dB	2022-05-10 14:13:11	93.5 dB	2022-05-10 14:08:24	108.7 dB	2022-05-10 14:08:24
$LS_{(min)}$	46.7 dB	2022-05-10 14:07:11	60.2 dB	2022-05-10 14:11:35	62.1 dB	2022-05-10 14:11:35
$LF_{(min)}$	46.1 dB	2022-05-10 14:07:11	58.1 dB	2022-05-10 14:07:15	60.5 dB	2022-05-10 14:06:03
$LI_{(min)}$	46.3 dB	2022-05-10 14:07:11	60.3 dB	2022-05-10 14:09:32	62.9 dB	2022-05-10 14:11:34
$L_{Peak(max)}$	102.1 dB	2022-05-10 14:13:11	101.4 dB	2022-05-10 14:08:24	111.5 dB	2022-05-10 14:08:24

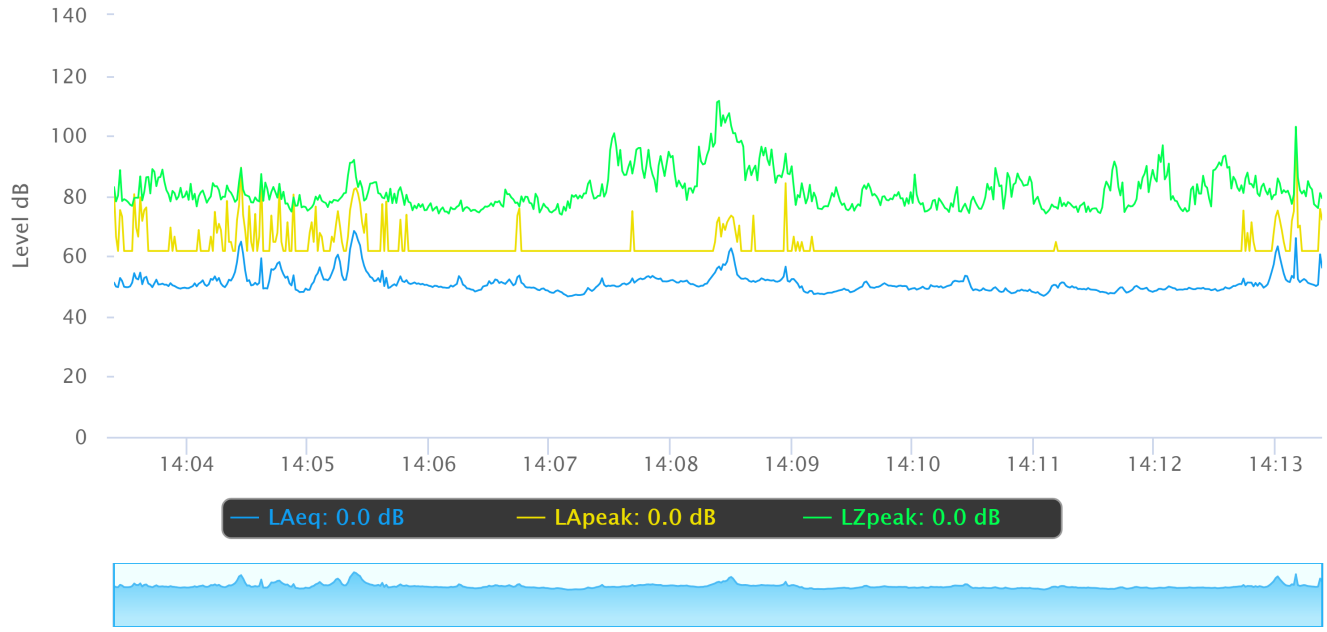
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

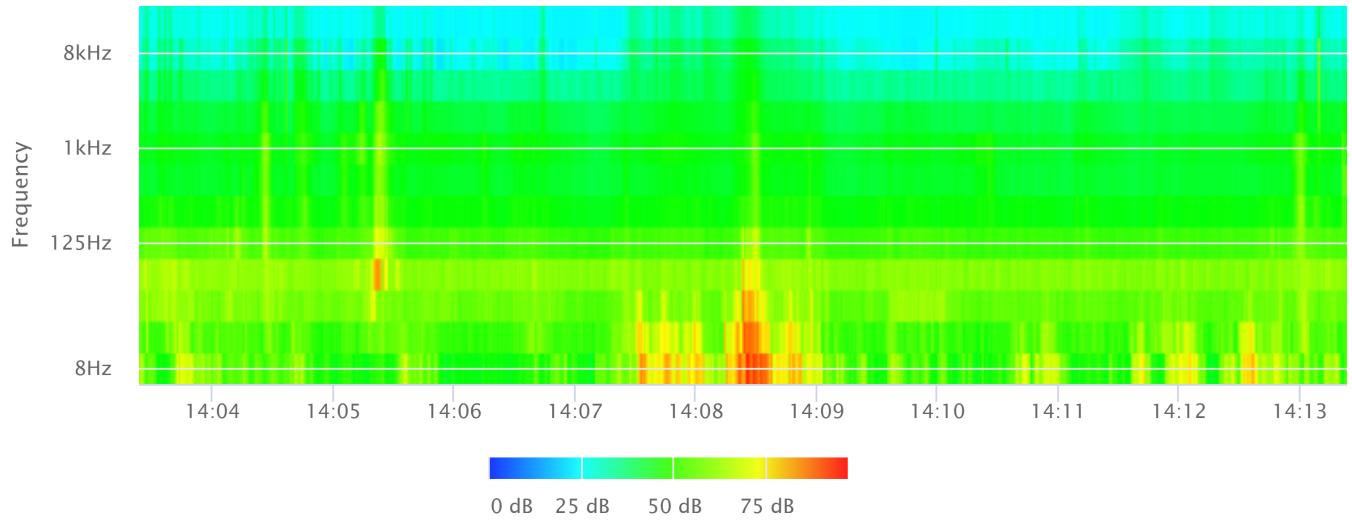
Statistics

LNF 5.0	69.9 dB
LNF 10.0	67.6 dB
LNF 33.3	64.9 dB
LNF 50.0	63.8 dB
LNF 66.6	63.1 dB
LNF 90.0	62.2 dB

Time History



OBA 1/1 Leq



Noise Measurement Field Data

Project:	Westgate West	**Job Number:**	90013031
Site No.:	ST-2	**Date:**	5/10/2022
Analyst:	Sophie La Herran	**Time:**	1:16 PM
Location:	Adjacent to 1545 Cameo Drive		
Noise Sources:	Traffic on Graves Ave.		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
59.4	44.4	76.2	91.6

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°F
Wind (mph):	15 mph
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	36%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	831_Data.005	Computer's File Name	831_0002335-20220510 141643-831_Data.005.ldbin
Meter	831		
Firmware	2.403		
User		Location	
Description			
Note			
Start Time	2022-05-10 14:16:43	Duration	0:10:00.0
End Time	2022-05-10 14:26:43	Run Time	0:10:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	59.4 dB		
LAE	87.1 dB	SEA	--- dB
EA	57.4 µPa²h		
EA8	2.8 mPa²h		
EA40	13.8 mPa²h		
LZ_{peak}	108.5 dB	2022-05-10 14:17:45	
LAS_{max}	76.2 dB	2022-05-10 14:22:13	
LAS_{min}	44.4 dB	2022-05-10 14:20:53	
LA_{eq}	59.4 dB		
LC_{eq}	69.7 dB	LC_{eq} - LA_{eq}	10.4 dB
LAI_{eq}	62.4 dB	LAI_{eq} - LA_{eq}	3.1 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	6	0:00:23.7
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
59.4 dB	59.4 dB	0.0 dB

LDEN	LDay	LEve	LNight
59.4 dB	59.4 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	59.4 dB		69.7 dB		75.0 dB	
$LS_{(max)}$	76.2 dB	2022-05-10 14:22:13	85.3 dB	2022-05-10 14:17:45	90.5 dB	2022-05-10 14:17:45
$LF_{(max)}$	79.3 dB	2022-05-10 14:22:12	93.3 dB	2022-05-10 14:17:45	98.4 dB	2022-05-10 14:17:45
$LI_{(max)}$	80.2 dB	2022-05-10 14:22:12	97.2 dB	2022-05-10 14:17:45	102.6 dB	2022-05-10 14:17:45
$LS_{(min)}$	44.4 dB	2022-05-10 14:20:53	59.1 dB	2022-05-10 14:21:00	62.0 dB	2022-05-10 14:21:05
$LF_{(min)}$	43.6 dB	2022-05-10 14:20:50	57.4 dB	2022-05-10 14:23:31	59.8 dB	2022-05-10 14:21:08
$LI_{(min)}$	44.0 dB	2022-05-10 14:20:53	60.3 dB	2022-05-10 14:20:58	62.9 dB	2022-05-10 14:21:10
$L_{Peak(max)}$	91.6 dB	2022-05-10 14:17:45	102.5 dB	2022-05-10 14:17:45	108.5 dB	2022-05-10 14:17:45

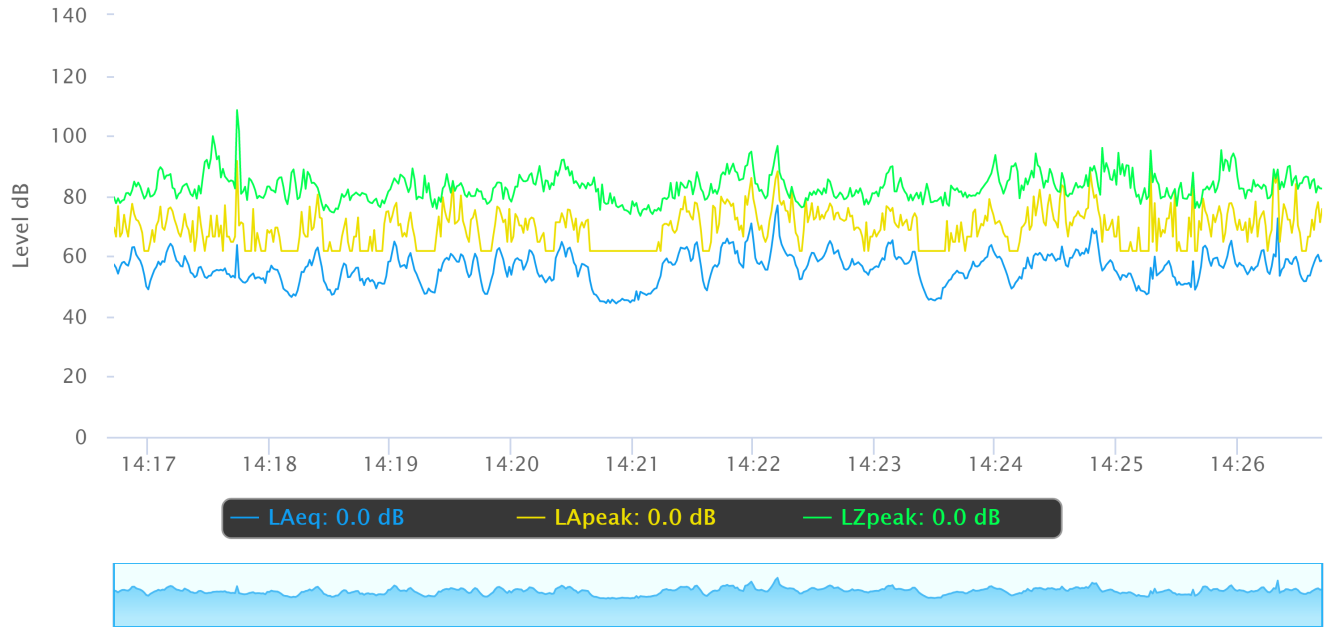
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

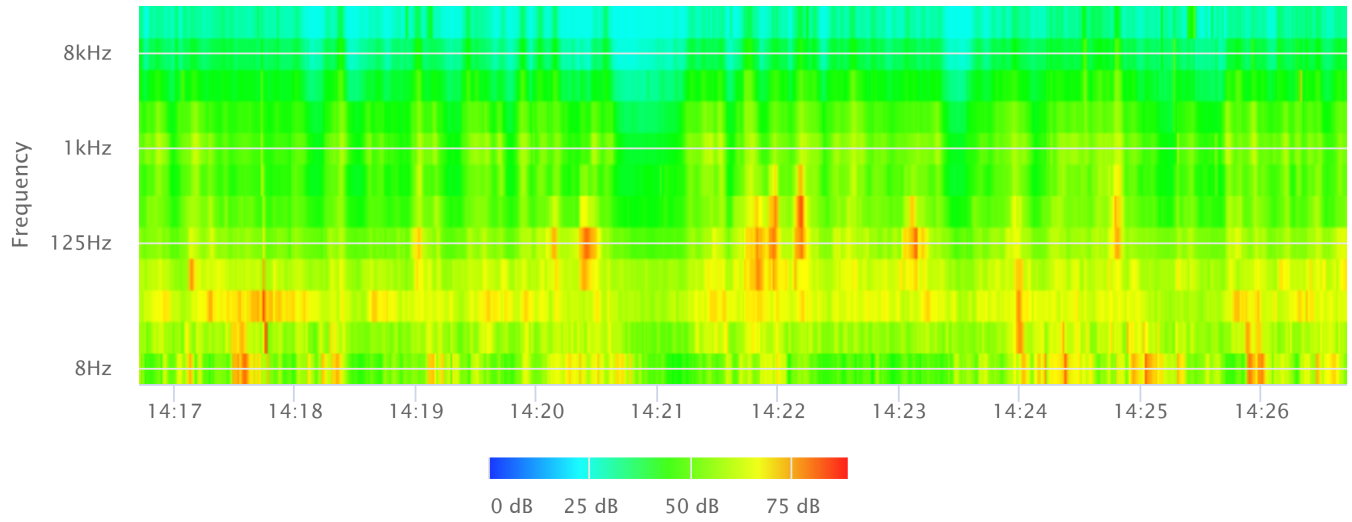
Statistics

LNF 5.0	75.9 dB
LNF 10.0	73.2 dB
LNF 33.3	69.1 dB
LNF 50.0	68.0 dB
LNF 66.6	66.6 dB
LNF 90.0	63.1 dB

Time History



OBA 1/1 Leq



Noise Measurement Field Data

Project:	Westgate West	**Job Number:**	90013031
Site No.:	ST-3	**Date:**	5/10/2022
Analyst:	Sophie La Herran	**Time:**	1:44 PM
Location:	Adjacnet to 5150 Graves Avenue		
Noise Sources:	Traffic on Graves Avenue		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
60.5	43.8	72.0	94.5

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°F
Wind (mph):	15 mph
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	36%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	831_Data.007	Computer's File Name	831_0002335-20220510 144444-831_Data.007.ldbin
Meter	831		
Firmware	2.403		
User		Location	
Description			
Note			
Start Time	2022-05-10 14:44:44	Duration	0:10:00.0
End Time	2022-05-10 14:54:44	Run Time	0:10:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	60.5 dB		
LAE	88.3 dB	SEA	--- dB
EA	74.5 µPa²h		
EA8	3.6 mPa²h		
EA40	17.9 mPa²h		
LZ_{peak}	105.6 dB	2022-05-10 14:54:07	
LAS_{max}	72.0 dB	2022-05-10 14:53:32	
LAS_{min}	43.8 dB	2022-05-10 14:48:52	
LA_{eq}	60.5 dB		
LC_{eq}	69.2 dB	LC_{eq} - LA_{eq}	8.7 dB
LAI_{eq}	63.5 dB	LAI_{eq} - LA_{eq}	3.0 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	21	0:01:20.6
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
60.5 dB	60.5 dB	0.0 dB

LDEN	LDay	LEve	LNight
60.5 dB	60.5 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	60.5 dB		69.2 dB		76.9 dB	
$LS_{(max)}$	72.0 dB	2022-05-10 14:53:32	84.8 dB	2022-05-10 14:45:46	90.1 dB	2022-05-10 14:46:55
$LF_{(max)}$	74.3 dB	2022-05-10 14:54:07	89.8 dB	2022-05-10 14:54:07	94.6 dB	2022-05-10 14:54:07
$LI_{(max)}$	78.9 dB	2022-05-10 14:54:07	93.7 dB	2022-05-10 14:54:07	98.5 dB	2022-05-10 14:54:07
$LS_{(min)}$	43.8 dB	2022-05-10 14:48:52	54.6 dB	2022-05-10 14:46:42	61.0 dB	2022-05-10 14:46:07
$LF_{(min)}$	43.1 dB	2022-05-10 14:48:56	52.7 dB	2022-05-10 14:46:42	57.4 dB	2022-05-10 14:49:34
$LI_{(min)}$	43.5 dB	2022-05-10 14:46:09	55.1 dB	2022-05-10 14:46:42	62.4 dB	2022-05-10 14:48:50
$L_{Peak(max)}$	94.5 dB	2022-05-10 14:46:27	101.0 dB	2022-05-10 14:54:07	105.6 dB	2022-05-10 14:54:07

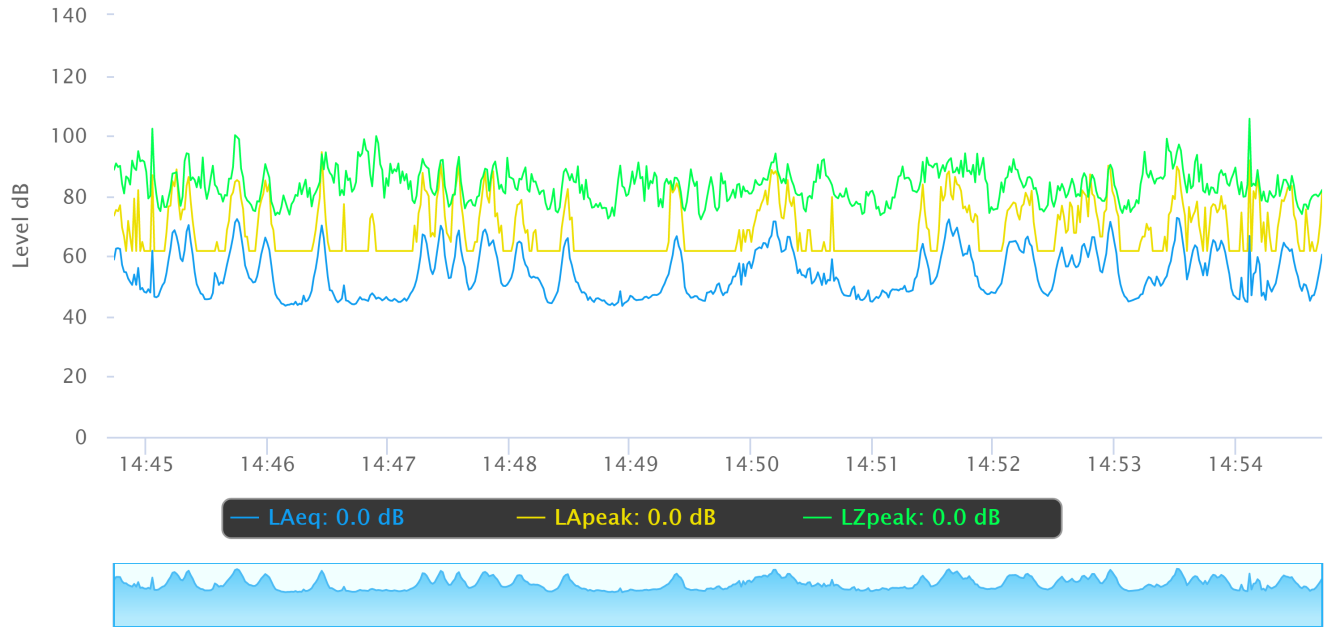
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

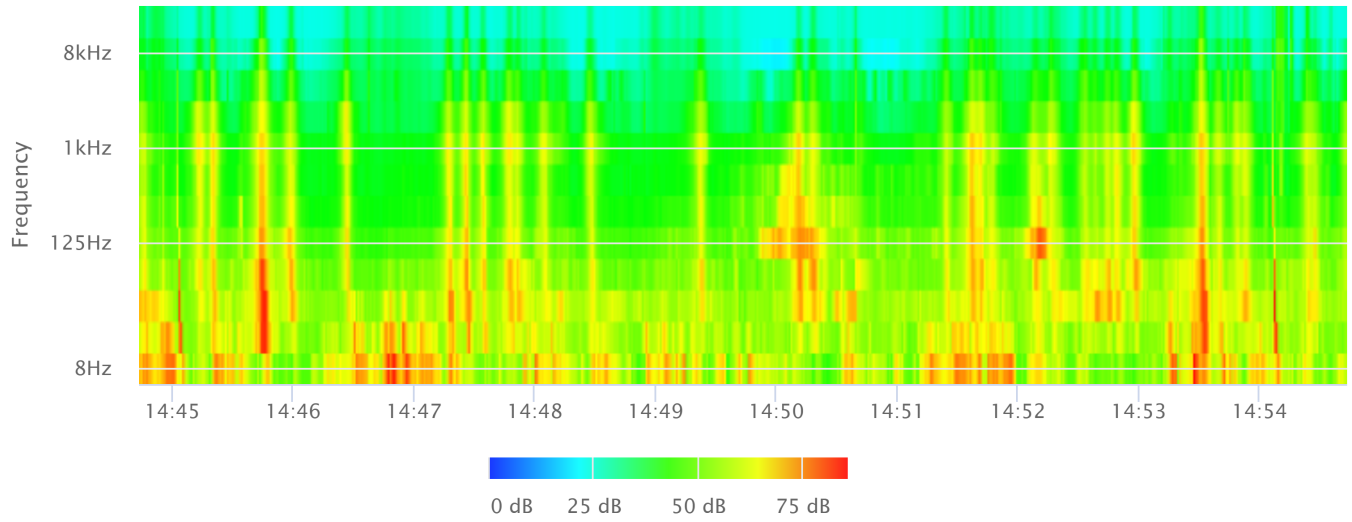
Statistics

LNF 5.0	76.0 dB
LNF 10.0	73.5 dB
LNF 33.3	68.1 dB
LNF 50.0	64.4 dB
LNF 66.6	61.3 dB
LNF 90.0	58.9 dB

Time History



OBA 1/1 Leq



Noise Measurement Field Data

Project:	Westgate West	**Job Number:**	90013031
Site No.:	ST-4	**Date:**	5/10/2022
Analyst:	Sophie La Herran	**Time:**	2:01 PM
Location:	Trader Joe's parking lot at 5269 Prospect Road		
Noise Sources:	Traffic in parking lot		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
56.4	50.9	67.8	84.9

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°F
Wind (mph):	15 mph
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	36%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	831_Data.008	Computer's File Name	831_0002335-20220510 150132-831_Data.008.ldbin
Meter	831		
Firmware	2.403		
User		Location	
Description			
Note			
Start Time	2022-05-10 15:01:32	Duration	0:10:00.0
End Time	2022-05-10 15:11:32	Run Time	0:10:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	56.4 dB		
LAE	84.2 dB	SEA	--- dB
EA	29.0 µPa²h		
EA8	1.4 mPa²h		
EA40	7.0 mPa²h		
LZ_{peak}	102.4 dB	2022-05-10 15:02:32	
LAS_{max}	67.0 dB	2022-05-10 15:11:25	
LAS_{min}	50.9 dB	2022-05-10 15:03:04	
LA_{eq}	56.4 dB		
LC_{eq}	72.3 dB	LC_{eq} - LA_{eq}	15.9 dB
LAI_{eq}	58.2 dB	LAI_{eq} - LA_{eq}	1.8 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	3	0:00:08.2
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
56.4 dB	56.4 dB	0.0 dB

LDEN	LDay	LEve	LNight
56.4 dB	56.4 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	56.4 dB		72.3 dB		79.0 dB	
$LS_{(max)}$	67.0 dB	2022-05-10 15:11:25	85.3 dB	2022-05-10 15:11:25	93.6 dB	2022-05-10 15:02:34
$LF_{(max)}$	70.1 dB	2022-05-10 15:11:25	88.3 dB	2022-05-10 15:11:25	98.0 dB	2022-05-10 15:02:34
$LI_{(max)}$	71.5 dB	2022-05-10 15:07:47	89.2 dB	2022-05-10 15:11:25	100.1 dB	2022-05-10 15:02:34
$LS_{(min)}$	50.9 dB	2022-05-10 15:03:04	65.0 dB	2022-05-10 15:01:32	71.1 dB	2022-05-10 15:10:49
$LF_{(min)}$	49.9 dB	2022-05-10 15:10:54	64.0 dB	2022-05-10 15:03:27	68.7 dB	2022-05-10 15:06:49
$LI_{(min)}$	50.5 dB	2022-05-10 15:03:03	66.8 dB	2022-05-10 15:03:27	72.2 dB	2022-05-10 15:02:09
$L_{Peak(max)}$	84.9 dB	2022-05-10 15:07:47	95.2 dB	2022-05-10 15:11:17	102.4 dB	2022-05-10 15:02:32

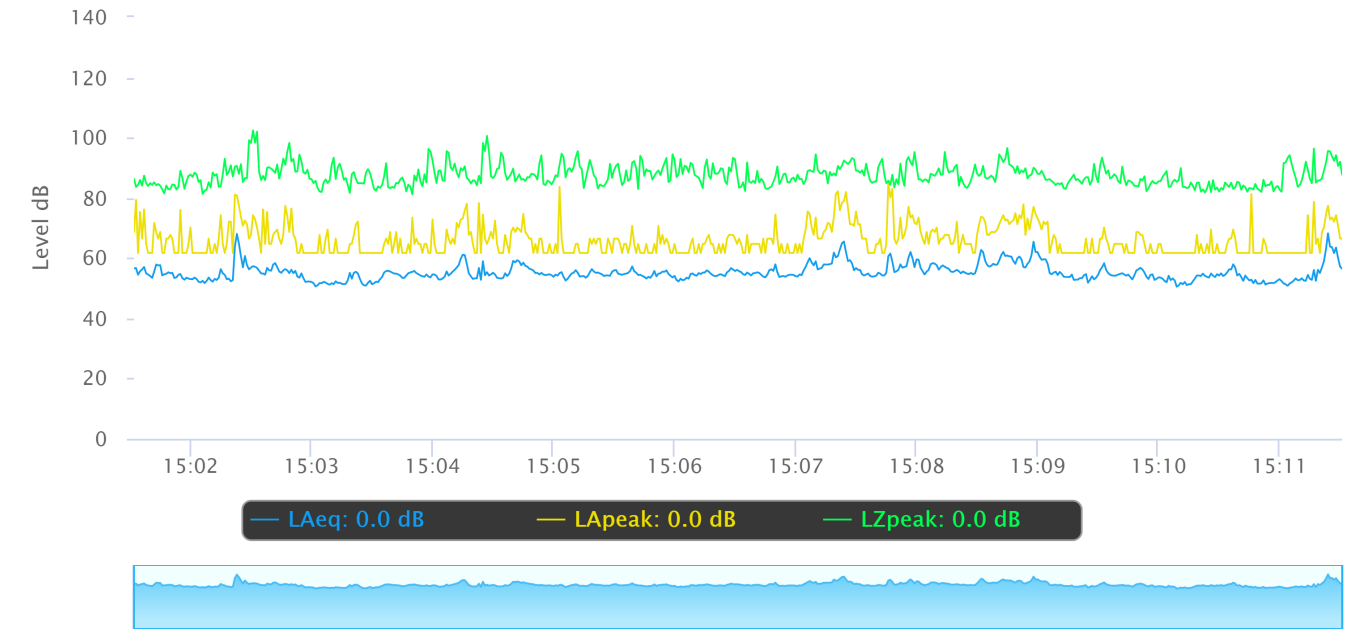
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

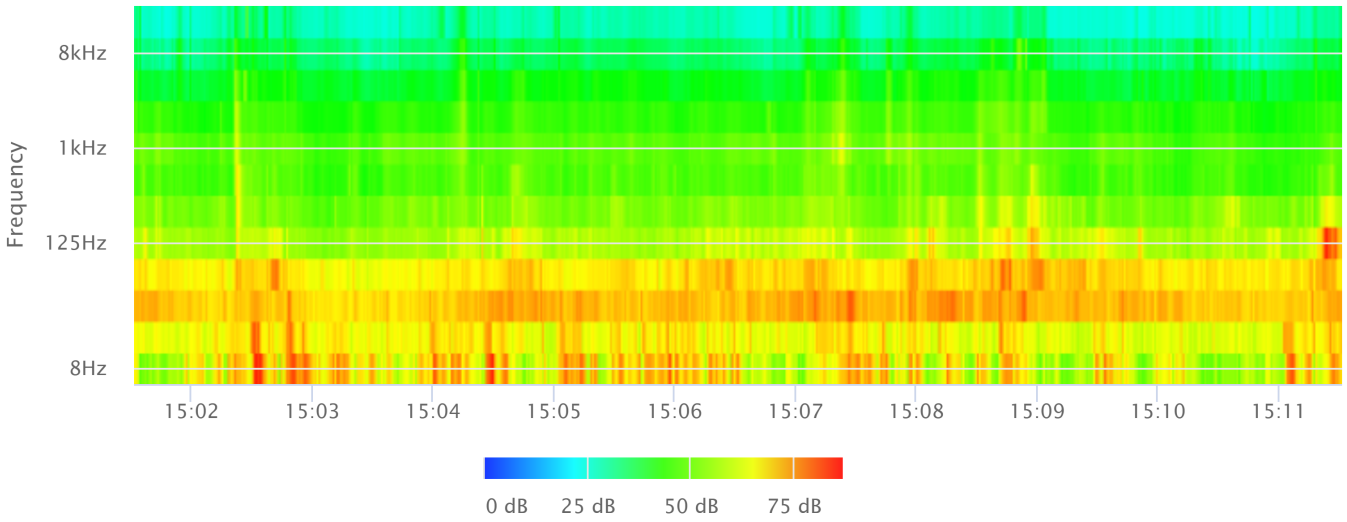
Statistics

LNF 5.0	77.2 dB
LNF 10.0	76.1 dB
LNF 33.3	73.9 dB
LNF 50.0	73.0 dB
LNF 66.6	72.1 dB
LNF 90.0	70.3 dB

Time History



OBA 1/1 Leq



Noise Measurement Field Data

Project:	Westgate West	**Job Number:**	90013031
Site No.:	ST-5	**Date:**	5/10/2022
Analyst:	Sophie La Herran	**Time:**	2:15 PM
Location:	Taco Bell parking lot at 5389 Prospect Road		
Noise Sources:	Traffic in parking lot		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
60.9	47.1	81.2	100.3

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°F
Wind (mph):	15 mph
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	36%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	831_Data.009	Computer's File Name	831_0002335-20220510 151524-831_Data.009.ldbin
Meter	831		
Firmware	2.403		
User		Location	
Description			
Note			
Start Time	2022-05-10 15:15:24	Duration	0:10:00.0
End Time	2022-05-10 15:25:24	Run Time	0:10:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	60.9 dB		
LAE	88.7 dB	SEA	--- dB
EA	82.2 µPa²h		
EA8	3.9 mPa²h		
EA40	19.7 mPa²h		
LZ_{peak}	108.6 dB	2022-05-10 15:20:14	
LAS_{max}	81.2 dB	2022-05-10 15:23:59	
LAS_{min}	47.1 dB	2022-05-10 15:25:16	
LA_{eq}	60.9 dB		
LC_{eq}	72.3 dB	LC_{eq} - LA_{eq}	11.4 dB
LAI_{eq}	63.7 dB	LAI_{eq} - LA_{eq}	2.7 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	7	0:00:28.6
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
60.9 dB	60.9 dB	0.0 dB

LDEN	LDay	LEve	LNight
60.9 dB	60.9 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	60.9 dB		72.3 dB		85.0 dB	
$LS_{(max)}$	81.2 dB	2022-05-10 15:23:59	90.3 dB	2022-05-10 15:23:58	99.8 dB	2022-05-10 15:20:16
$LF_{(max)}$	84.3 dB	2022-05-10 15:23:58	92.2 dB	2022-05-10 15:23:57	103.7 dB	2022-05-10 15:21:07
$LI_{(max)}$	85.6 dB	2022-05-10 15:23:58	93.3 dB	2022-05-10 15:23:58	106.3 dB	2022-05-10 15:21:07
$LS_{(min)}$	47.1 dB	2022-05-10 15:25:16	62.0 dB	2022-05-10 15:25:19	64.8 dB	2022-05-10 15:24:44
$LF_{(min)}$	46.5 dB	2022-05-10 15:25:16	59.6 dB	2022-05-10 15:24:44	62.8 dB	2022-05-10 15:24:44
$LI_{(min)}$	46.7 dB	2022-05-10 15:25:16	62.5 dB	2022-05-10 15:24:44	66.3 dB	2022-05-10 15:25:06
$L_{Peak(max)}$	100.3 dB	2022-05-10 15:23:58	104.0 dB	2022-05-10 15:23:58	108.6 dB	2022-05-10 15:20:14

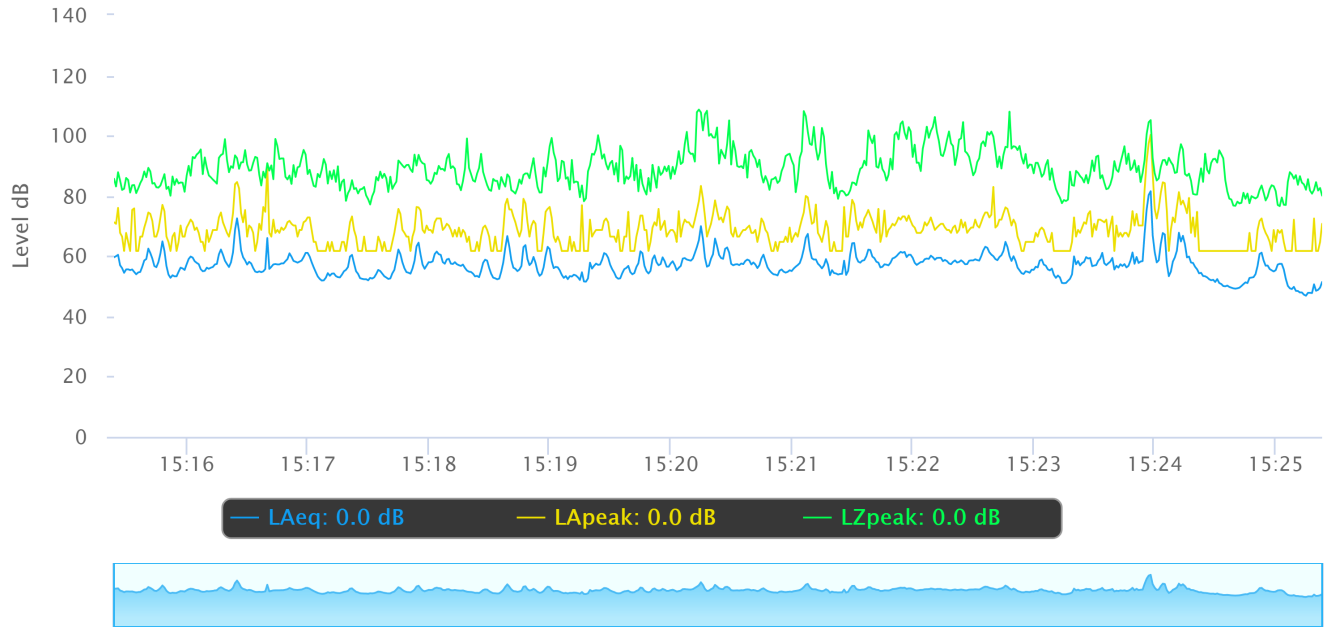
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

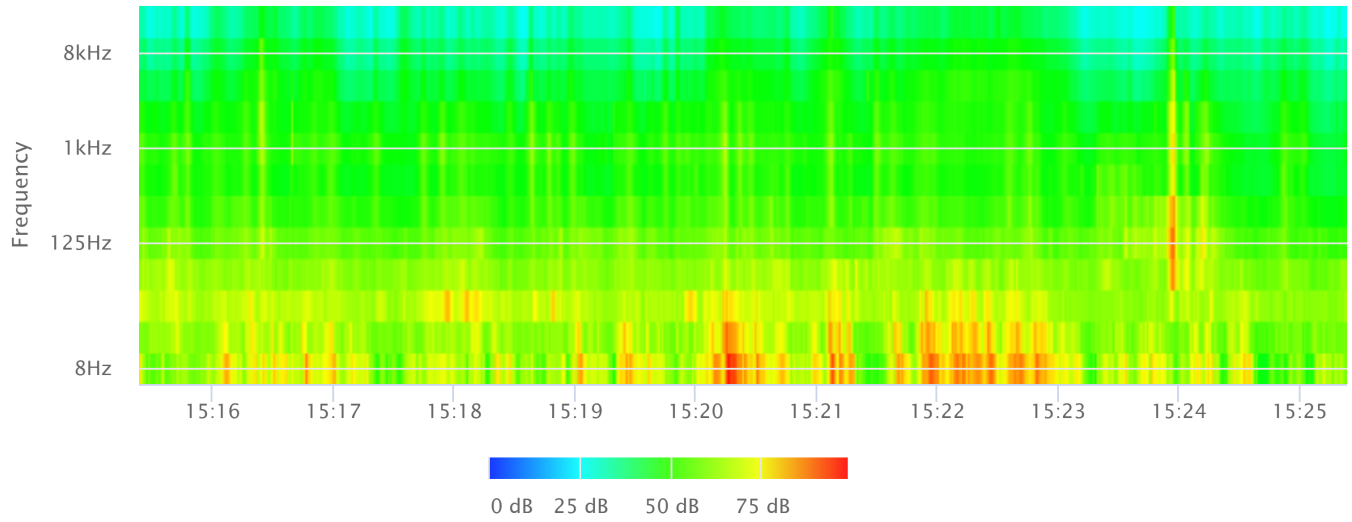
Statistics

LNF 5.0	76.9 dB
LNF 10.0	74.8 dB
LNF 33.3	71.2 dB
LNF 50.0	69.8 dB
LNF 66.6	68.6 dB
LNF 90.0	66.4 dB

Time History



OBA 1/1 Leq



Noise Measurement Field Data

Project:	Westgate West	**Job Number:**	90013031
Site No.:	ST-6	**Date:**	5/10/2022
Analyst:	Sophie La Herran	**Time:**	1:29 PM
Location:	Adjacent to 1526 Crespi Drive		
Noise Sources:	Traffic on Graves Avenue		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
52.7	41.5	69.2	94.2

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°F
Wind (mph):	15 mph
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	36%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	831_Data.006	Computer's File Name	831_0002335-20220510 142943-831_Data.006.ldbin
Meter	831		
Firmware	2.403		
User		Location	
Description			
Note			
Start Time	2022-05-10 14:29:43	Duration	0:10:00.0
End Time	2022-05-10 14:39:43	Run Time	0:10:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	52.7 dB		
LAE	80.5 dB	SEA	--- dB
EA	12.5 µPa²h		
EA8	599.2 µPa²h		
EA40	3.0 mPa²h		
LZ_{peak}	100.7 dB	2022-05-10 14:30:25	
LAS_{max}	69.2 dB	2022-05-10 14:31:19	
LAS_{min}	41.5 dB	2022-05-10 14:39:36	
LA_{eq}	52.7 dB		
LC_{eq}	65.1 dB	LC_{eq} - LA_{eq}	12.3 dB
LAI_{eq}	55.9 dB	LAI_{eq} - LA_{eq}	3.2 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	1	0:00:04.10
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
52.7 dB	52.7 dB	0.0 dB

LDEN	LDay	LEve	LNight
52.7 dB	52.7 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	52.7 dB		65.1 dB		72.8 dB	
$LS_{(max)}$	69.2 dB	2022-05-10 14:31:19	83.5 dB	2022-05-10 14:31:20	89.3 dB	2022-05-10 14:30:26
$LF_{(max)}$	70.5 dB	2022-05-10 14:31:18	85.6 dB	2022-05-10 14:31:20	95.2 dB	2022-05-10 14:30:25
$LI_{(max)}$	73.3 dB	2022-05-10 14:37:02	86.8 dB	2022-05-10 14:31:20	97.6 dB	2022-05-10 14:30:25
$LS_{(min)}$	41.5 dB	2022-05-10 14:39:36	53.5 dB	2022-05-10 14:38:19	56.2 dB	2022-05-10 14:29:43
$LF_{(min)}$	40.0 dB	2022-05-10 14:38:20	51.1 dB	2022-05-10 14:38:19	55.7 dB	2022-05-10 14:38:04
$LI_{(min)}$	42.0 dB	2022-05-10 14:38:21	54.4 dB	2022-05-10 14:38:19	58.7 dB	2022-05-10 14:38:04
$L_{Peak(max)}$	94.2 dB	2022-05-10 14:37:02	93.9 dB	2022-05-10 14:31:19	100.7 dB	2022-05-10 14:30:25

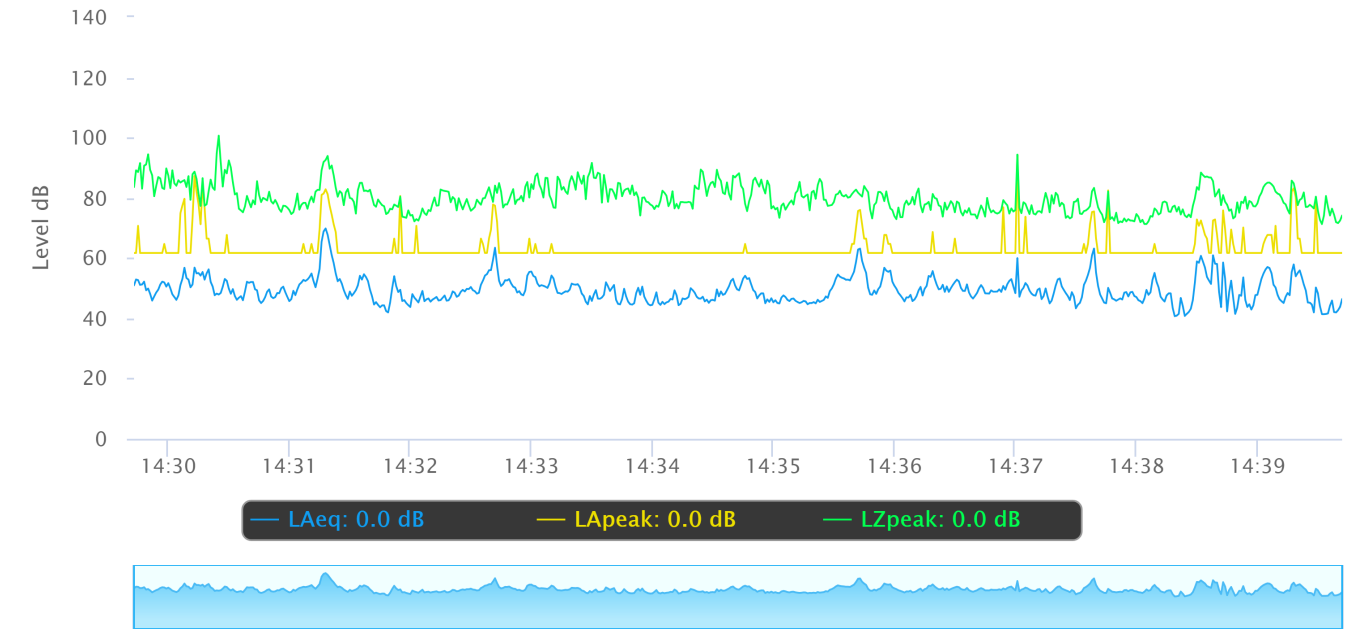
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

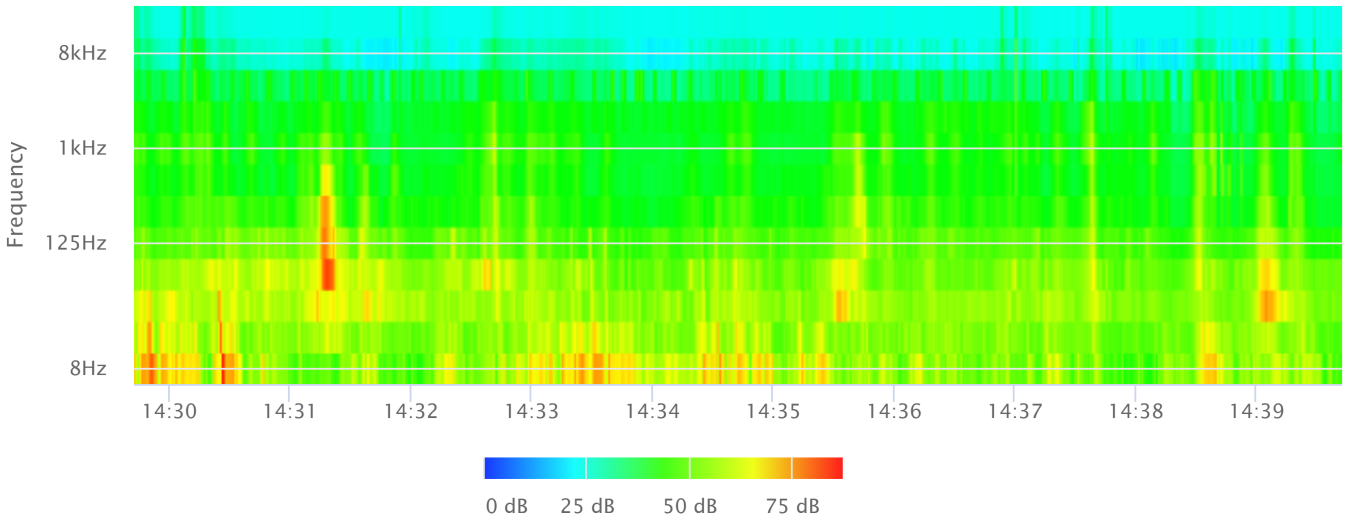
Statistics

LNF 5.0	69.4 dB
LNF 10.0	67.3 dB
LNF 33.3	62.8 dB
LNF 50.0	61.0 dB
LNF 66.6	59.4 dB
LNF 90.0	57.2 dB

Time History



OBA 1/1 Leq



Noise Measurement Field Data

Project:	Westgate West	**Job Number:**	90013031
Site No.:	ST-7	**Date:**	5/10/2022
Analyst:	Sophie La Herran	**Time:**	2:30 PM
Location:	Adjacent to Prospect High School		
Noise Sources:	Traffic from near by roadways		

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
52.4	44.6	64.7	100.8

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°F
Wind (mph):	15 mph
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	36%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	831_Data.010	Computer's File Name	831_0002335-20220510 153125-831_Data.010.ldbin
Meter	831		
Firmware	2.403		
User		Location	
Description			
Note			
Start Time	2022-05-10 15:31:25	Duration	0:10:00.0
End Time	2022-05-10 15:41:25	Run Time	0:10:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	52.4 dB		
LAE	80.2 dB	SEA	--- dB
EA	11.6 µPa²h		
EA8	557.2 µPa²h		
EA40	2.8 mPa²h		
LZ_{peak}	105.9 dB	2022-05-10 15:31:40	
LAS_{max}	64.7 dB	2022-05-10 15:40:24	
LAS_{min}	44.6 dB	2022-05-10 15:34:58	
LA_{eq}	52.4 dB		
LC_{eq}	66.9 dB	LC_{eq} - LA_{eq}	14.5 dB
LAI_{eq}	58.2 dB	LAI_{eq} - LA_{eq}	5.8 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
52.4 dB	52.4 dB	0.0 dB

LDEN	LDay	LEve	LNight
52.4 dB	52.4 dB	--- dB	--- dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	52.4 dB		66.9 dB		80.9 dB	
$LS_{(max)}$	64.7 dB	2022-05-10 15:40:24	84.0 dB	2022-05-10 15:31:40	93.1 dB	2022-05-10 15:38:44
$LF_{(max)}$	70.1 dB	2022-05-10 15:34:35	91.3 dB	2022-05-10 15:31:40	97.0 dB	2022-05-10 15:38:44
$LI_{(max)}$	74.1 dB	2022-05-10 15:40:39	94.4 dB	2022-05-10 15:31:40	99.9 dB	2022-05-10 15:31:40
$LS_{(min)}$	44.6 dB	2022-05-10 15:34:58	57.3 dB	2022-05-10 15:31:25	63.1 dB	2022-05-10 15:34:58
$LF_{(min)}$	43.9 dB	2022-05-10 15:34:57	57.2 dB	2022-05-10 15:31:25	61.0 dB	2022-05-10 15:34:57
$LI_{(min)}$	44.3 dB	2022-05-10 15:34:57	57.2 dB	2022-05-10 15:31:25	64.7 dB	2022-05-10 15:34:56
$L_{Peak(max)}$	100.8 dB	2022-05-10 15:40:39	101.7 dB	2022-05-10 15:31:40	105.9 dB	2022-05-10 15:31:40

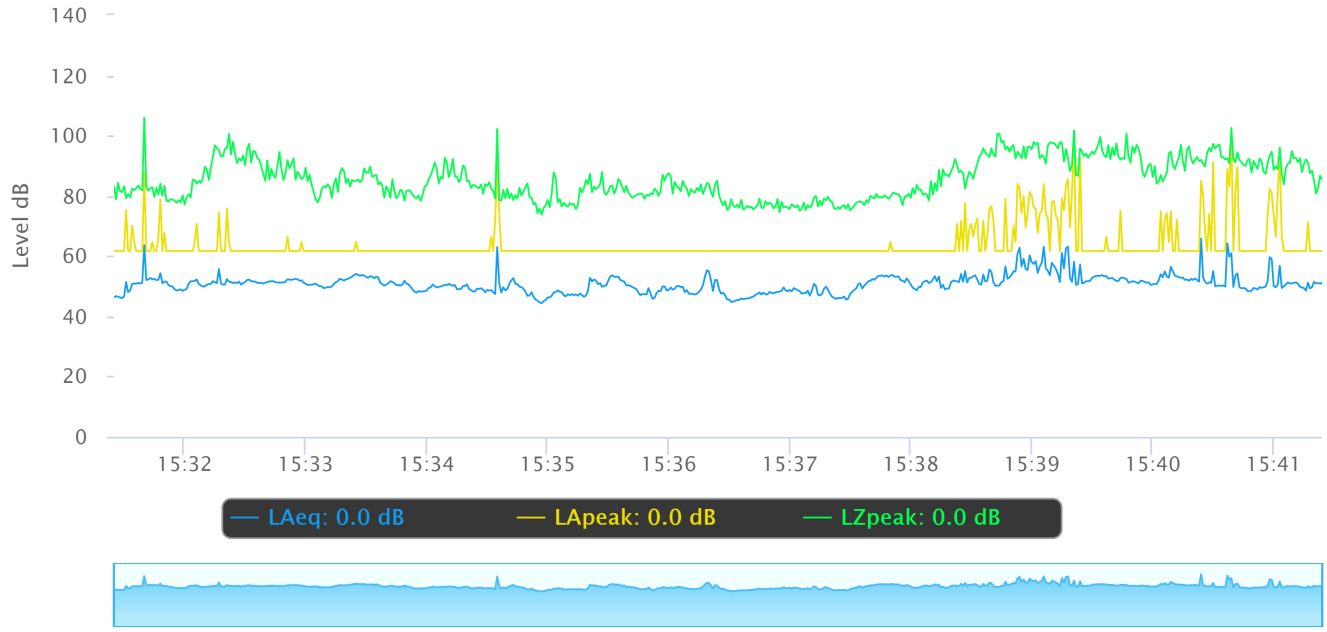
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

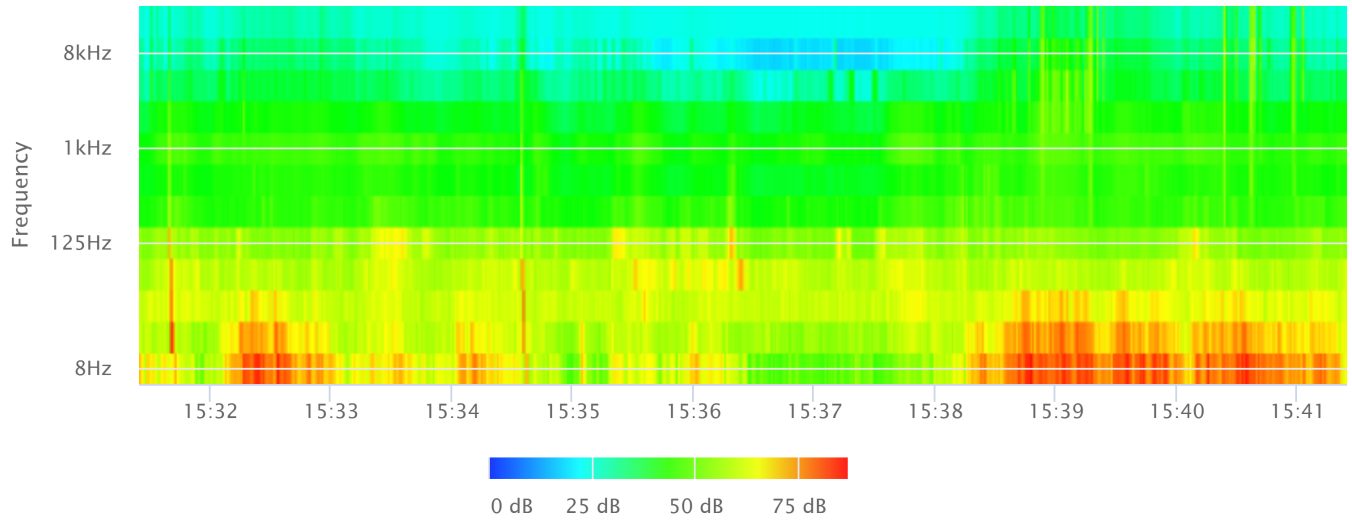
Statistics

LNF 5.0	69.8 dB
LNF 10.0	68.8 dB
LNF 33.3	66.4 dB
LNF 50.0	65.3 dB
LNF 66.6	64.4 dB
LNF 90.0	63.1 dB

Time History



OBA 1/1 Leq



Noise Measurement Field Data

Project:	Westgate West	**Job Number:**	90013031
Site No.:	LT-1	**Date:**	5/10/2022
Analyst:	Sophie La Herran	**Time:**	3:59 PM
Location:	Near the northern boundary of the Project Site, adjacent to Graves Avenue and existing loading docks.		
Noise Sources:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
61.0	38.0	89.5	111.0

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°F
Wind (mph):	15 mph
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	36%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	831_Data.011	Computer's File Name	831_0002335-20220510 155940-831_Data.011.ldbin
Meter	831		
Firmware	2.403		
User		Location	
Description			
Note			
Start Time	2022-05-10 15:59:40	Duration	24:06:50.1
End Time	2022-05-11 16:06:30	Run Time	24:06:50.1
		Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	61.0 dB		
LAE	110.4 dB	SEA	--- dB
EA	12.1 mPa²h		
EA8	4.0 mPa²h		
EA40	20.1 mPa²h		
LZ_{peak}	111.0 dB	2022-05-10 17:06:27	
LAS_{max}	89.5 dB	2022-05-11 12:02:00	
LAS_{min}	38.0 dB	2022-05-11 04:22:10	
LA_{eq}	61.0 dB		
LC_{eq}	66.9 dB	LC_{eq} - LA_{eq}	5.9 dB
LAI_{eq}	66.1 dB	LAI_{eq} - LA_{eq}	5.1 dB

Exceedances	Count	Duration
LAS > 65.0 dB	327	0:44:29.2
LAS > 85.0 dB	35	0:01:13.4
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	64.0 dB	62.5 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	64.1 dB	63.3 dB	53.8 dB	55.8 dB

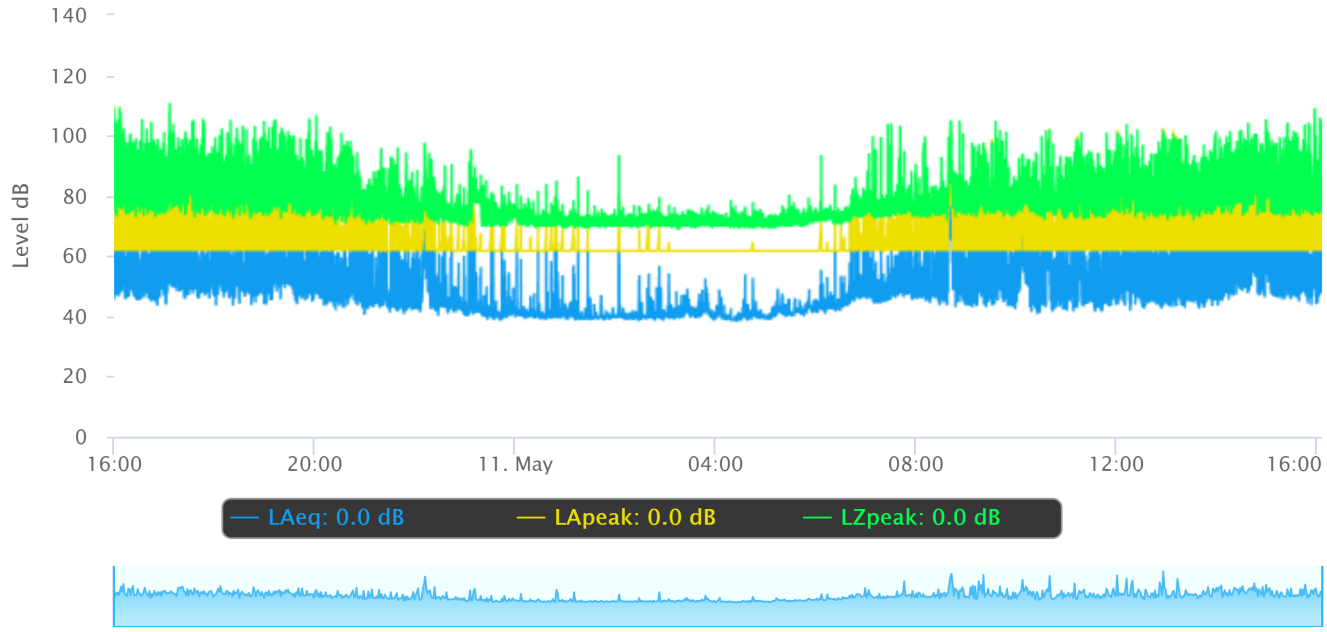
Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	61.0 dB		66.9 dB		74.5 dB	
$LS_{(max)}$	89.5 dB	2022-05-11 12:02:00	94.9 dB	2022-05-11 08:52:26	100.6 dB	2022-05-10 17:06:27
$LF_{(max)}$	93.1 dB	2022-05-11 12:01:26	96.5 dB	2022-05-11 08:52:25	107.2 dB	2022-05-10 17:06:27
$LI_{(max)}$	95.8 dB	2022-05-11 12:01:02	97.2 dB	2022-05-11 08:52:25	109.6 dB	2022-05-10 17:06:27
$LS_{(min)}$	38.0 dB	2022-05-11 04:22:10	52.8 dB	2022-05-11 04:22:30	55.7 dB	2022-05-11 04:29:08
$LF_{(min)}$	37.1 dB	2022-05-11 04:23:08	51.2 dB	2022-05-11 04:26:06	53.1 dB	2022-05-11 04:26:03
$LI_{(min)}$	38.0 dB	2022-05-11 04:23:08	53.0 dB	2022-05-11 04:25:03	56.1 dB	2022-05-11 04:41:17
$L_{Peak(max)}$	109.8 dB	2022-05-10 15:59:54	108.0 dB	2022-05-10 15:59:54	111.0 dB	2022-05-10 17:06:27

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	1	0:00:02.1

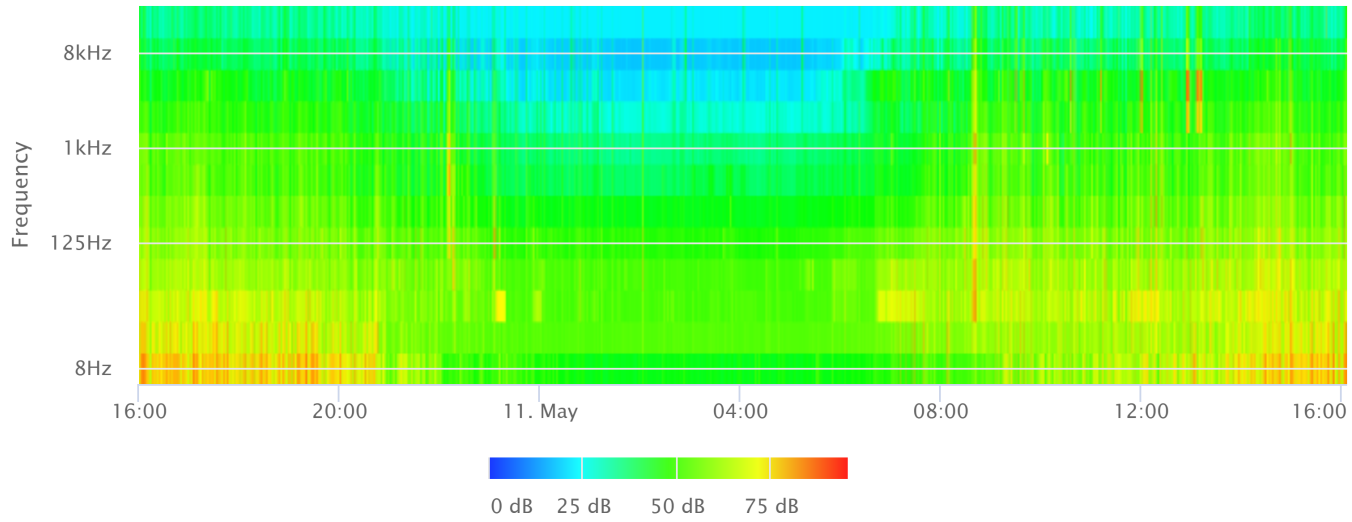
Statistics

LNF 5.0	71.3 dB
LNF 10.0	68.9 dB
LNF 33.3	63.8 dB
LNF 50.0	61.6 dB
LNF 66.6	59.1 dB
LNF 90.0	55.6 dB

Time History



OBA 1/1 Leq



Noise Measurement Field Data

Project:	Westgate West	**Job Number:**	90013031
Site No.:	LT-2	**Date:**	5/11/2022
Analyst:	Sophie La Herran	**Time:**	4:50 PM
Location:	Adjacent to residential uses to the east of the Project site		
Noise Sources:			

Results (dBA):

Leq:	Lmin:	Lmax:	Peak:
54.3	41.8	86.9	112.4

Equipment	
Sound Level Meter:	LD SoundExpert LxT
Calibrator:	CAL200
Response Time:	Slow
Weighting:	A
Microphone Height:	5 feet

Weather	
Temp. (degrees F):	60°F
Wind (mph):	15 mph
Sky:	Clear
Bar. Pressure:	30.19"
Humidity:	36%

Photo:

Kimley»Horn

Measurement Report

Report Summary

Meter's File Name	831_Data.012	Computer's File Name	831_0002335-20220511 165030-831_Data.012.ldbin
Meter	831		
Firmware	2.403		
User		Location	
Description			
Note			
Start Time	2022-05-11 16:50:30	Duration	24:10:00.0
End Time	2022-05-12 17:00:30	Run Time	24:10:00.0
		Pause Time	0:00:00.0

Results

Overall Metrics

LA_{eq}	54.3 dB		
LAE	103.7 dB	SEA	--- dB
EA	2.6 mPa²h		
EA8	860.3 µPa²h		
EA40	4.3 mPa²h		
LZ_{peak}	112.4 dB	2022-05-12 16:55:22	
LAS_{max}	86.9 dB	2022-05-12 08:00:00	
LAS_{min}	41.8 dB	2022-05-12 05:02:59	
LA_{eq}	54.3 dB		
LC_{eq}	67.4 dB	LC_{eq} - LA_{eq}	13.1 dB
LAI_{eq}	58.3 dB	LAI_{eq} - LA_{eq}	4.0 dB

Exceedances

	Count	Duration
LAS > 65.0 dB	156	0:12:04.5
LAS > 85.0 dB	2	0:00:02.7
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise

LDN	LDay	LNight
58.4 dB	55.5 dB	0.0 dB

LDEN	LDay	LEve	LNight
58.6 dB	56.0 dB	52.3 dB	50.9 dB

Any Data

	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	54.3 dB		67.4 dB		79.3 dB	
$LS_{(max)}$	86.9 dB	2022-05-12 08:00:00	91.7 dB	2022-05-12 07:59:59	101.2 dB	2022-05-12 16:22:51
$LF_{(max)}$	91.7 dB	2022-05-12 07:59:59	97.0 dB	2022-05-12 07:59:59	106.3 dB	2022-05-12 16:55:22
$LI_{(max)}$	93.2 dB	2022-05-12 07:59:59	98.8 dB	2022-05-12 07:59:59	109.8 dB	2022-05-12 16:55:22
$LS_{(min)}$	41.8 dB	2022-05-12 05:02:59	57.4 dB	2022-05-12 01:58:17	59.3 dB	2022-05-12 01:58:17
$LF_{(min)}$	41.1 dB	2022-05-12 01:17:44	55.6 dB	2022-05-12 02:53:20	57.2 dB	2022-05-12 02:16:21
$LI_{(min)}$	41.7 dB	2022-05-12 03:28:33	57.6 dB	2022-05-12 02:21:20	59.4 dB	2022-05-12 02:28:03
$L_{Peak(max)}$	109.5 dB	2022-05-12 09:05:29	108.8 dB	2022-05-12 09:05:29	112.4 dB	2022-05-12 16:55:22

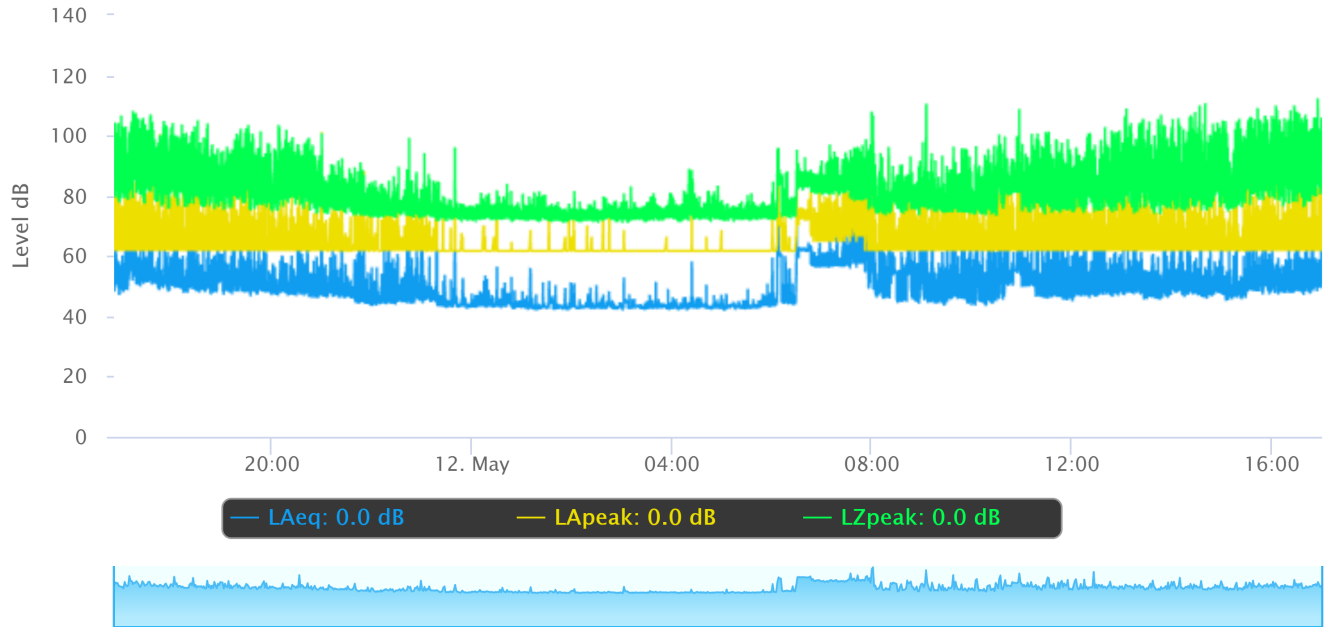
Overloads

Count	Duration	OBA Count	OBA Duration
0	0:00:00.0	0	0:00:00.0

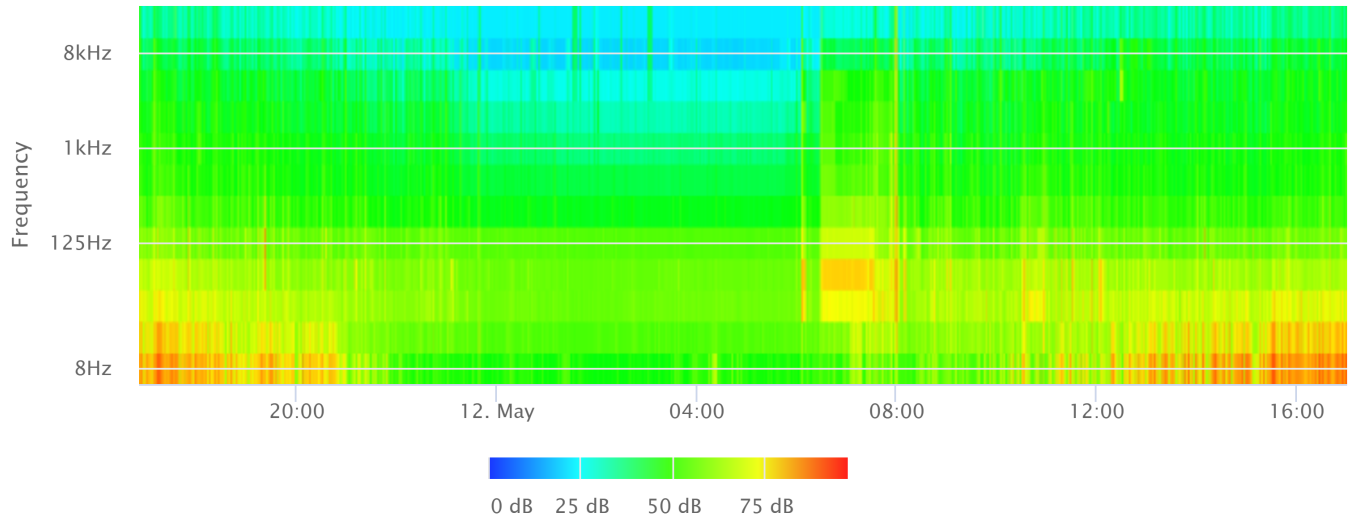
Statistics

LNF 5.0	74.0 dB
LNF 10.0	71.3 dB
LNF 33.3	65.8 dB
LNF 50.0	64.2 dB
LNF 66.6	62.3 dB
LNF 90.0	60.1 dB

Time History



OBA 1/1 Leq



Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/20/2022
Case Description: Demo

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential North	Residential	1	1	1

			Equipment			
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw		No	20		89.6	330	0
Excavator		No	40		80.7	330	0
Dozer		No	40		81.7	330	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		73.2	66.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		64.3	60.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		65.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	73.2	68.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential West	Residential	1	1	1

			Equipment			
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw		No	20		89.6	650	0
Excavator		No	40		80.7	650	0
Dozer		No	40		81.7	650	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		67.3	60.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		58.4	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		59.4	55.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	67.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercial	Residential	1	1	1

			Equipment			
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw		No	20		89.6	315	0
Excavator		No	40		80.7	315	0
Dozer		No	40		81.7	315	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		73.6	66.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		64.7	60.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		65.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	73.6	68.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercial	Commercial	1	1	1

			Equipment			
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw		No	20		89.6	610	0
Excavator		No	40		80.7	610	0
Dozer		No	40		81.7	610	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		67.9	60.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		59	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		59.9	56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	67.9	62.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School	Residential	1	1	1

			Equipment			
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw		No	20		89.6	945	0
Excavator		No	40		80.7	945	0
Dozer		No	40		81.7	945	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		64.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		55.2	51.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		56.1	52.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	64.1	59.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential East	Residential	1	1	1

			Equipment			
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw		No	20		89.6	1030	0
Excavator		No	40		80.7	1030	0
Dozer		No	40		81.7	1030	0

Results

		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		63.3	56.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator		54.4	50.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		55.4	51.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	63.3	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/20/2022
Case Description: Site Prep

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential North	Residential	1	1	1

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Tractor	No		40	84	330	0
Dozer	No		40	81.7	330	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		67.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		65.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	67.6	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential West	Residential	1	1	1

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Tractor	No		40	84	650	0
Dozer	No		40	81.7	650	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		61.7	57.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		59.4	55.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	61.7	59.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercial	Residential	1	1	1

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Tractor	No		40	84	315	0
Dozer	No		40	81.7	315	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		68	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		65.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	68	66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercial	Commercial	1	1	1

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Tractor	No		40	84	610	0
Dozer	No		40	81.7	610	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		62.3	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		59.9	56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	62.3	60.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School	Residential	1	1	1

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Tractor	No		40	84	945	0
Dozer	No		40	81.7	945	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		58.5	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		56.1	52.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	58.5	56.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential East	Residential	1	1	1

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Tractor	No		40	84	1030	0
Dozer	No		40	81.7	1030	0

		Results													
		Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor		57.7	53.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		55.4	51.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	57.7	55.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/20/2022
Case Description: Grading

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential North	Residential	1	1	1

			Equipment				
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator		No	40		80.7	330	0
Grader		No	40	85		330	0
Dozer		No	40		81.7	330	0
Scraper		No	40		83.6	330	0
Tractor		No	40	84		330	0

Results

		Calculated (dBA)				Noise Limits (dBA)					Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		64.3	60.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader		68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		65.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper		67.2	63.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		67.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	68.6	69.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential West	Residential	1	1	1

			Equipment				
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator		No	40		80.7	650	0
Grader		No	40	85		650	0
Dozer		No	40		81.7	650	0
Scraper		No	40		83.6	650	0
Tractor		No	40	84		650	0

Results

		Calculated (dBA)				Noise Limits (dBA)					Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		58.4	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader		62.7	58.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		59.4	55.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper		61.3	57.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		61.7	57.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	62.7	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercial	Residential	1	1	1

			Equipment				
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator		No	40		80.7	315	0
Grader		No	40	85		315	0
Dozer		No	40		81.7	315	0
Scraper		No	40		83.6	315	0
Tractor		No	40	84		315	0

Results

		Calculated (dBA)				Noise Limits (dBA)					Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		64.7	60.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader		69	65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		65.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper		67.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		68	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	69	70.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Commercial	Commercial	1	1	1

			Equipment				
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator		No	40		80.7	610	0
Grader		No	40	85		610	0
Dozer		No	40		81.7	610	0
Scraper		No	40		83.6	610	0
Tractor		No	40	84		610	0

Results

		Calculated (dBA)				Noise Limits (dBA)					Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		59	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader		63.3	59.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		59.9	56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper		61.9	57.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		62.3	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	63.3	64.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School	Residential	1	1	1

			Equipment				
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator		No	40		80.7	945	0
Grader		No	40	85		945	0
Dozer		No	40		81.7	945	0
Scraper		No	40		83.6	945	0
Tractor		No	40	84		945	0

Results

		Calculated (dBA)				Noise Limits (dBA)					Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		55.2	51.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader		59.5	55.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		56.1	52.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper		58.1	54.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		58.5	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	59.5	60.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential East	Residential	1	1	1

			Equipment				
		Impact	Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding	
Description		Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator		No	40		80.7	1030	0
Grader		No	40	85		1030	0
Dozer		No	40		81.7	1030	0
Scraper		No	40		83.6	1030	0
Tractor		No	40	84		1030	0

Results

		Calculated (dBA)				Noise Limits (dBA)					Noise Limit Exceedance (dBA)				
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		54.4	50.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader		58.7	54.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		55.4	51.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scraper		57.3	53.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		57.7	53.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	58.7	60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/20/2022
Case Description: Building

---- Receptor #1 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residential North	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	330	0
Man Lift	No	20		74.7	330	0
Generator	No	50		80.6	330	0
Tractor	No	40	84		330	0
Welder / Torch	No	40		74	330	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	64.2	56.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	58.3	51.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	64.2	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	67.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	57.6	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	67.6	66.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residential West	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	650	0
Man Lift	No	20		74.7	650	0
Generator	No	50		80.6	650	0
Tractor	No	40	84		650	0
Welder / Torch	No	40		74	650	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	58.3	50.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	52.4	45.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	58.4	55.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	61.7	57.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	51.7	47.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	61.7	60.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Commercial	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	315	0
Man Lift	No	20		74.7	315	0
Generator	No	50		80.6	315	0
Tractor	No	40	84		315	0
Welder / Torch	No	40		74	315	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	64.6	56.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	58.7	51.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	64.6	61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	68	64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	58	54	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68	66.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Commercial	Commercial	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	610	0
Man Lift	No	20		74.7	610	0
Generator	No	50		80.6	610	0
Tractor	No	40	84		610	0
Welder / Torch	No	40		74	610	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	58.8	50.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	53	46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	58.9	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	62.3	58.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	52.3	48.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	62.3	61.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
School	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	945	0
Man Lift	No	20		74.7	945	0
Generator	No	50		80.6	945	0
Tractor	No	40	84		945	0
Welder / Torch	No	40		74	945	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	55	47.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	49.2	42.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	55.1	52.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	58.5	54.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	48.5	44.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	58.5	57.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residential East	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	1030	0
Man Lift	No	20		74.7	1030	0
Generator	No	50		80.6	1030	0
Tractor	No	40	84		1030	0
Welder / Torch	No	40		74	1030	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	54.3	46.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	48.4	41.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	54.4	51.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	57.7	53.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	47.7	43.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	57.7	56.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat ########
Case Descr Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	330	0
Roller	No	20		80	330	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	60.8	57.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	63.6	56.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	63.6	60.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	650	0
Roller	No	20		80	650	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	54.9	51.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	57.7	50.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	57.7	54.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Commercia	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	315	0
Roller	No	20		80	315	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	61.2	58.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64	60.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Commercia	Commercia	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	610	0
Roller	No	20		80	610	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	55.5	52.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	58.3	51.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	58.3	54.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
School	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	945	0
Roller	No	20		80	945	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	51.7	48.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	54.5	47.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	54.5	51.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #6 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential	Residential	1	1	1

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	1030	0
Roller	No	20		80	1030	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Paver	50.9	47.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	53.7	46.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	53.7	50.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/20/2022
Case Description: Arch Coating

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential North	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	330	0

Equipment	*Lmax	Calculated (dBA) Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)		61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential West	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	650	0

Equipment	*Lmax	Calculated (dBA) Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)		55.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	55.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Commercial	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	315	0

Equipment	*Lmax	Calculated (dBA) Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)		61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Commercial	Commercial	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	610	0

Equipment	*Lmax	Calculated (dBA) Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)		55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	55.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
School	Residential	1	1	1

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	945	0

Equipment	*Lmax	Calculated (dBA) Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)		52.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	52.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Westgate West Costco Project
Scenario: Exisitng
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

								Vehicle Mix		CNEL at	Distance from Centerline of Roadway Distance to Contour			
#	Roadway	Segment	Lanes	Median Width	ADT Volume	Speed (mph)	Alpha Factor	Medium Trucks	Heavy Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Prospect Rd	Lyde Dr to Lawrence Expwy	4	20	38,000	25	0	5.7%	4.4%	69.0	80	252	797	2,521
2	Prospect Rd	Lawrence Expwy to Project driveway	4	20	30,400	35	0	5.7%	4.4%	69.3	84	267	843	2,667
3	Prospect Rd	Project Driveway to Saratoga Ave	4	20	32,900	35	0	5.7%	4.4%	69.6	91	289	913	2,886
4	Prospect Rd	Saratoga Ave to Target Driveway	5	17	36,400	35	0	5.7%	4.4%	70.1	103	324	1,025	3,241
5	Saratoga Ave	Grave Ave to Prospect Rd	6	15	21,700	40	0	5.7%	4.4%	68.9	78	246	779	2,464
6	Saratoga Ave	Prospect Rd to Lawrence Expwy	6	15	22,300	40	0	5.7%	4.4%	69.0	80	253	801	2,532
7	Lawrence Expwy	Prospect Rd to Quito Rd	6	25	24,300	50	0	5.7%	4.4%	71.2	133	422	1,335	4,221
8	Lawrence Expwy	Project Driveway to Prospect Rd	6	25	35,100	50	0	5.7%	4.4%	72.8	192	608	1,924	6,084
9	Lawrence Expwy	Lassen Ave to Project Driveway	6	20	37,700	50	0	5.7%	4.4%	73.0	204	645	2,038	6,446
10	Graves Ave	Saratoga Ave to Lawrence Expwy	2	2	2,600	25	0	5.7%	4.4%	57.0	-	-	52	166

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Westgate West Costco Project
Scenario: Existing Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

										Vehicle Mix		Distance from Centerline of Roadway			
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour				
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Prospect Rd	Lyde Dr to Lawrence Expwy	4	20	39,075	25	0	5.7%	4.4%	69.1	82	259	820	2,592
2	Prospect Rd	Lawrence Expwy to Project driveway	4	20	33,126	35	0	5.7%	4.4%	69.6	92	291	919	2,906
3	Prospect Rd	Project Driveway to Saratoga Ave	4	20	36,576	35	0	5.7%	4.4%	70.1	101	321	1,015	3,209
4	Prospect Rd	Saratoga Ave to Target Driveway	5	17	37,450	35	0	5.7%	4.4%	70.2	105	333	1,055	3,335
5	Saratoga Ave	Grave Ave to Prospect Rd	6	15	22,901	40	0	5.7%	4.4%	69.2	82	260	822	2,600
6	Saratoga Ave	Prospect Rd to Lawrence Expwy	6	15	23,439	40	0	5.7%	4.4%	69.3	84	266	842	2,661
7	Lawrence Expwy	Prospect Rd to Quito Rd	6	25	25,588	50	0	5.7%	4.4%	71.4	141	444	1,405	4,444
8	Lawrence Expwy	Project Driveway to Prospect Rd	6	25	34,750	50	0	5.7%	4.4%	72.7	190	602	1,905	6,023
9	Lawrence Expwy	Lassen Ave to Project Driveway	6	20	39,463	50	0	5.7%	4.4%	73.2	213	675	2,134	6,747
10	Graves Ave	Saratoga Ave to Lawrence Expwy	2	2	4,088	25	0	5.7%	4.4%	59.0	-	-	83	261

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Westgate West Costco Project
Scenario: Background Year
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

										Vehicle Mix		Distance from Centerline of Roadway			
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour				
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Prospect Rd	Lyde Dr to Lawrence Expwy	4	20	38,263	25	0	5.7%	4.4%	69.0	80	252	797	2,519
2	Prospect Rd	Lawrence Expwy to Project driveway	4	20	30,610	35	0	5.7%	4.4%	69.3	84	267	844	2,668
3	Prospect Rd	Project Driveway to Saratoga Ave	4	20	33,154	35	0	5.7%	4.4%	69.6	91	289	914	2,890
4	Prospect Rd	Saratoga Ave to Target Driveway	5	17	36,680	35	0	5.7%	4.4%	70.1	103	325	1,026	3,246
5	Saratoga Ave	Grave Ave to Prospect Rd	6	15	21,957	40	0	5.7%	4.4%	68.9	78	248	784	2,478
6	Saratoga Ave	Prospect Rd to Lawrence Expwy	6	15	22,540	40	0	5.7%	4.4%	69.1	80	254	804	2,544
7	Lawrence Expwy	Prospect Rd to Quito Rd	6	25	24,561	50	0	5.7%	4.4%	71.2	134	424	1,342	4,243
8	Lawrence Expwy	Project Driveway to Prospect Rd	6	25	35,342	50	0	5.7%	4.4%	72.8	193	609	1,927	6,093
9	Lawrence Expwy	Lassen Ave to Project Driveway	6	20	38,147	50	0	5.7%	4.4%	73.0	205	649	2,052	6,488
10	Graves Ave	Saratoga Ave to Lawrence Expwy	2	2	2,631	25	0	5.7%	4.4%	57.0	-	-	53	167

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels

Project Name: Westgate West Costco Project
Scenario: Background Year Plus Project
Ldn/CNEL: CNEL

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

										Vehicle Mix		Distance from Centerline of Roadway			
				Median	ADT	Speed	Alpha	Medium	Heavy	CNEL at	Distance to Contour				
#	Roadway	Segment	Lanes	Width	Volume	(mph)	Factor	Trucks	Trucks	100 Feet	70 CNEL	65 CNEL	60 CNEL	55 CNEL
1	Prospect Rd	Lyde Dr to Lawrence Expwy	4	20	39,338	25	0	6.1%	5.7%	70.0	100	315	997	3,153
2	Prospect Rd	Lawrence Expwy to Project driveway	4	20	33,336	35	0	6.1%	5.7%	70.3	107	339	1,071	3,385
3	Prospect Rd	Project Driveway to Saratoga Ave	4	20	36,830	35	0	6.1%	5.7%	70.7	118	374	1,183	3,740
4	Prospect Rd	Saratoga Ave to Target Driveway	5	17	37,730	35	0	6.1%	5.7%	70.9	123	389	1,230	3,890
5	Saratoga Ave	Grave Ave to Prospect Rd	6	15	23,158	40	0	6.1%	5.7%	69.8	95	301	951	3,008
6	Saratoga Ave	Prospect Rd to Lawrence Expwy	6	15	23,679	40	0	6.1%	5.7%	69.9	97	308	972	3,075
7	Lawrence Expwy	Prospect Rd to Quito Rd	6	25	25,849	50	0	6.1%	5.7%	72.0	159	503	1,590	5,027
8	Lawrence Expwy	Project Driveway to Prospect Rd	6	25	34,992	50	0	6.1%	5.7%	73.2	215	679	2,148	6,791
9	Lawrence Expwy	Lassen Ave to Project Driveway	6	20	39,910	50	0	6.1%	5.7%	73.7	242	764	2,416	7,641
10	Graves Ave	Saratoga Ave to Lawrence Expwy	2	2	4,119	25	0	6.1%	5.7%	59.8	-	-	100	318

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway right-of-way.

Modeled Noise Levels

Receptor No.	Land Use	City	Modeled Noise Level – Daytime (dBA L_{eq})		Modeled Noise Level – Nighttime (dBA L_{eq})		Modeled Noise Level – Ldn	
			1st Floor	2nd Floor	1st Floor	2nd Floor	1st Floor	2nd Floor
1	Residential	San Jose	52.2	53.5	33.8	34.6	50.5	51.8
2	Residential	San Jose	54.0	-	35.4	-	52.3	-
3	Residential	San Jose	50.0	-	36.7	-	49.1	-
4	Residential	San Jose	43.0	-	34.4	-	43.6	-
5	Residential	San Jose	42.6	-	34.8	-	43.6	-
6	Residential	San Jose	42.5	-	35.3	-	43.8	-
7	Residential	San Jose	42.5	-	36.2	-	44.3	-
8	Residential	San Jose	42.4	-	36.4	-	44.4	-
9	Residential	San Jose	43.0	-	38.1	-	45.6	-
10	Residential	San Jose	43.6	-	40.1	-	47.2	-
11	Residential	San Jose	50.1	-	48.6	-	55.2	-
12	Residential	San Jose	51.0	-	49.7	-	56.3	-
13	Residential	San Jose	50.1	-	48.7	-	55.3	-
14	Residential	San Jose	49.7	-	48.2	-	54.9	-
15	Residential	San Jose	45.5	47.9	44.2	46.6	50.8	53.2
16	Residential	San Jose	42.2	45.2	41.3	44.2	47.8	50.8
17	Residential	San Jose	41.4	44.9	40.6	44.1	47.2	50.7
18	Residential	San Jose	42.5	45.6	41.7	44.9	48.3	51.4
19	Residential	San Jose	45.3	47.3	44.8	46.6	51.3	53.1
20	Residential	San Jose	46.5	47.7	46.3	47.3	52.7	53.8
21	Residential	San Jose	45.5	46.7	45.3	46.4	51.7	52.8
22	Residential	San Jose	44.4	45.7	44.2	45.4	50.6	51.8
23	Institutional	Saratoga	41.5	-	27.8	-	40.4	-
24	Commercial	Saratoga	40.6	-	31.0	-	40.8	-
25	Commercial	Saratoga	41.2	-	39.4	-	46.1	-
26	Residential	Saratoga	40.0	-	24.5	-	38.6	-
27	Residential	Saratoga	36.6	-	29.0	-	37.7	-
28	Residential	Saratoga	33.2	-	31.2	-	38.0	-
29	Commercial	San Jose	54.1	-	53.0	-	59.6	-
30	Commercial	San Jose	56.3	-	55.3	-	61.9	-
31	Commercial	San Jose	58.6	-	58.0	-	64.5	-
32	Commercial	San Jose	58.8	-	58.6	-	65.0	-
33	Commercial	San Jose	58.0	-	57.9	-	64.3	-
34	Commercial	San Jose	56.5	-	56.4	-	62.8	-
35	Commercial	San Jose	54.6	-	54.3	-	60.7	-
36	Commercial	San Jose	53.8	-	53.5	-	60.0	-
37	Commercial	San Jose	52.9	-	52.5	-	59.0	-
38	Commercial	San Jose	52.4	-	51.9	-	58.4	-

Floor	Min			Max		
	Daytime	Nighttime	Ldn	Daytime	Nighttime	Ldn
1	33.2	24.5	37.7	58.8	58.6	65.0
2	44.9	34.6	50.7	53.5	47.3	53.8

Composite Noise Levels - EXTERIOR

Receptor No.	Land Use	City	DAYTIME				NIGHTTIME				LDN					
			Daytime Ambient Noise Level (dBA L_{eq})[1]	Composite Project Operations	Ambient + Project (dBA Leq)	Increase Over Daytime Ambient (dBA L_{eq})	Nighttime Ambient Noise Level (dBA L_{eq})[1]	Composite Project Operations	Ambient + Project (dBA Leq)	Increase Over Nighttime Ambient (dBA L_{eq})	Existing Ambient Noise Level - Ldn	Composite Project Operations	Ambient + Project (dBA Leq)	Increase Over Ambient (Ldn)	Incremental Threshold	Exceed Threshold?
1	Residential	San Jose	62.5	53.5	63.0	0.5	55.8	34.6	55.8	0.0	64.0	51.8	64.3	0.3	3.0	NO
2	Residential	San Jose	62.5	54.0	63.1	0.6	55.8	35.4	55.8	0.0	64.0	52.3	64.3	0.3	3.0	NO
3	Residential	San Jose	62.5	50.0	62.7	0.2	55.8	36.7	55.9	0.1	64.0	49.1	64.1	0.1	3.0	NO
4	Residential	San Jose	62.5	43.0	62.5	0.0	55.8	34.4	55.8	0.0	64.0	43.6	64.0	0.0	3.0	NO
5	Residential	San Jose	62.5	42.6	62.5	0.0	55.8	34.8	55.8	0.0	64.0	43.6	64.0	0.0	3.0	NO
6	Residential	San Jose	62.5	42.5	62.5	0.0	55.8	35.3	55.8	0.0	64.0	43.8	64.0	0.0	3.0	NO
7	Residential	San Jose	62.5	42.5	62.5	0.0	55.8	36.2	55.8	0.0	64.0	44.3	64.0	0.0	3.0	NO
8	Residential	San Jose	62.5	42.4	62.5	0.0	55.8	36.4	55.8	0.0	64.0	44.4	64.0	0.0	3.0	NO
9	Residential	San Jose	62.5	43.0	62.5	0.0	55.8	38.1	55.9	0.1	64.0	45.6	64.1	0.1	3.0	NO
10	Residential	San Jose	62.5	43.6	62.6	0.1	55.8	40.1	55.9	0.1	64.0	47.2	64.1	0.1	3.0	NO
11	Residential	San Jose	62.5	50.1	62.7	0.2	55.8	48.6	56.6	0.8	64.0	55.2	64.5	0.5	3.0	NO
12	Residential	San Jose	62.5	51.0	62.8	0.3	55.8	49.7	56.8	1.0	64.0	56.3	64.7	0.7	3.0	NO
13	Residential	San Jose	62.5	50.1	62.7	0.2	55.8	48.7	56.6	0.8	64.0	55.3	64.5	0.5	3.0	NO
14	Residential	San Jose	62.5	49.7	62.7	0.2	55.8	48.2	56.5	0.7	64.0	54.9	64.5	0.5	3.0	NO
15	Residential	San Jose	55.5	47.9	56.2	0.7	50.9	46.6	52.3	1.4	58.4	53.2	59.5	1.1	5.0	NO
16	Residential	San Jose	55.5	45.2	55.9	0.4	50.9	44.2	51.7	0.8	58.4	50.8	59.1	0.7	5.0	NO
17	Residential	San Jose	55.5	44.9	55.9	0.4	50.9	44.1	51.7	0.8	58.4	50.7	59.1	0.7	5.0	NO
18	Residential	San Jose	55.5	45.6	55.9	0.4	50.9	44.9	51.9	1.0	58.4	51.4	59.2	0.8	5.0	NO
19	Residential	San Jose	55.5	47.3	56.1	0.6	50.9	46.6	52.3	1.4	58.4	53.1	59.5	1.1	5.0	NO
20	Residential	San Jose	55.5	47.7	56.2	0.7	50.9	47.3	52.5	1.6	58.4	53.8	59.7	1.3	5.0	NO
21	Residential	San Jose	55.5	46.7	56.0	0.5	50.9	46.4	52.2	1.3	58.4	52.8	59.5	1.1	5.0	NO
22	Residential	San Jose	55.5	45.7	55.9	0.4	50.9	45.4	52.0	1.1	58.4	51.8	59.3	0.9	5.0	NO
23	Institutional	Saratoga	0	41.5	41.5	41.5	0	27.8	27.8	27.8	0	40.4	40.4	40.4	3.0	NO
24	Commercial	Saratoga	0	40.6	40.6	40.6	0	31.0	31.0	31.0	0	40.8	40.8	40.8	3.0	NO
25	Commercial	Saratoga	0	41.2	41.2	41.2	0	39.4	39.4	39.4	0	46.1	46.1	46.1	3.0	NO
26	Residential	Saratoga	0	40.0	40.0	40.0	0	24.5	24.5	24.5	0	38.6	38.6	38.6	3.0	NO
27	Residential	Saratoga	0	36.6	36.6	36.6	0	29.0	29.0	29.0	0	37.7	37.7	37.7	3.0	NO
28	Residential	Saratoga	0	33.2	33.2	33.2	0	31.2	31.2	31.2	0	38.0	38.0	38.0	3.0	NO
29	Commercial	San Jose	0	54.1	54.1	54.1	0	53.0	53.0	53.0	0	59.6	59.6	59.6	3.0	NO
30	Commercial	San Jose	0	56.3	56.3	56.3	0	55.3	55.3	55.3	0	61.9	61.9	61.9	3.0	NO
31	Commercial	San Jose	0	58.6	58.6	58.6	0	58.0	58.0	58.0	0	64.5	64.5	64.5	3.0	NO
32	Commercial	San Jose	0	58.8	58.8	58.8	0	58.6	58.6	58.6	0	65.0	65.0	65.0	3.0	NO
33	Commercial	San Jose	0	58.0	58.0	58.0	0	57.9	57.9	57.9	0	64.3	64.3	64.3	3.0	NO
34	Commercial	San Jose	0	56.5	56.5	56.5	0	56.4	56.4	56.4	0	62.8	62.8	62.8	3.0	NO
35	Commercial	San Jose	0	54.6	54.6	54.6	0	54.3	54.3	54.3	0	60.7	60.7	60.7	3.0	NO
36	Commercial	San Jose	0	53.8	53.8	53.8	0	53.5	53.5	53.5	0	60.0	60.0	60.0	3.0	NO
37	Commercial	San Jose	0	52.9	52.9	52.9	0	52.5	52.5	52.5	0	59.0	59.0	59.0	3.0	NO
38	Commercial	San Jose	0	52.4	52.4	52.4	0	51.9	51.9	51.9	0	58.4	58.4	58.4	3.0	NO

1. The long-term measurement data for LT-1 is used as the ambient level for receivers 1 through 14, and the long-term measurement data for LT-2 is used as the ambient level for receviers 15 through 22 based on proximity to the long-term noise measurements conducted by Kimley-Horn on May 10-12, 2022.

Composite Noise Levels - INTERIOR

Receptor No.	Land Use	LDN								
		City	Existing Ambient Noise Level - Ldn	Modeled Noise Level – Ldn		Composite Project Operations	Ambient + Project (dBA Leq)	Interior Noise Levels	Interior Threshold (Ldn)	Exceed Threshold?
				1st Floor	2nd Floor					
1	Residential	San Jose	64.0	50.5	51.8	51.8	64.3	39.3	45.0	NO
2	Residential	San Jose	64.0	52.3	-	52.3	64.3	39.3	45.0	NO
3	Residential	San Jose	64.0	49.1	-	49.1	64.1	39.1	45.0	NO
4	Residential	San Jose	64.0	43.6	-	43.6	64.0	39.0	45.0	NO
5	Residential	San Jose	64.0	43.6	-	43.6	64.0	39.0	45.0	NO
6	Residential	San Jose	64.0	43.8	-	43.8	64.0	39.0	45.0	NO
7	Residential	San Jose	64.0	44.3	-	44.3	64.0	39.0	45.0	NO
8	Residential	San Jose	64.0	44.4	-	44.4	64.0	39.0	45.0	NO
9	Residential	San Jose	64.0	45.6	-	45.6	64.1	39.1	45.0	NO
10	Residential	San Jose	64.0	47.2	-	47.2	64.1	39.1	45.0	NO
11	Residential	San Jose	64.0	55.2	-	55.2	64.5	39.5	45.0	NO
12	Residential	San Jose	64.0	56.3	-	56.3	64.7	39.7	45.0	NO
13	Residential	San Jose	64.0	55.3	-	55.3	64.5	39.5	45.0	NO
14	Residential	San Jose	64.0	54.9	-	54.9	64.5	39.5	45.0	NO
15	Residential	San Jose	58.4	50.8	53.2	53.2	59.5	34.5	45.0	NO
16	Residential	San Jose	58.4	47.8	50.8	50.8	59.1	34.1	45.0	NO
17	Residential	San Jose	58.4	47.2	50.7	50.7	59.1	34.1	45.0	NO
18	Residential	San Jose	58.4	48.3	51.4	51.4	59.2	34.2	45.0	NO
19	Residential	San Jose	58.4	51.3	53.1	53.1	59.5	34.5	45.0	NO
20	Residential	San Jose	58.4	52.7	53.8	53.8	59.7	34.7	45.0	NO
21	Residential	San Jose	58.4	51.7	52.8	52.8	59.5	34.5	45.0	NO
22	Residential	San Jose	58.4	50.6	51.8	51.8	59.3	34.3	45.0	NO
23	Institutional	Saratoga	0	40.4	-	40.4	40.4	15.4	45.0	NO
24	Commercial	Saratoga	0	40.8	-	40.8	40.8	15.8	45.0	NO
25	Commercial	Saratoga	0	46.1	-	46.1	46.1	21.1	45.0	NO
26	Residential	Saratoga	0	38.6	-	38.6	38.6	13.6	45.0	NO
27	Residential	Saratoga	0	37.7	-	37.7	37.7	12.7	45.0	NO
28	Residential	Saratoga	0	38.0	-	38.0	38.0	13.0	45.0	NO
29	Commercial	San Jose	0	59.6	-	59.6	59.6	34.6	45.0	NO
30	Commercial	San Jose	0	61.9	-	61.9	61.9	36.9	45.0	NO

31	Commercial	San Jose	0	64.5	-	64.5	64.5	39.5	45.0	NO
32	Commercial	San Jose	0	65.0	-	65.0	65.0	40.0	45.0	NO
33	Commercial	San Jose	0	64.3	-	64.3	64.3	39.3	45.0	NO
34	Commercial	San Jose	0	62.8	-	62.8	62.8	37.8	45.0	NO
35	Commercial	San Jose	0	60.7	-	60.7	60.7	35.7	45.0	NO
36	Commercial	San Jose	0	60.0	-	60.0	60.0	35.0	45.0	NO
37	Commercial	San Jose	0	59.0	-	59.0	59.0	34.0	45.0	NO
38	Commercial	San Jose	0	58.4	-	58.4	58.4	33.4	45.0	NO

Min	Max
Ldn	Ldn
34.1	39.7

SoundPLAN Receiver Results					
No.	Receiver name	Floor	Level w/o NP		
			Day	Night	Ldn
			dB(A)	dB(A)	dB(A)
1	1	1.Fl	52.2	33.8	50.5
2	2	1.Fl	54	35.4	52.3
3	3	1.Fl	50	36.7	49.1
4	4	1.Fl	43	34.4	43.6
5	5	1.Fl	42.6	34.8	43.6
6	6	1.Fl	42.5	35.3	43.8
7	7	1.Fl	42.5	36.2	44.3
8	8	1.Fl	42.4	36.4	44.4
9	9	1.Fl	43	38.1	45.6
10	10	1.Fl	43.6	40.1	47.2
11	11	1.Fl	50.1	48.6	55.2
12	12	1.Fl	51	49.7	56.3
13	13	1.Fl	50.1	48.7	55.3
14	14	1.Fl	49.7	48.2	54.9
15	15	1.Fl	45.5	44.2	50.8
16	16	1.Fl	42.2	41.3	47.8
17	17	1.Fl	41.4	40.6	47.2
18	18	1.Fl	42.5	41.7	48.3
19	19	1.Fl	45.3	44.8	51.3
20	20	1.Fl	46.5	46.3	52.7
21	21	1.Fl	45.5	45.3	51.7
22	22	1.Fl	44.4	44.2	50.6
23	23 (Prospect HS - Saratoga)	1.Fl	41.5	27.8	40.4
24	24 (Commerical - Saratoga)	1.Fl	40.6	31	40.8
25	25 (Commerical - Saratoga)	1.Fl	41.2	39.4	46.1
26	26 (Residential - Saratoga)	1.Fl	40	24.5	38.6
27	27 (Residential - Saratoga)	1.Fl	36.6	29	37.7
28	28 (Residential - Saratoga)	1.Fl	33.2	31.2	38
29	E Commercial Property - 1	1.Fl	54.1	53	59.6
30	E Commercial Property - 2	1.Fl	56.3	55.3	61.9
31	E Commercial Property - 3	1.Fl	58.6	58	64.5
32	E Commercial Property - 4	1.Fl	58.8	58.6	65
33	E Commercial Property - 5	1.Fl	58	57.9	64.3
34	E Commercial Property - 6	1.Fl	56.5	56.4	62.8
35	E Commercial Property - 7	1.Fl	54.6	54.3	60.7
36	E Commercial Property - 8	1.Fl	53.8	53.5	60
37	E Commercial Property - 9	1.Fl	52.9	52.5	59
38	E Commercial Property - 10	1.Fl	52.4	51.9	58.4
1	1	2.Fl	53.5	34.6	51.8
15	15	2.Fl	47.9	46.6	53.2
16	16	2.Fl	45.2	44.2	50.8
17	17	2.Fl	44.9	44.1	50.7
18	18	2.Fl	45.6	44.9	51.4
19	19	2.Fl	47.3	46.6	53.1
20	20	2.Fl	47.7	47.3	53.8
21	21	2.Fl	46.7	46.4	52.8
22	22	2.Fl	45.7	45.4	51.8
23	23 (Prospect HS - Saratoga)	2.Fl	43.1	29.8	42.2
24	24 (Commerical - Saratoga)	2.Fl	41.7	34.1	42.8
25	25 (Commerical - Saratoga)	2.Fl	41.9	39.7	46.5

SoundPLAN Receiver Results					
No.	Receiver name	Level w/o NP			
		Floor	Day dB(A)	Night dB(A)	Ldn dB(A)
1	1	1.Fl	52.2	33.8	50.5
		2.Fl	53.5	34.6	51.8
2	2	1.Fl	54	35.4	52.3
3	3	1.Fl	50	36.7	49.1
4	4	1.Fl	43	34.4	43.6
5	5	1.Fl	42.6	34.8	43.6
6	6	1.Fl	42.5	35.3	43.8
7	7	1.Fl	42.5	36.2	44.3
8	8	1.Fl	42.4	36.4	44.4
9	9	1.Fl	43	38.1	45.6
10	10	1.Fl	43.6	40.1	47.2
11	11	1.Fl	50.1	48.6	55.2
12	12	1.Fl	51	49.7	56.3
13	13	1.Fl	50.1	48.7	55.3
14	14	1.Fl	49.7	48.2	54.9
15	15	1.Fl	45.5	44.2	50.8
		2.Fl	47.9	46.6	53.2
16	16	1.Fl	42.2	41.3	47.8
		2.Fl	45.2	44.2	50.8
17	17	1.Fl	41.4	40.6	47.2
		2.Fl	44.9	44.1	50.7
18	18	1.Fl	42.5	41.7	48.3
		2.Fl	45.6	44.9	51.4
19	19	1.Fl	45.3	44.8	51.3
		2.Fl	47.3	46.6	53.1
20	20	1.Fl	46.5	46.3	52.7
		2.Fl	47.7	47.3	53.8
21	21	1.Fl	45.5	45.3	51.7
		2.Fl	46.7	46.4	52.8
22	22	1.Fl	44.4	44.2	50.6
		2.Fl	45.7	45.4	51.8
23	23 (Prospect HS - Saratoga)	1.Fl	41.5	27.8	40.4
23	23 (Prospect HS - Saratoga)	2.Fl	43.1	29.8	42.2
24	24 (Commerical - Saratoga)	1.Fl	40.6	31	40.8
24	24 (Commerical - Saratoga)	2.Fl	41.7	34.1	42.8
25	25 (Commerical - Saratoga)	1.Fl	41.2	39.4	46.1
25	25 (Commerical - Saratoga)	2.Fl	41.9	39.7	46.5
26	26 (Residential - Saratoga)	1.Fl	40	24.5	38.6
27	27 (Residential - Saratoga)	1.Fl	36.6	29	37.7
28	28 (Residential - Saratoga)	1.Fl	33.2	31.2	38
29	E Commercial Property - 1	1.Fl	54.1	53	59.6
30	E Commercial Property - 2	1.Fl	56.3	55.3	61.9
31	E Commercial Property - 3	1.Fl	58.6	58	64.5
32	E Commercial Property - 4	1.Fl	58.8	58.6	65
33	E Commercial Property - 5	1.Fl	58	57.9	64.3
34	E Commercial Property - 6	1.Fl	56.5	56.4	62.8
35	E Commercial Property - 7	1.Fl	54.6	54.3	60.7
36	E Commercial Property - 8	1.Fl	53.8	53.5	60
37	E Commercial Property - 9	1.Fl	52.9	52.5	59
38	E Commercial Property - 10	1.Fl	52.4	51.9	58.4

	Noise Level	Reference Dist. (feet)	Dist. to 7-11 Property Line (feet)	Distance Attenuation	Duration (minutes)*	anti-log	Total Noise Energy	Notes
Forklifts - daytime	85	3	3	85.0	225	316227766	71151247354	

*Assuming 15 minutes of operation every hour

total	71151247354	
No. samples	900	15 hours for daytime (7:00 a.m. to 10:00 p.m.).
	79056941.5	15 hrs X 60 mins/hr = 900 samples
$L_{eq(15\text{-}hour)}$	79.0	

	Noise Level	Reference Dist. (feet)	Dist. to 7-11 Property Line (feet)	Distance Attenuation	Duration (minutes)	anti-log	Total Noise Energy
Forklifts - nighttime	85	3	3	85.0	135	316227766	42690748412

*Assuming 15 minutes of operation every hour

	0
total	42690748412
No. samples	540
	79056941.5
$L_{eq(9\text{-}hour)}$	79.0

	Noise Level	Reference Dist. (feet)	Dist. to 7-11 Property Line (feet)	Distance Attenuation	Duration (minutes)	anti-log	Total Noise Energy
Trash Collection	75	50	50	75.0	2	31622777	63245553.2

*Assuming 2 minutes of operation in one hour, per day
*Assumes daytime operations only

total	63245553.2	
No. samples	900	15 hours for daytime (7:00 a.m. to 10:00 p.m.).
	70272.83689	15 hrs X 60 mins/hr = 900 samples
$L_{eq(15\text{-}hour)}$	48.5	

	Noise Level	Reference Dist. (feet)	Dist. to 7-11 Property Line (feet)	Distance Attenuation	Duration (minutes)	anti-log	Total Noise Energy
Trash Compactor	70.4	10	50	56.4	30	438591.28	13157738.35

*Assuming 30 seconds of operation per compaction, 4 compactions per hour, per day
*Assumes daytime operations only

	0
total	13157738.35
No. samples	900
	14619.70928
$L_{eq(15\text{-}hour)}$	41.6

	Noise Level	Reference Dist. (feet)	Dist. to 7-11 Property Line (feet)	Distance Attenuation	Duration (minutes)	anti-log	Total Noise Energy
Truck Loading - Nighttime	70	50	50	70.0	68	10000000	680000000

*Assuming 108 seconds of truck backing up to loading dock, and 5 seconds of truck movement noise w
*Assumes even split of # truck trips between day and night (12 trips during early morning/nighttime and 12 trips during morning/daytime)

	0
total	680000000
No. samples	540
	1259259.259
$L_{eq(9\text{-}hour)}$	61.0

14
10

	Noise Level	Reference Dist. (feet)	Dist. to 7-11 Property Line (feet)	Distance Attenuation	Duration (minutes)	anti-log	Total Noise Energy
Truck Loading - Daytime	70	50	50	70.0	95.2	10000000	952000000

*Assuming 108 seconds of truck backing up to loading dock, and 5 seconds of truck movement noise w
*Assumes even split of # truck trips between day and night (12 trips during early morning/nighttime and 12 trips during morning/daytime)

0.8

	0
total	952000000
No. samples	900
	1057777.778
$L_{eq(9\text{-}hour)}$	60.2

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP Day	Level w/o NP Night	Level w/o NP Ldn	Level w NP Day	Level w NP Night	Level w NP Ldn
		dB(A)			dB(A)		
1 1.Fl		52.2	33.8	50.5	52.2	52.2	34.6
Auto Maintenance Noise 1	-	45.1	-51.1	43.0	45.1	-51.1	43.0
Auto Maintenance Noise 2	-	44.4	-51.8	42.4	44.4	-51.8	42.4
Auto Maintenance Noise 3	-	46.7	-49.5	44.6	46.7	-49.5	44.6
Auto Maintenance Noise 4	-	43.1	-53.1	41.0	43.1	-53.1	41.0
Driveway 7 - Lawrence to Warehouse	-	27.7	-	25.6	27.7	-	25.6
Driveway B - Graves to Truck Docks	-	27.6	26.6	33.2	27.5	26.6	33.1
Driveway B - Graves to Truck Docks1	-	16.2	15.1	21.7	16.6	15.4	22.0
Driveway B - Truck Docks to Up Ramp	-	-2.0	-	-4.0	-2.0	-	-4.0
Driveway C - Saratoga to Truck Docks	-	6.7	6.4	12.8	6.7	6.4	12.8
Driveway D - Prospect to Parking Lot 2	-	14.2	-	12.2	14.2	-	12.2
Driveway E - Prospect to Warehouse	-	8.0	-	5.9	8.0	-	5.9
Forklift operations	-	8.4	8.4	14.8	7.6	-81.6	5.6
Graves - B to A	-	38.4	-	36.3	38.4	-	36.3
HVAC 1	-	10.0	10.0	16.5	15.0	15.0	21.5
HVAC 2	-	10.0	10.0	16.4	15.0	15.0	21.4
HVAC 3	-	10.0	10.0	16.4	15.0	15.0	21.4
HVAC 4	-	9.9	9.9	16.3	14.9	14.9	21.3
HVAC 5	-	9.8	9.8	16.2	14.8	14.8	21.2
HVAC 6	-	9.7	9.7	16.1	14.7	14.7	21.1
HVAC 7	-	9.7	9.7	16.1	14.7	14.7	21.1
HVAC 8	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 9	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 10	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 11	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 12	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 13	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 14	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 15	-	26.8	26.8	33.2	26.8	26.8	33.2
HVAC 16	-	27.9	27.9	34.3	27.9	27.9	34.3
HVAC 17	-	27.8	27.8	34.2	27.8	27.8	34.2
Lot 1	-	43.9	-	41.9	43.9	-	41.9
Lot 2	-	34.1	-	32.1	34.1	-	32.1
Lot 3	-	33.8	-	31.8	33.8	-	31.8
Ramp up to Rooftop Parking	-	2.5	-	0.5	2.5	-	0.5
Transformer	-	4.5	4.5	10.9	4.5	4.5	10.9
Trash Collection	-	2.2	-80.9	0.2	-5.1	-79.5	-7.2
Trash Compactor 1	-	-19.0	-81.3	-21.0	-19.0	-81.3	-21.0
Trash Compactor 2	-	-19.0	-81.3	-21.0	-19.0	-81.3	-21.0
Truck Loading	-	13.7	14.5	20.8	23.5	23.5	29.9
1 2.Fl		53.5	34.6	51.8	53.5	53.5	35.5
Auto Maintenance Noise 1	-	46.0	-50.2	43.9	46.0	-50.2	43.9
Auto Maintenance Noise 2	-	45.3	-50.9	43.2	45.3	-50.9	43.2
Auto Maintenance Noise 3	-	47.4	-48.8	45.4	47.4	-48.8	45.4
Auto Maintenance Noise 4	-	43.8	-52.4	41.7	43.8	-52.4	41.7
Driveway 7 - Lawrence to Warehouse	-	32.7	-	30.6	32.7	-	30.6
Driveway B - Graves to Truck Docks	-	28.5	27.4	34.0	28.4	27.3	33.9
Driveway B - Graves to Truck Docks1	-	18.3	17.0	23.6	18.8	17.6	24.2
Driveway B - Truck Docks to Up Ramp	-	-2.6	-	-4.7	-2.6	-	-4.7
Driveway C - Saratoga to Truck Docks	-	6.7	6.4	12.9	6.8	6.4	12.9
Driveway D - Prospect to Parking Lot 2	-	19.6	-	17.6	19.6	-	17.6
Driveway E - Prospect to Warehouse	-	12.8	-	10.8	12.8	-	10.8
Forklift operations	-	8.5	8.5	14.9	7.6	-81.6	5.6
Graves - B to A	-	38.8	-	36.7	38.8	-	36.7
HVAC 1	-	11.6	11.6	18.0	16.6	16.6	23.0
HVAC 2	-	11.5	11.5	17.9	16.5	16.5	22.9
HVAC 3	-	11.6	11.6	18.0	16.6	16.6	23.0
HVAC 4	-	11.4	11.4	17.8	16.4	16.4	22.8
HVAC 5	-	11.2	11.2	17.6	16.2	16.2	22.6
HVAC 6	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 7	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 8	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 9	-	13.2	13.2	19.6	18.2	18.2	24.6

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 10	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 11	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 12	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 13	-	13.2	13.2	19.7	18.2	18.2	24.7
HVAC 14	-	13.3	13.3	19.7	18.3	18.3	24.7
HVAC 15	-	27.4	27.4	33.8	27.4	27.4	33.8
HVAC 16	-	28.7	28.7	35.1	28.7	28.7	35.1
HVAC 17	-	28.4	28.4	34.8	28.4	28.4	34.8
Lot 1	-	47.0	-	44.9	47.0	-	44.9
Lot 2	-	37.0	-	35.0	37.0	-	35.0
Lot 3	-	35.2	-	33.2	35.2	-	33.2
Ramp up to Rooftop Parking	-	4.9	-	2.8	4.9	-	2.8
Transformer	-	4.5	4.5	10.9	4.5	4.5	10.9
Trash Collection	-	2.5	-80.7	0.4	-4.8	-79.2	-6.9
Trash Compactor 1	-	-19.0	-81.2	-21.0	-19.0	-81.2	-21.0
Trash Compactor 2	-	-19.0	-81.3	-21.0	-19.0	-81.3	-21.0
Truck Loading	-	13.8	14.6	20.9	23.6	23.6	30.0
2	1.Fl	54.0	35.4	52.3	54.0	54.0	36.1
Auto Maintenance Noise 1	-	47.9	-48.3	45.8	47.9	-48.3	45.8
Auto Maintenance Noise 2	-	46.8	-49.4	44.7	46.8	-49.4	44.7
Auto Maintenance Noise 3	-	48.6	-47.6	46.5	48.6	-47.6	46.5
Auto Maintenance Noise 4	-	44.7	-51.5	42.6	44.7	-51.5	42.6
Driveway 7 - Lawrence to Warehouse	-	28.2	-	26.2	28.2	-	26.2
Driveway B - Graves to Truck Docks	-	29.1	28.1	34.6	29.0	28.0	34.6
Driveway B - Graves to Truck Docks1	-	19.1	18.1	24.6	19.5	18.5	25.1
Driveway B - Truck Docks to Up Ramp	-	-3.4	-	-5.4	-3.4	-	-5.4
Driveway C - Saratoga to Truck Docks	-	5.7	5.3	11.8	5.7	5.3	11.8
Driveway D - Prospect to Parking Lot 2	-	15.3	-	13.3	15.3	-	13.3
Driveway E - Prospect to Warehouse	-	-1.3	-	-3.4	-1.3	-	-3.4
Forklift operations	-	10.2	10.2	16.6	9.4	-79.8	7.3
Graves - B to A	-	38.8	-	36.7	38.8	-	36.7
HVAC 1	-	10.2	10.2	16.6	15.2	15.2	21.6
HVAC 2	-	10.0	10.0	16.4	15.0	15.0	21.4
HVAC 3	-	9.9	9.9	16.3	14.9	14.9	21.3
HVAC 4	-	9.7	9.7	16.1	14.7	14.7	21.1
HVAC 5	-	9.5	9.5	15.9	14.5	14.5	20.9
HVAC 6	-	9.4	9.4	15.8	14.4	14.4	20.8
HVAC 7	-	9.3	9.3	15.7	14.3	14.3	20.7
HVAC 8	-	10.8	10.8	17.3	15.8	15.8	22.3
HVAC 9	-	10.8	10.8	17.2	15.8	15.8	22.2
HVAC 10	-	10.7	10.7	17.1	15.7	15.7	22.1
HVAC 11	-	10.6	10.6	17.0	15.6	15.6	22.0
HVAC 12	-	10.4	10.4	16.8	15.4	15.4	21.8
HVAC 13	-	10.3	10.3	16.7	15.3	15.3	21.7
HVAC 14	-	10.2	10.2	16.6	15.2	15.2	21.6
HVAC 15	-	28.7	28.7	35.1	28.7	28.7	35.1
HVAC 16	-	29.5	29.5	35.9	29.5	29.5	35.9
HVAC 17	-	29.7	29.7	36.1	29.7	29.7	36.1
Lot 1	-	43.8	-	41.8	43.8	-	41.8
Lot 2	-	34.5	-	32.4	34.5	-	32.4
Lot 3	-	35.2	-	33.2	35.2	-	33.2
Ramp up to Rooftop Parking	-	1.4	-	-0.6	1.4	-	-0.6
Transformer	-	6.4	6.4	12.8	6.4	6.4	12.8
Trash Collection	-	3.9	-79.2	1.9	-3.5	-77.9	-5.5
Trash Compactor 1	-	-17.1	-79.4	-19.2	-17.1	-79.4	-19.2
Trash Compactor 2	-	-17.2	-79.4	-19.2	-17.2	-79.4	-19.2
Truck Loading	-	15.1	15.9	22.2	24.9	24.9	31.3
3	1.Fl	50.0	36.7	49.1	50.1	50.1	37.4
Auto Maintenance Noise 1	-	46.1	-50.1	44.1	46.1	-50.1	44.1
Auto Maintenance Noise 2	-	31.6	-64.6	29.5	31.6	-64.6	29.5
Auto Maintenance Noise 3	-	42.4	-53.8	40.4	42.4	-53.8	40.4
Auto Maintenance Noise 4	-	38.1	-58.1	36.1	38.1	-58.1	36.1
Driveway 7 - Lawrence to Warehouse	-	26.6	-	24.6	26.6	-	24.6

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Driveway B - Graves to Truck Docks	-	30.8	29.7	36.3	30.6	29.7	36.2
Driveway B - Graves to Truck Docks1	-	20.3	19.2	25.8	20.7	19.7	26.3
Driveway B - Truck Docks to Up Ramp	-	-6.2	-	-8.3	-6.2	-	-8.3
Driveway C - Saratoga to Truck Docks	-	8.5	8.2	14.6	8.5	8.2	14.6
Driveway D - Prospect to Parking Lot 2	-	-4.4	-	-6.4	-4.4	-	-6.4
Driveway E - Prospect to Warehouse	-	-4.7	-	-6.8	-4.7	-	-6.8
Forklift operations	-	11.6	11.6	18.0	10.8	-78.4	8.7
Graves - B to A	-	38.5	-	36.4	38.5	-	36.4
HVAC 1	-	11.2	11.2	17.6	16.2	16.2	22.6
HVAC 2	-	11.0	11.0	17.4	16.0	16.0	22.4
HVAC 3	-	10.9	10.9	17.3	15.9	15.9	22.3
HVAC 4	-	10.7	10.7	17.1	15.7	15.7	22.1
HVAC 5	-	10.5	10.5	16.9	15.5	15.5	21.9
HVAC 6	-	10.3	10.3	16.7	15.3	15.3	21.7
HVAC 7	-	10.2	10.2	16.6	15.2	15.2	21.6
HVAC 8	-	11.5	11.5	17.9	16.5	16.5	22.9
HVAC 9	-	11.6	11.6	18.0	16.6	16.6	23.0
HVAC 10	-	11.5	11.5	17.9	16.5	16.5	22.9
HVAC 11	-	11.4	11.4	17.8	16.4	16.4	22.8
HVAC 12	-	11.2	11.2	17.7	16.2	16.2	22.7
HVAC 13	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 14	-	11.0	11.0	17.4	16.0	16.0	22.4
HVAC 15	-	27.8	27.8	34.2	27.8	27.8	34.2
HVAC 16	-	29.7	29.7	36.1	29.7	29.7	36.1
HVAC 17	-	32.8	32.8	39.2	32.8	32.8	39.2
Lot 1	-	42.2	-	40.1	42.2	-	40.1
Lot 2	-	32.8	-	30.8	32.8	-	30.8
Lot 3	-	36.0	-	33.9	36.0	-	33.9
Ramp up to Rooftop Parking	-	-1.7	-	-3.7	-1.7	-	-3.7
Transformer	-	7.9	7.9	14.3	7.9	7.9	14.3
Trash Collection	-	5.3	-77.8	3.3	-2.1	-76.5	-4.1
Trash Compactor 1	-	-15.7	-77.9	-17.7	-15.7	-77.9	-17.7
Trash Compactor 2	-	-15.7	-78.0	-17.7	-15.7	-78.0	-17.7
Truck Loading	-	16.3	17.1	23.4	26.1	26.1	32.5
4 1.Fl		43.0	34.4	43.6	43.3	43.3	35.8
Auto Maintenance Noise 1	-	24.2	-72.0	22.2	24.2	-72.0	22.2
Auto Maintenance Noise 2	-	23.3	-72.9	21.2	23.3	-72.9	21.2
Auto Maintenance Noise 3	-	25.2	-71.0	23.1	25.2	-71.0	23.1
Auto Maintenance Noise 4	-	21.4	-74.8	19.4	21.4	-74.8	19.4
Driveway 7 - Lawrence to Warehouse	-	22.6	-	20.6	22.6	-	20.6
Driveway B - Graves to Truck Docks	-	32.7	31.7	38.2	32.6	31.6	38.1
Driveway B - Graves to Truck Docks1	-	21.7	20.7	27.3	22.3	21.3	27.9
Driveway B - Truck Docks to Up Ramp	-	-5.2	-	-7.2	-5.2	-	-7.2
Driveway C - Saratoga to Truck Docks	-	9.0	8.6	15.1	8.9	8.6	15.0
Driveway D - Prospect to Parking Lot 2	-	-7.5	-	-9.5	-7.5	-	-9.5
Driveway E - Prospect to Warehouse	-	-4.4	-	-6.5	-4.4	-	-6.5
Forklift operations	-	13.6	13.6	20.0	12.8	-76.4	10.7
Graves - B to A	-	37.1	-	35.1	37.1	-	35.1
HVAC 1	-	12.7	12.7	19.1	17.7	17.7	24.1
HVAC 2	-	12.5	12.5	18.9	17.5	17.5	23.9
HVAC 3	-	12.4	12.4	18.8	17.4	17.4	23.8
HVAC 4	-	12.2	12.2	18.6	17.2	17.2	23.6
HVAC 5	-	12.0	12.0	18.4	17.0	17.0	23.4
HVAC 6	-	11.8	11.8	18.2	16.8	16.8	23.2
HVAC 7	-	11.7	11.7	18.1	16.7	16.7	23.1
HVAC 8	-	12.6	12.6	19.0	17.6	17.6	24.0
HVAC 9	-	12.8	12.8	19.2	17.8	17.8	24.2
HVAC 10	-	12.9	12.9	19.3	17.9	17.9	24.3
HVAC 11	-	12.7	12.7	19.1	17.7	17.7	24.1
HVAC 12	-	12.6	12.6	19.0	17.6	17.6	24.0
HVAC 13	-	12.4	12.4	18.8	17.4	17.4	23.8
HVAC 14	-	12.3	12.3	18.7	17.3	17.3	23.7
HVAC 15	-	24.0	24.0	30.4	24.0	24.0	30.4
HVAC 16	-	25.8	25.8	32.2	25.8	25.8	32.2

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 17	-	22.1	22.1	28.5	22.1	22.1	28.5
Lot 1	-	37.4	-	35.4	37.4	-	35.4
Lot 2	-	20.6	-	18.6	20.6	-	18.6
Lot 3	-	37.1	-	35.0	37.1	-	35.0
Ramp up to Rooftop Parking	-	-0.8	-	-2.8	-0.8	-	-2.8
Transformer	-	10.3	10.3	16.7	10.3	10.3	16.7
Trash Collection	-	7.5	-75.6	5.5	0.1	-74.3	-2.0
Trash Compactor 1	-	-13.4	-75.7	-15.5	-13.4	-75.7	-15.5
Trash Compactor 2	-	-13.5	-75.8	-15.6	-13.5	-75.8	-15.6
Truck Loading	-	18.2	19.0	25.3	28.0	28.0	34.4
5 1.Fl		42.6	34.8	43.6	42.9	42.9	36.3
Auto Maintenance Noise 1	-	23.1	-73.1	21.1	23.1	-73.1	21.1
Auto Maintenance Noise 2	-	22.4	-73.8	20.3	22.4	-73.8	20.3
Auto Maintenance Noise 3	-	24.5	-71.7	22.4	24.5	-71.7	22.4
Auto Maintenance Noise 4	-	20.8	-75.4	18.7	20.8	-75.4	18.7
Driveway 7 - Lawrence to Warehouse	-	2.5	-	0.4	2.5	-	0.4
Driveway B - Graves to Truck Docks	-	33.3	32.2	38.8	33.1	32.1	38.6
Driveway B - Graves to Truck Docks1	-	23.9	22.9	29.5	24.6	23.6	30.2
Driveway B - Truck Docks to Up Ramp	-	-4.8	-	-6.9	-4.8	-	-6.9
Driveway C - Saratoga to Truck Docks	-	12.7	12.5	18.9	12.7	12.5	18.9
Driveway D - Prospect to Parking Lot 2	-	-7.4	-	-9.4	-7.4	-	-9.4
Driveway E - Prospect to Warehouse	-	-4.3	-	-6.3	-4.3	-	-6.3
Forklift operations	-	14.7	14.7	21.1	13.9	-75.3	11.9
Graves - B to A	-	37.3	-	35.2	37.3	-	35.2
HVAC 1	-	13.1	13.1	19.6	18.1	18.1	24.6
HVAC 2	-	13.1	13.1	19.5	18.1	18.1	24.5
HVAC 3	-	13.0	13.0	19.4	18.0	18.0	24.4
HVAC 4	-	12.8	12.8	19.2	17.8	17.8	24.2
HVAC 5	-	12.6	12.6	19.0	17.6	17.6	24.0
HVAC 6	-	12.4	12.4	18.8	17.4	17.4	23.8
HVAC 7	-	12.2	12.2	18.7	17.2	17.2	23.7
HVAC 8	-	13.0	13.0	19.4	18.0	18.0	24.4
HVAC 9	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 10	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 11	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 12	-	13.1	13.1	19.5	18.1	18.1	24.5
HVAC 13	-	12.9	12.9	19.3	17.9	17.9	24.3
HVAC 14	-	12.7	12.7	19.1	17.7	17.7	24.1
HVAC 15	-	23.7	23.7	30.1	23.7	23.7	30.1
HVAC 16	-	25.4	25.4	31.8	25.4	25.4	31.8
HVAC 17	-	21.6	21.6	28.0	21.6	21.6	28.0
Lot 1	-	34.7	-	32.7	34.7	-	32.7
Lot 2	-	19.8	-	17.8	19.8	-	17.8
Lot 3	-	37.4	-	35.4	37.4	-	35.4
Ramp up to Rooftop Parking	-	-0.7	-	-2.8	-0.7	-	-2.8
Transformer	-	11.6	11.6	18.0	11.6	11.6	18.0
Trash Collection	-	8.8	-74.4	6.7	1.3	-73.1	-0.7
Trash Compactor 1	-	-12.2	-74.4	-14.2	-12.2	-74.4	-14.2
Trash Compactor 2	-	-12.3	-74.5	-14.3	-12.3	-74.5	-14.3
Truck Loading	-	19.4	20.2	26.5	29.2	29.2	35.6
6 1.Fl		42.5	35.3	43.8	42.9	42.9	36.8
Auto Maintenance Noise 1	-	22.3	-73.9	20.2	22.3	-73.9	20.2
Auto Maintenance Noise 2	-	21.6	-74.6	19.6	21.6	-74.6	19.6
Auto Maintenance Noise 3	-	23.9	-72.3	21.8	23.9	-72.3	21.8
Auto Maintenance Noise 4	-	20.3	-75.9	18.2	20.3	-75.9	18.2
Driveway 7 - Lawrence to Warehouse	-	1.5	-	-0.5	1.5	-	-0.5
Driveway B - Graves to Truck Docks	-	34.0	33.0	39.5	33.9	32.8	39.4
Driveway B - Graves to Truck Docks1	-	24.6	23.7	30.3	25.5	24.5	31.1
Driveway B - Truck Docks to Up Ramp	-	-4.2	-	-6.2	-4.2	-	-6.2
Driveway C - Saratoga to Truck Docks	-	14.0	13.8	20.2	14.0	13.8	20.2
Driveway D - Prospect to Parking Lot 2	-	-7.3	-	-9.3	-7.3	-	-9.3
Driveway E - Prospect to Warehouse	-	-4.6	-	-6.7	-4.6	-	-6.7
Forklift operations	-	15.5	15.5	21.9	14.7	-74.5	12.7

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Graves - B to A	-	37.3	-	35.3	37.3	-	35.3
HVAC 1	-	13.4	13.4	19.9	18.4	18.4	24.9
HVAC 2	-	13.6	13.6	20.0	18.6	18.6	25.0
HVAC 3	-	13.4	13.4	19.8	18.4	18.4	24.8
HVAC 4	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 5	-	13.0	13.0	19.4	18.0	18.0	24.4
HVAC 6	-	12.8	12.8	19.2	17.8	17.8	24.2
HVAC 7	-	12.6	12.6	19.1	17.6	17.6	24.1
HVAC 8	-	13.3	13.3	19.7	18.3	18.3	24.7
HVAC 9	-	13.5	13.5	19.9	18.5	18.5	24.9
HVAC 10	-	13.5	13.5	19.9	18.5	18.5	24.9
HVAC 11	-	13.4	13.4	19.9	18.4	18.4	24.9
HVAC 12	-	13.4	13.4	19.8	18.4	18.4	24.8
HVAC 13	-	13.2	13.2	19.7	18.2	18.2	24.7
HVAC 14	-	13.1	13.1	19.5	18.1	18.1	24.5
HVAC 15	-	23.4	23.4	29.8	23.4	23.4	29.8
HVAC 16	-	25.1	25.1	31.5	25.1	25.1	31.5
HVAC 17	-	21.1	21.1	27.5	21.1	21.1	27.5
Lot 1	-	33.1	-	31.1	33.1	-	31.1
Lot 2	-	19.6	-	17.5	19.6	-	17.5
Lot 3	-	37.5	-	35.5	37.5	-	35.5
Ramp up to Rooftop Parking	-	-0.6	-	-2.7	-0.6	-	-2.7
Transformer	-	12.7	12.7	19.1	12.7	12.7	19.1
Trash Collection	-	9.8	-73.4	7.7	2.3	-72.1	0.2
Trash Compactor 1	-	-11.2	-73.5	-13.2	-11.2	-73.5	-13.2
Trash Compactor 2	-	-11.3	-73.6	-13.4	-11.3	-73.6	-13.4
Truck Loading	-	20.0	20.8	27.1	29.8	29.8	36.2
7 1.Fl		42.5	36.2	44.3	42.9	42.9	37.6
Auto Maintenance Noise 1	-	21.5	-74.7	19.4	21.5	-74.7	19.4
Auto Maintenance Noise 2	-	20.9	-75.3	18.9	20.9	-75.3	18.9
Auto Maintenance Noise 3	-	23.2	-72.9	21.2	23.2	-72.9	21.2
Auto Maintenance Noise 4	-	19.7	-76.5	17.7	19.7	-76.5	17.7
Driveway 7 - Lawrence to Warehouse	-	5.3	-	3.2	5.3	-	3.2
Driveway B - Graves to Truck Docks	-	34.7	33.6	40.2	34.5	33.4	40.0
Driveway B - Graves to Truck Docks1	-	26.5	25.6	32.2	27.2	26.3	32.8
Driveway B - Truck Docks to Up Ramp	-	5.8	-	3.8	1.1	-	-0.9
Driveway C - Saratoga to Truck Docks	-	15.1	14.9	21.3	15.1	14.9	21.3
Driveway D - Prospect to Parking Lot 2	-	-5.7	-	-7.7	-5.7	-	-7.7
Driveway E - Prospect to Warehouse	-	-1.4	-	-3.4	-3.1	-	-5.2
Forklift operations	-	16.3	16.3	22.7	15.5	-73.7	13.4
Graves - B to A	-	37.0	-	35.0	37.0	-	35.0
HVAC 1	-	13.8	13.8	20.2	18.8	18.8	25.2
HVAC 2	-	13.9	13.9	20.3	18.9	18.9	25.3
HVAC 3	-	13.9	13.9	20.3	18.9	18.9	25.3
HVAC 4	-	13.7	13.7	20.1	18.7	18.7	25.1
HVAC 5	-	13.5	13.5	19.9	18.5	18.5	24.9
HVAC 6	-	13.3	13.3	19.7	18.3	18.3	24.7
HVAC 7	-	13.1	13.1	19.5	18.1	18.1	24.5
HVAC 8	-	13.7	13.7	20.1	18.7	18.7	25.1
HVAC 9	-	13.8	13.8	20.2	18.8	18.8	25.2
HVAC 10	-	13.8	13.8	20.2	18.8	18.8	25.2
HVAC 11	-	13.8	13.8	20.2	18.8	18.8	25.2
HVAC 12	-	13.7	13.7	20.1	18.7	18.7	25.1
HVAC 13	-	13.6	13.6	20.0	18.6	18.6	25.0
HVAC 14	-	13.5	13.5	19.9	18.5	18.5	24.9
HVAC 15	-	23.3	23.3	29.7	23.3	23.3	29.7
HVAC 16	-	24.9	24.9	31.3	24.9	24.9	31.3
HVAC 17	-	26.4	26.4	32.9	26.4	26.4	32.9
Lot 1	-	31.9	-	29.9	31.9	-	29.9
Lot 2	-	19.3	-	17.3	19.3	-	17.3
Lot 3	-	37.5	-	35.4	37.5	-	35.4
Ramp up to Rooftop Parking	-	-0.4	-	-2.4	-0.4	-	-2.4
Transformer	-	13.7	13.7	20.1	13.7	13.7	20.1
Trash Collection	-	10.8	-72.3	8.8	3.3	-71.0	1.3

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Trash Compactor 1	-	-10.3	-72.5	-12.3	-10.3	-72.5	-12.3
Trash Compactor 2	-	-10.4	-72.7	-12.5	-10.4	-72.7	-12.5
Truck Loading	-	20.6	21.4	27.7	30.4	30.4	36.9
8	1.Fl	42.4	36.4	44.4	42.8	42.8	37.9
Auto Maintenance Noise 1	-	20.5	-75.7	18.4	20.5	-75.7	18.4
Auto Maintenance Noise 2	-	20.0	-76.2	18.0	20.0	-76.2	18.0
Auto Maintenance Noise 3	-	22.5	-73.7	20.4	22.5	-73.7	20.4
Auto Maintenance Noise 4	-	19.0	-77.2	17.0	19.0	-77.2	17.0
Driveway 7 - Lawrence to Warehouse	-	4.2	-	2.1	4.2	-	2.1
Driveway B - Graves to Truck Docks	-	34.6	33.5	40.0	34.3	33.2	39.8
Driveway B - Graves to Truck Docks1	-	28.8	27.9	34.5	29.5	28.5	35.1
Driveway B - Truck Docks to Up Ramp	-	6.3	-	4.3	4.8	-	2.8
Driveway C - Saratoga to Truck Docks	-	18.2	18.0	24.4	17.8	17.6	24.0
Driveway D - Prospect to Parking Lot 2	-	-5.1	-	-7.1	-5.1	-	-7.1
Driveway E - Prospect to Warehouse	-	-1.5	-	-3.5	-2.0	-	-4.0
Forklift operations	-	17.3	17.3	23.7	16.5	-72.7	14.4
Graves - B to A	-	36.8	-	34.8	36.8	-	34.8
HVAC 1	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 2	-	14.3	14.3	20.7	19.3	19.3	25.7
HVAC 3	-	14.2	14.2	20.7	19.2	19.2	25.7
HVAC 4	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 5	-	14.0	14.0	20.4	19.0	19.0	25.4
HVAC 6	-	13.8	13.8	20.2	18.8	18.8	25.2
HVAC 7	-	13.6	13.6	20.0	18.6	18.6	25.0
HVAC 8	-	14.0	14.0	20.4	19.0	19.0	25.4
HVAC 9	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 10	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 11	-	14.1	14.1	20.5	19.1	19.1	25.5
HVAC 12	-	14.0	14.0	20.4	19.0	19.0	25.4
HVAC 13	-	13.9	13.9	20.3	18.9	18.9	25.3
HVAC 14	-	13.8	13.8	20.2	18.8	18.8	25.2
HVAC 15	-	23.1	23.1	29.5	23.1	23.1	29.5
HVAC 16	-	24.6	24.6	31.0	24.6	24.6	31.0
HVAC 17	-	26.1	26.1	32.5	26.1	26.1	32.5
Lot 1	-	31.3	-	29.2	31.3	-	29.2
Lot 2	-	19.1	-	17.1	19.1	-	17.1
Lot 3	-	37.3	-	35.3	37.3	-	35.3
Ramp up to Rooftop Parking	-	-0.4	-	-2.4	-0.3	-	-2.3
Transformer	-	15.2	15.2	21.6	15.2	15.2	21.6
Trash Collection	-	12.3	-70.8	10.3	4.9	-69.5	2.9
Trash Compactor 1	-	-9.0	-71.3	-11.0	-9.0	-71.3	-11.0
Trash Compactor 2	-	-9.3	-71.5	-11.3	-9.3	-71.5	-11.3
Truck Loading	-	21.2	22.0	28.3	31.0	31.0	37.4
9	1.Fl	43.0	38.1	45.6	43.4	43.4	39.2
Auto Maintenance Noise 1	-	19.6	-76.6	17.5	19.6	-76.6	17.5
Auto Maintenance Noise 2	-	19.2	-77.0	17.2	19.2	-77.0	17.2
Auto Maintenance Noise 3	-	21.7	-74.5	19.7	21.7	-74.5	19.7
Auto Maintenance Noise 4	-	18.4	-77.8	16.3	18.4	-77.8	16.3
Driveway 7 - Lawrence to Warehouse	-	-0.5	-	-2.6	-0.5	-	-2.6
Driveway B - Graves to Truck Docks	-	36.9	35.7	42.3	36.6	35.5	42.1
Driveway B - Graves to Truck Docks1	-	31.2	30.2	36.8	31.8	30.8	37.4
Driveway B - Truck Docks to Up Ramp	-	15.2	-	13.2	10.9	-	8.9
Driveway C - Saratoga to Truck Docks	-	22.5	22.3	28.8	21.8	21.6	28.1
Driveway D - Prospect to Parking Lot 2	-	-0.2	-	-2.2	0.4	-	-1.6
Driveway E - Prospect to Warehouse	-	0.6	-	-1.4	2.0	-	-0.1
Forklift operations	-	18.6	18.6	25.0	17.8	-71.4	15.8
Graves - B to A	-	37.2	-	35.2	37.2	-	35.2
HVAC 1	-	14.4	14.4	20.8	19.4	19.4	25.8
HVAC 2	-	14.4	14.4	20.9	19.4	19.4	25.9
HVAC 3	-	14.4	14.4	20.8	19.4	19.4	25.8
HVAC 4	-	14.3	14.3	20.7	19.3	19.3	25.7
HVAC 5	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 6	-	14.0	14.0	20.5	19.0	19.0	25.5

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 7	-	13.9	13.9	20.3	18.9	18.9	25.3
HVAC 8	-	14.3	14.3	20.7	19.3	19.3	25.7
HVAC 9	-	14.4	14.4	20.8	19.4	19.4	25.8
HVAC 10	-	14.4	14.4	20.8	19.4	19.4	25.8
HVAC 11	-	14.3	14.3	20.7	19.3	19.3	25.7
HVAC 12	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 13	-	14.1	14.1	20.5	19.1	19.1	25.5
HVAC 14	-	13.9	13.9	20.3	18.9	18.9	25.3
HVAC 15	-	22.7	22.7	29.1	22.7	22.7	29.1
HVAC 16	-	24.1	24.1	30.5	24.1	24.1	30.5
HVAC 17	-	25.6	25.6	32.0	25.6	25.6	32.0
Lot 1	-	29.4	-	27.3	29.4	-	27.3
Lot 2	-	18.8	-	16.8	18.8	-	16.8
Lot 3	-	37.2	-	35.1	37.2	-	35.1
Ramp up to Rooftop Parking	-	1.4	-	-0.7	1.5	-	-0.5
Transformer	-	17.1	17.1	23.5	17.1	17.1	23.5
Trash Collection	-	14.5	-68.7	12.5	7.3	-67.1	5.2
Trash Compactor 1	-	-7.3	-69.6	-9.4	-7.3	-69.6	-9.4
Trash Compactor 2	-	-7.7	-70.0	-9.8	-7.7	-70.0	-9.8
Truck Loading	-	21.7	22.5	28.9	31.5	31.5	38.0
10	1.Fl	43.6	40.1	47.2	44.0	44.0	40.8
Auto Maintenance Noise 1	-	18.4	-77.8	16.4	18.4	-77.8	16.4
Auto Maintenance Noise 2	-	18.1	-78.1	16.1	18.1	-78.1	16.1
Auto Maintenance Noise 3	-	20.8	-75.4	18.7	20.8	-75.4	18.7
Auto Maintenance Noise 4	-	17.4	-78.7	15.4	17.4	-78.7	15.4
Driveway 7 - Lawrence to Warehouse	-	-0.8	-	-2.8	-0.8	-	-2.8
Driveway B - Graves to Truck Docks	-	38.6	37.2	43.8	38.5	37.0	43.7
Driveway B - Graves to Truck Docks1	-	35.6	34.4	41.0	35.9	34.7	41.3
Driveway B - Truck Docks to Up Ramp	-	18.7	-	16.6	14.4	-	12.3
Driveway C - Saratoga to Truck Docks	-	28.0	27.6	34.1	24.7	24.5	30.9
Driveway D - Prospect to Parking Lot 2	-	0.3	-	-1.8	1.0	-	-1.1
Driveway E - Prospect to Warehouse	-	7.7	-	5.7	5.0	-	3.0
Forklift operations	-	23.6	23.6	30.0	22.8	-66.4	20.7
Graves - B to A	-	36.2	-	34.2	36.2	-	34.2
HVAC 1	-	14.6	14.6	21.0	19.6	19.6	26.0
HVAC 2	-	14.7	14.7	21.1	19.7	19.7	26.1
HVAC 3	-	14.7	14.7	21.1	19.7	19.7	26.1
HVAC 4	-	14.6	14.6	21.0	19.6	19.6	26.0
HVAC 5	-	14.5	14.5	20.9	19.5	19.5	25.9
HVAC 6	-	14.3	14.3	20.7	19.3	19.3	25.7
HVAC 7	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 8	-	14.6	14.6	21.1	19.6	19.6	26.1
HVAC 9	-	14.8	14.8	21.2	19.8	19.8	26.2
HVAC 10	-	14.8	14.8	21.2	19.8	19.8	26.2
HVAC 11	-	14.7	14.7	21.1	19.7	19.7	26.1
HVAC 12	-	14.6	14.6	21.0	19.6	19.6	26.0
HVAC 13	-	14.5	14.5	20.9	19.5	19.5	25.9
HVAC 14	-	14.3	14.3	20.7	19.3	19.3	25.7
HVAC 15	-	22.6	22.6	29.0	22.6	22.6	29.0
HVAC 16	-	24.0	24.0	30.4	24.0	24.0	30.4
HVAC 17	-	25.3	25.3	31.7	25.3	25.3	31.7
Lot 1	-	28.3	-	26.3	28.3	-	26.3
Lot 2	-	18.7	-	16.7	18.7	-	16.7
Lot 3	-	36.5	-	34.5	36.5	-	34.5
Ramp up to Rooftop Parking	-	2.6	-	0.6	2.6	-	0.6
Transformer	-	20.2	20.2	26.6	20.2	20.2	26.6
Trash Collection	-	20.6	-62.6	18.5	15.7	-58.7	13.6
Trash Compactor 1	-	-4.5	-66.7	-6.5	-4.5	-66.7	-6.5
Trash Compactor 2	-	-5.3	-67.5	-7.3	-5.3	-67.5	-7.3
Truck Loading	-	22.4	23.2	29.5	32.2	32.2	38.6
11	1.Fl	50.1	48.6	55.2	50.2	50.2	48.1
Auto Maintenance Noise 1	-	17.5	-78.7	15.4	17.5	-78.7	15.4
Auto Maintenance Noise 2	-	17.2	-79.0	15.2	17.2	-79.0	15.2

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Auto Maintenance Noise 3	-	19.9	-76.3	17.9	19.9	-76.3	17.9
Auto Maintenance Noise 4	-	16.7	-79.5	14.6	16.7	-79.5	14.6
Driveway 7 - Lawrence to Warehouse	-	0.7	-	-1.4	0.7	-	-1.4
Driveway B - Graves to Truck Docks	-	44.9	43.2	49.9	44.9	43.2	49.9
Driveway B - Graves to Truck Docks1	-	43.3	41.9	48.5	43.2	41.8	48.5
Driveway B - Truck Docks to Up Ramp	-	21.5	-	19.5	21.7	-	19.7
Driveway C - Saratoga to Truck Docks	-	33.6	33.2	39.7	32.4	32.1	38.5
Driveway D - Prospect to Parking Lot 2	-	0.6	-	-1.5	0.6	-	-1.5
Driveway E - Prospect to Warehouse	-	4.6	-	2.6	4.7	-	2.6
Forklift operations	-	42.4	42.4	48.8	41.6	-47.6	39.5
Graves - B to A	-	36.1	-	34.0	36.1	-	34.0
HVAC 1	-	15.4	15.4	21.8	20.4	20.4	26.8
HVAC 2	-	15.6	15.6	22.0	20.6	20.6	27.0
HVAC 3	-	15.8	15.8	22.2	20.8	20.8	27.2
HVAC 4	-	15.8	15.8	22.2	20.8	20.8	27.2
HVAC 5	-	15.8	15.8	22.2	20.8	20.8	27.2
HVAC 6	-	15.8	15.8	22.3	20.8	20.8	27.3
HVAC 7	-	15.9	15.9	22.3	20.9	20.9	27.3
HVAC 8	-	16.6	16.6	23.0	21.6	21.6	28.0
HVAC 9	-	17.1	17.1	23.5	22.1	22.1	28.5
HVAC 10	-	17.4	17.4	23.9	22.4	22.4	28.9
HVAC 11	-	17.7	17.7	24.1	22.7	22.7	29.1
HVAC 12	-	17.9	17.9	24.3	22.9	22.9	29.3
HVAC 13	-	18.1	18.1	24.5	23.1	23.1	29.5
HVAC 14	-	18.3	18.3	24.7	23.3	23.3	29.7
HVAC 15	-	21.8	21.8	28.2	21.8	21.8	28.2
HVAC 16	-	23.1	23.1	29.6	23.1	23.1	29.6
HVAC 17	-	24.5	24.5	30.9	24.5	24.5	30.9
Lot 1	-	26.0	-	24.0	26.0	-	24.0
Lot 2	-	18.6	-	16.6	18.6	-	16.6
Lot 3	-	35.8	-	33.7	35.8	-	33.7
Ramp up to Rooftop Parking	-	2.4	-	0.4	2.3	-	0.3
Transformer	-	41.3	41.3	47.7	41.3	41.3	47.7
Trash Collection	-	37.2	-45.9	35.2	27.1	-47.3	25.1
Trash Compactor 1	-	16.8	-45.5	14.8	16.8	-45.5	14.8
Trash Compactor 2	-	16.2	-46.1	14.2	16.2	-46.1	14.2
Truck Loading	-	30.5	31.3	37.6	40.3	40.3	46.7
12	1.Fl	51.0	49.7	56.3	51.3	51.3	50.0
Auto Maintenance Noise 1	-	15.5	-80.7	13.4	15.5	-80.7	13.4
Auto Maintenance Noise 2	-	15.3	-80.9	13.2	15.3	-80.9	13.2
Auto Maintenance Noise 3	-	18.1	-78.1	16.0	18.1	-78.1	16.0
Auto Maintenance Noise 4	-	15.0	-81.2	12.9	14.9	-81.3	12.9
Driveway 7 - Lawrence to Warehouse	-	1.4	-	-0.7	1.4	-	-0.7
Driveway B - Graves to Truck Docks	-	49.0	47.5	54.1	49.0	47.5	54.1
Driveway B - Graves to Truck Docks1	-	40.1	38.8	45.5	34.4	33.4	40.0
Driveway B - Truck Docks to Up Ramp	-	23.1	-	21.0	15.3	-	13.2
Driveway C - Saratoga to Truck Docks	-	31.5	31.1	37.6	27.2	26.9	33.4
Driveway D - Prospect to Parking Lot 2	-	12.8	-	10.8	4.4	-	2.4
Driveway E - Prospect to Warehouse	-	14.4	-	12.3	7.9	-	5.9
Forklift operations	-	40.6	40.6	47.0	37.2	-52.0	35.2
Graves - B to A	-	27.4	-	25.3	27.4	-	25.3
HVAC 1	-	18.5	18.5	24.9	23.5	23.5	29.9
HVAC 2	-	19.3	19.3	25.7	24.3	24.3	30.7
HVAC 3	-	20.0	20.0	26.4	25.0	25.0	31.4
HVAC 4	-	20.6	20.6	27.0	25.6	25.6	32.0
HVAC 5	-	21.3	21.3	27.7	26.3	26.3	32.7
HVAC 6	-	22.2	22.2	28.6	27.2	27.2	33.6
HVAC 7	-	23.3	23.3	29.7	28.3	28.3	34.7
HVAC 8	-	19.3	19.3	25.7	24.3	24.3	30.7
HVAC 9	-	21.0	21.0	27.4	26.0	26.0	32.4
HVAC 10	-	22.4	22.4	28.9	27.4	27.4	33.9
HVAC 11	-	24.3	24.3	30.7	29.3	29.3	35.7
HVAC 12	-	26.1	26.1	32.5	31.1	31.1	37.5
HVAC 13	-	28.9	28.9	35.4	33.9	33.9	40.4

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 14	-	28.8	28.8	35.2	33.8	33.8	40.2
HVAC 15	-	21.4	21.4	27.8	21.4	21.4	27.8
HVAC 16	-	22.6	22.6	29.0	22.6	22.6	29.0
HVAC 17	-	23.9	23.9	30.3	23.9	23.9	30.3
Lot 1	-	23.9	-	21.8	23.9	-	21.8
Lot 2	-	19.4	-	17.4	19.2	-	17.2
Lot 3	-	34.5	-	32.5	34.5	-	32.5
Ramp up to Rooftop Parking	-	6.4	-	4.4	6.5	-	4.4
Transformer	-	38.2	38.2	44.6	34.0	34.0	40.4
Trash Collection	-	35.1	-48.0	33.1	25.2	-49.1	23.2
Trash Compactor 1	-	14.1	-48.1	12.1	10.1	-52.1	8.1
Trash Compactor 2	-	13.8	-48.5	11.7	10.0	-52.3	8.0
Truck Loading	-	36.8	37.6	43.9	44.4	44.4	50.8
13	1.Fl	50.1	48.7	55.3	50.9	50.9	49.7
Auto Maintenance Noise 1	-	14.4	-81.8	12.3	14.4	-81.8	12.3
Auto Maintenance Noise 2	-	14.2	-82.0	12.2	14.2	-82.0	12.2
Auto Maintenance Noise 3	-	17.0	-79.2	15.0	17.0	-79.2	15.0
Auto Maintenance Noise 4	-	14.0	-82.2	11.9	13.9	-82.3	11.9
Driveway 7 - Lawrence to Warehouse	-	4.4	-	2.4	4.4	-	2.4
Driveway B - Graves to Truck Docks	-	49.1	47.6	54.3	49.1	47.6	54.3
Driveway B - Graves to Truck Docks1	-	36.2	35.0	41.6	30.7	29.9	36.4
Driveway B - Truck Docks to Up Ramp	-	20.5	-	18.4	14.2	-	12.2
Driveway C - Saratoga to Truck Docks	-	27.9	27.7	34.1	26.9	26.7	33.1
Driveway D - Prospect to Parking Lot 2	-	11.9	-	9.9	4.7	-	2.7
Driveway E - Prospect to Warehouse	-	11.4	-	9.4	7.3	-	5.2
Forklift operations	-	32.7	32.7	39.1	30.5	-58.7	28.5
Graves - B to A	-	24.8	-	22.8	24.4	-	22.4
HVAC 1	-	18.6	18.6	25.0	23.6	23.6	30.0
HVAC 2	-	19.9	19.9	26.3	24.9	24.9	31.3
HVAC 3	-	21.4	21.4	27.9	26.4	26.4	32.9
HVAC 4	-	23.2	23.2	29.6	28.2	28.2	34.6
HVAC 5	-	25.1	25.1	31.5	30.1	30.1	36.5
HVAC 6	-	25.5	25.5	31.9	30.5	30.5	36.9
HVAC 7	-	25.4	25.4	31.8	30.4	30.4	36.8
HVAC 8	-	19.9	19.9	26.3	24.9	24.9	31.3
HVAC 9	-	23.0	23.0	29.4	28.0	28.0	34.4
HVAC 10	-	25.5	25.5	31.9	30.5	30.5	36.9
HVAC 11	-	26.0	26.0	32.4	31.0	31.0	37.4
HVAC 12	-	25.9	25.9	32.3	30.9	30.9	37.3
HVAC 13	-	25.8	25.8	32.2	30.8	30.8	37.2
HVAC 14	-	25.7	25.7	32.1	30.7	30.7	37.1
HVAC 15	-	22.7	22.7	29.1	22.7	22.7	29.1
HVAC 16	-	22.9	22.9	29.3	22.9	22.9	29.3
HVAC 17	-	23.5	23.5	29.9	23.5	23.5	29.9
Lot 1	-	22.7	-	20.7	22.7	-	20.7
Lot 2	-	20.4	-	18.3	20.2	-	18.2
Lot 3	-	33.6	-	31.6	33.6	-	31.6
Ramp up to Rooftop Parking	-	7.9	-	5.9	8.0	-	6.0
Transformer	-	35.4	35.4	41.8	30.9	30.9	37.3
Trash Collection	-	31.1	-52.1	29.0	21.2	-53.2	19.2
Trash Compactor 1	-	11.7	-50.6	9.7	7.4	-54.9	5.3
Trash Compactor 2	-	11.5	-50.8	9.4	7.3	-54.9	5.3
Truck Loading	-	33.7	34.5	40.8	43.1	43.1	49.5
14	1.Fl	49.7	48.2	54.9	50.5	50.5	49.3
Auto Maintenance Noise 1	-	12.3	-83.9	10.3	12.3	-83.9	10.3
Auto Maintenance Noise 2	-	12.3	-83.9	10.2	12.3	-83.9	10.2
Auto Maintenance Noise 3	-	15.1	-81.1	13.1	15.1	-81.1	13.1
Auto Maintenance Noise 4	-	12.0	-84.2	10.0	12.0	-84.2	10.0
Driveway 7 - Lawrence to Warehouse	-	5.7	-	3.6	5.7	-	3.6
Driveway B - Graves to Truck Docks	-	49.0	47.5	54.2	49.0	47.5	54.2
Driveway B - Graves to Truck Docks1	-	29.5	28.4	35.0	25.8	25.1	31.6
Driveway B - Truck Docks to Up Ramp	-	11.9	-	9.8	12.2	-	10.2
Driveway C - Saratoga to Truck Docks	-	32.9	32.7	39.1	33.0	32.7	39.2

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Driveway D - Prospect to Parking Lot 2	-	5.1	-	3.1	5.2	-	3.1
Driveway E - Prospect to Warehouse	-	6.1	-	4.1	6.2	-	4.2
Forklift operations	-	30.4	30.4	36.8	27.8	-61.4	25.7
Graves - B to A	-	20.3	-	18.2	19.9	-	17.8
HVAC 1	-	19.2	19.2	25.6	24.2	24.2	30.6
HVAC 2	-	22.1	22.1	28.5	27.1	27.1	33.5
HVAC 3	-	23.7	23.7	30.1	28.7	28.7	35.1
HVAC 4	-	23.5	23.5	29.9	28.5	28.5	34.9
HVAC 5	-	25.7	25.7	32.1	30.7	30.7	37.1
HVAC 6	-	25.6	25.6	32.0	30.6	30.6	37.0
HVAC 7	-	25.5	25.5	32.0	30.5	30.5	37.0
HVAC 8	-	21.5	21.5	27.9	26.5	26.5	32.9
HVAC 9	-	24.1	24.1	30.5	29.1	29.1	35.5
HVAC 10	-	24.0	24.0	30.4	29.0	29.0	35.4
HVAC 11	-	23.9	23.9	30.3	28.9	28.9	35.3
HVAC 12	-	23.8	23.8	30.2	28.8	28.8	35.2
HVAC 13	-	24.0	24.0	30.4	29.0	29.0	35.4
HVAC 14	-	25.2	25.2	31.6	30.2	30.2	36.6
HVAC 15	-	22.6	22.6	29.1	22.6	22.6	29.1
HVAC 16	-	22.8	22.8	29.3	22.8	22.8	29.3
HVAC 17	-	22.8	22.8	29.2	22.8	22.8	29.2
Lot 1	-	21.1	-	19.1	21.1	-	19.1
Lot 2	-	21.5	-	19.5	21.5	-	19.5
Lot 3	-	32.1	-	30.1	32.1	-	30.1
Ramp up to Rooftop Parking	-	7.1	-	5.1	7.2	-	5.1
Transformer	-	26.0	26.0	32.4	22.6	22.6	29.0
Trash Collection	-	26.6	-56.5	24.6	17.8	-56.6	15.7
Trash Compactor 1	-	0.7	-61.6	-1.3	-0.9	-63.2	-2.9
Trash Compactor 2	-	0.9	-61.4	-1.2	-0.8	-63.1	-2.9
Truck Loading	-	31.9	32.7	39.0	41.5	41.5	47.9
15 1.Fl		45.5	44.2	50.8	46.7	46.7	45.7
Auto Maintenance Noise 1	-	12.1	-84.1	10.1	12.1	-84.1	10.1
Auto Maintenance Noise 2	-	12.1	-84.1	10.0	12.1	-84.1	10.0
Auto Maintenance Noise 3	-	15.0	-81.2	12.9	15.0	-81.2	12.9
Auto Maintenance Noise 4	-	11.9	-84.3	9.9	11.9	-84.3	9.9
Driveway 7 - Lawrence to Warehouse	-	2.9	-	0.9	2.9	-	0.9
Driveway B - Graves to Truck Docks	-	44.4	43.0	49.6	44.4	43.0	49.6
Driveway B - Graves to Truck Docks1	-	27.6	26.7	33.2	24.0	23.4	29.9
Driveway B - Truck Docks to Up Ramp	-	9.4	-	7.4	9.6	-	7.5
Driveway C - Saratoga to Truck Docks	-	32.2	31.9	38.4	32.2	31.9	38.4
Driveway D - Prospect to Parking Lot 2	-	0.9	-	-1.2	0.9	-	-1.2
Driveway E - Prospect to Warehouse	-	4.3	-	2.2	4.3	-	2.2
Forklift operations	-	25.8	25.8	32.2	24.1	-65.1	22.0
Graves - B to A	-	18.0	-	16.0	17.8	-	15.8
HVAC 1	-	21.4	21.4	27.9	26.4	26.4	32.9
HVAC 2	-	21.4	21.4	27.8	26.4	26.4	32.8
HVAC 3	-	23.7	23.7	30.1	28.7	28.7	35.1
HVAC 4	-	23.6	23.6	30.1	28.6	28.6	35.1
HVAC 5	-	23.6	23.6	30.0	28.6	28.6	35.0
HVAC 6	-	23.5	23.5	29.9	28.5	28.5	34.9
HVAC 7	-	23.5	23.5	29.9	28.5	28.5	34.9
HVAC 8	-	21.7	21.7	28.1	26.7	26.7	33.1
HVAC 9	-	21.6	21.6	28.0	26.6	26.6	33.0
HVAC 10	-	23.7	23.7	30.2	28.7	28.7	35.2
HVAC 11	-	23.7	23.7	30.1	28.7	28.7	35.1
HVAC 12	-	23.7	23.7	30.1	28.7	28.7	35.1
HVAC 13	-	23.6	23.6	30.0	28.6	28.6	35.0
HVAC 14	-	23.5	23.5	30.0	28.5	28.5	35.0
HVAC 15	-	17.2	17.2	23.6	17.2	17.2	23.6
HVAC 16	-	17.5	17.5	23.9	17.5	17.5	23.9
HVAC 17	-	17.6	17.6	24.0	17.6	17.6	24.0
Lot 1	-	21.1	-	19.1	21.1	-	19.1
Lot 2	-	20.7	-	18.6	20.7	-	18.6
Lot 3	-	31.0	-	29.0	31.0	-	29.0

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Ramp up to Rooftop Parking	-	4.3	-	2.3	4.3	-	2.3
Transformer	-	20.2	20.2	26.6	19.5	19.5	25.9
Trash Collection	-	21.0	-62.1	19.0	12.1	-62.3	10.0
Trash Compactor 1	-	-2.8	-65.1	-4.8	-3.8	-66.1	-5.9
Trash Compactor 2	-	-2.7	-65.0	-4.7	-3.8	-66.1	-5.8
Truck Loading	-	28.1	28.9	35.2	37.9	37.9	44.3
15 2.Fl		47.9	46.6	53.2	49.6	49.6	48.8
Auto Maintenance Noise 1	-	12.2	-84.0	10.1	12.1	-84.1	10.1
Auto Maintenance Noise 2	-	12.1	-84.1	10.1	12.1	-84.1	10.0
Auto Maintenance Noise 3	-	15.0	-81.2	13.0	15.0	-81.2	13.0
Auto Maintenance Noise 4	-	12.0	-84.2	9.9	12.0	-84.2	9.9
Driveway 7 - Lawrence to Warehouse	-	2.7	-	0.7	2.7	-	0.7
Driveway B - Graves to Truck Docks	-	46.3	44.7	51.4	46.3	44.7	51.4
Driveway B - Graves to Truck Docks1	-	29.7	28.5	35.1	25.9	25.0	31.6
Driveway B - Truck Docks to Up Ramp	-	13.9	-	11.9	13.8	-	11.8
Driveway C - Saratoga to Truck Docks	-	35.5	35.2	41.6	35.5	35.2	41.6
Driveway D - Prospect to Parking Lot 2	-	3.2	-	1.2	4.2	-	2.2
Driveway E - Prospect to Warehouse	-	5.4	-	3.3	5.8	-	3.8
Forklift operations	-	33.5	33.5	40.0	29.3	-59.9	27.3
Graves - B to A	-	19.3	-	17.3	19.2	-	17.2
HVAC 1	-	23.7	23.7	30.1	28.7	28.7	35.1
HVAC 2	-	23.7	23.7	30.1	28.7	28.7	35.1
HVAC 3	-	26.0	26.0	32.4	31.0	31.0	37.4
HVAC 4	-	25.9	25.9	32.4	30.9	30.9	37.4
HVAC 5	-	25.9	25.9	32.3	30.9	30.9	37.3
HVAC 6	-	25.9	25.9	32.3	30.9	30.9	37.3
HVAC 7	-	25.8	25.8	32.2	30.8	30.8	37.2
HVAC 8	-	24.0	24.0	30.4	29.0	29.0	35.4
HVAC 9	-	23.9	23.9	30.4	28.9	28.9	35.4
HVAC 10	-	26.0	26.0	32.5	31.0	31.0	37.5
HVAC 11	-	26.0	26.0	32.4	31.0	31.0	37.4
HVAC 12	-	26.0	26.0	32.4	31.0	31.0	37.4
HVAC 13	-	25.9	25.9	32.3	30.9	30.9	37.3
HVAC 14	-	25.9	25.9	32.3	30.9	30.9	37.3
HVAC 15	-	22.8	22.8	29.2	22.8	22.8	29.2
HVAC 16	-	23.0	23.0	29.4	23.0	23.0	29.4
HVAC 17	-	22.9	22.9	29.3	22.9	22.9	29.3
Lot 1	-	23.1	-	21.0	22.7	-	20.7
Lot 2	-	24.3	-	22.3	24.3	-	22.3
Lot 3	-	33.6	-	31.5	33.6	-	31.5
Ramp up to Rooftop Parking	-	5.7	-	3.7	5.7	-	3.7
Transformer	-	27.6	27.6	34.0	23.5	23.5	30.0
Trash Collection	-	27.8	-55.3	25.8	18.6	-55.8	16.6
Trash Compactor 1	-	4.9	-57.4	2.8	0.2	-62.0	-1.8
Trash Compactor 2	-	5.0	-57.2	3.0	0.3	-62.0	-1.8
Truck Loading	-	34.7	35.5	41.8	44.1	44.1	50.5
16 1.Fl		42.2	41.3	47.8	45.2	45.2	44.7
Auto Maintenance Noise 1	-	12.1	-84.1	10.1	12.1	-84.1	10.1
Auto Maintenance Noise 2	-	12.1	-84.1	10.0	12.1	-84.1	10.0
Auto Maintenance Noise 3	-	15.0	-81.2	13.0	15.0	-81.2	13.0
Auto Maintenance Noise 4	-	12.0	-84.2	10.0	12.0	-84.2	10.0
Driveway 7 - Lawrence to Warehouse	-	5.7	-	3.7	5.7	-	3.7
Driveway B - Graves to Truck Docks	-	37.6	36.4	43.0	37.6	36.4	43.0
Driveway B - Graves to Truck Docks1	-	22.7	22.0	28.5	22.7	22.1	28.6
Driveway B - Truck Docks to Up Ramp	-	10.2	-	8.1	10.1	-	8.1
Driveway C - Saratoga to Truck Docks	-	34.8	34.5	40.9	34.8	34.5	41.0
Driveway D - Prospect to Parking Lot 2	-	1.2	-	-0.9	1.2	-	-0.8
Driveway E - Prospect to Warehouse	-	5.1	-	3.1	5.2	-	3.1
Forklift operations	-	26.7	26.7	33.1	25.3	-63.9	23.2
Graves - B to A	-	7.2	-	5.1	6.5	-	4.4
HVAC 1	-	25.3	25.3	31.7	30.3	30.3	36.7
HVAC 2	-	25.1	25.1	31.5	30.1	30.1	36.5
HVAC 3	-	25.0	25.0	31.4	30.0	30.0	36.4

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 4	-	24.9	24.9	31.3	29.9	29.9	36.3
HVAC 5	-	24.7	24.7	31.1	29.7	29.7	36.1
HVAC 6	-	24.5	24.5	31.0	29.5	29.5	36.0
HVAC 7	-	24.4	24.4	30.8	29.4	29.4	35.8
HVAC 8	-	23.1	23.1	29.5	28.1	28.1	34.5
HVAC 9	-	25.2	25.2	31.6	30.2	30.2	36.6
HVAC 10	-	25.1	25.1	31.5	30.1	30.1	36.5
HVAC 11	-	24.9	24.9	31.3	29.9	29.9	36.3
HVAC 12	-	24.8	24.8	31.2	29.8	29.8	36.2
HVAC 13	-	24.6	24.6	31.0	29.6	29.6	36.0
HVAC 14	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 15	-	19.2	19.2	25.6	19.2	19.2	25.6
HVAC 16	-	19.1	19.1	25.5	19.1	19.1	25.5
HVAC 17	-	18.7	18.7	25.2	18.7	18.7	25.2
Lot 1	-	20.0	-	18.0	20.0	-	18.0
Lot 2	-	22.8	-	20.8	22.8	-	20.8
Lot 3	-	30.4	-	28.4	30.4	-	28.4
Ramp up to Rooftop Parking	-	7.4	-	5.4	7.4	-	5.4
Transformer	-	21.1	21.1	27.5	20.0	20.0	26.5
Trash Collection	-	23.0	-60.1	21.0	13.7	-60.7	11.6
Trash Compactor 1	-	-1.5	-63.8	-3.6	-3.1	-65.4	-5.1
Trash Compactor 2	-	-1.3	-63.6	-3.4	-3.0	-65.3	-5.0
Truck Loading	-	29.5	30.3	36.6	39.2	39.2	45.6
16	2.Fl	45.2	44.2	50.8	48.4	48.4	47.9
Auto Maintenance Noise 1	-	12.2	-84.0	10.2	12.2	-84.0	10.2
Auto Maintenance Noise 2	-	12.2	-84.0	10.1	12.2	-84.0	10.1
Auto Maintenance Noise 3	-	15.1	-81.1	13.1	15.1	-81.1	13.1
Auto Maintenance Noise 4	-	12.1	-84.1	10.1	12.1	-84.1	10.1
Driveway 7 - Lawrence to Warehouse	-	4.8	-	2.8	4.8	-	2.8
Driveway B - Graves to Truck Docks	-	40.0	38.5	45.2	40.0	38.5	45.2
Driveway B - Graves to Truck Docks1	-	26.6	25.8	32.4	26.5	25.8	32.3
Driveway B - Truck Docks to Up Ramp	-	15.9	-	13.8	15.9	-	13.8
Driveway C - Saratoga to Truck Docks	-	38.0	37.6	44.1	38.0	37.6	44.1
Driveway D - Prospect to Parking Lot 2	-	3.5	-	1.5	3.6	-	1.5
Driveway E - Prospect to Warehouse	-	6.4	-	4.3	7.4	-	5.3
Forklift operations	-	33.2	33.2	39.6	29.2	-60.0	27.2
Graves - B to A	-	10.4	-	8.3	10.0	-	8.0
HVAC 1	-	26.4	26.4	32.9	31.4	31.4	37.9
HVAC 2	-	26.4	26.4	32.8	31.4	31.4	37.8
HVAC 3	-	26.3	26.3	32.7	31.3	31.3	37.7
HVAC 4	-	26.3	26.3	32.7	31.3	31.3	37.7
HVAC 5	-	26.2	26.2	32.7	31.2	31.2	37.7
HVAC 6	-	26.2	26.2	32.6	31.2	31.2	37.6
HVAC 7	-	26.2	26.2	32.6	31.2	31.2	37.6
HVAC 8	-	24.4	24.4	30.8	29.4	29.4	35.8
HVAC 9	-	26.4	26.4	32.9	31.4	31.4	37.9
HVAC 10	-	26.4	26.4	32.8	31.4	31.4	37.8
HVAC 11	-	26.4	26.4	32.8	31.4	31.4	37.8
HVAC 12	-	26.3	26.3	32.7	31.3	31.3	37.7
HVAC 13	-	26.3	26.3	32.7	31.3	31.3	37.7
HVAC 14	-	26.3	26.3	32.7	31.3	31.3	37.7
HVAC 15	-	22.9	22.9	29.3	22.9	22.9	29.3
HVAC 16	-	23.0	23.0	29.4	23.0	23.0	29.4
HVAC 17	-	23.0	23.0	29.4	23.0	23.0	29.4
Lot 1	-	22.2	-	20.1	22.1	-	20.1
Lot 2	-	25.6	-	23.5	25.6	-	23.5
Lot 3	-	33.6	-	31.6	33.6	-	31.6
Ramp up to Rooftop Parking	-	10.9	-	8.9	10.9	-	8.9
Transformer	-	28.1	28.1	34.5	23.6	23.6	30.0
Trash Collection	-	28.0	-55.2	25.9	18.8	-55.6	16.8
Trash Compactor 1	-	5.4	-56.9	3.3	0.3	-62.0	-1.8
Trash Compactor 2	-	5.5	-56.7	3.5	0.3	-62.0	-1.7
Truck Loading	-	35.3	36.1	42.4	44.6	44.6	51.0

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP Day	Level w/o NP Night	Level w/o NP Ldn	Level w NP Day	Level w NP Night	Level w NP Ldn
			dB(A)			dB(A)	
17 1.Fl		41.4	40.6	47.2	44.8	44.8	44.4
Auto Maintenance Noise 1	-	12.1	-84.1	10.1	12.1	-84.1	10.1
Auto Maintenance Noise 2	-	12.1	-84.1	10.1	12.1	-84.1	10.1
Auto Maintenance Noise 3	-	15.1	-81.1	13.1	15.1	-81.1	13.1
Auto Maintenance Noise 4	-	12.1	-84.1	10.0	12.1	-84.1	10.0
Driveway 7 - Lawrence to Warehouse	-	3.2	-	1.1	3.2	-	1.1
Driveway B - Graves to Truck Docks	-	33.4	32.1	38.7	33.4	32.1	38.7
Driveway B - Graves to Truck Docks1	-	25.2	24.5	31.0	24.6	24.1	30.6
Driveway B - Truck Docks to Up Ramp	-	13.0	-	10.9	13.0	-	10.9
Driveway C - Saratoga to Truck Docks	-	36.2	35.9	42.3	36.2	35.9	42.4
Driveway D - Prospect to Parking Lot 2	-	2.4	-	0.4	2.4	-	0.4
Driveway E - Prospect to Warehouse	-	6.3	-	4.3	6.4	-	4.3
Forklift operations	-	25.7	25.7	32.1	24.4	-64.8	22.3
Graves - B to A	-	8.1	-	6.1	7.5	-	5.5
HVAC 1	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 2	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 3	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 4	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 5	-	24.4	24.4	30.9	29.4	29.4	35.9
HVAC 6	-	24.4	24.4	30.9	29.4	29.4	35.9
HVAC 7	-	24.4	24.4	30.8	29.4	29.4	35.8
HVAC 8	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 9	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 10	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 11	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 12	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 13	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 14	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 15	-	17.6	17.6	24.0	17.6	17.6	24.0
HVAC 16	-	17.6	17.6	24.0	17.6	17.6	24.0
HVAC 17	-	17.5	17.5	23.9	17.5	17.5	23.9
Lot 1	-	19.8	-	17.8	19.8	-	17.8
Lot 2	-	24.0	-	22.0	24.0	-	22.0
Lot 3	-	30.3	-	28.2	30.3	-	28.3
Ramp up to Rooftop Parking	-	7.8	-	5.7	7.8	-	5.7
Transformer	-	20.9	20.9	27.4	19.6	19.6	26.0
Trash Collection	-	21.1	-62.0	19.1	12.4	-62.0	10.4
Trash Compactor 1	-	-0.7	-63.0	-2.7	-3.5	-65.8	-5.6
Trash Compactor 2	-	-3.0	-65.2	-5.0	-3.7	-66.0	-5.8
Truck Loading	-	29.8	30.6	36.9	39.4	39.4	45.8
17 2.Fl		44.9	44.1	50.7	48.5	48.5	48.1
Auto Maintenance Noise 1	-	12.2	-84.0	10.1	12.2	-84.0	10.1
Auto Maintenance Noise 2	-	12.2	-84.0	10.1	12.2	-84.0	10.1
Auto Maintenance Noise 3	-	15.2	-81.0	13.1	15.2	-81.0	13.1
Auto Maintenance Noise 4	-	12.2	-84.0	10.2	12.2	-84.0	10.2
Driveway 7 - Lawrence to Warehouse	-	4.5	-	2.5	4.5	-	2.5
Driveway B - Graves to Truck Docks	-	36.5	35.1	41.7	36.5	35.1	41.8
Driveway B - Graves to Truck Docks1	-	29.6	28.8	35.3	28.8	28.2	34.7
Driveway B - Truck Docks to Up Ramp	-	17.6	-	15.5	17.7	-	15.6
Driveway C - Saratoga to Truck Docks	-	39.1	38.7	45.2	39.1	38.8	45.2
Driveway D - Prospect to Parking Lot 2	-	3.5	-	1.5	3.5	-	1.5
Driveway E - Prospect to Warehouse	-	7.2	-	5.1	7.6	-	5.5
Forklift operations	-	33.2	33.2	39.7	29.3	-59.9	27.2
Graves - B to A	-	11.4	-	9.3	11.0	-	8.9
HVAC 1	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 2	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 3	-	26.4	26.4	32.9	31.4	31.4	37.9
HVAC 4	-	26.4	26.4	32.8	31.4	31.4	37.8
HVAC 5	-	26.4	26.4	32.8	31.4	31.4	37.8
HVAC 6	-	26.4	26.4	32.8	31.4	31.4	37.8
HVAC 7	-	26.4	26.4	32.8	31.4	31.4	37.8
HVAC 8	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 9	-	26.5	26.5	32.9	31.5	31.5	37.9

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 10	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 11	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 12	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 13	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 14	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 15	-	23.0	23.0	29.4	23.0	23.0	29.4
HVAC 16	-	23.1	23.1	29.5	23.1	23.1	29.5
HVAC 17	-	23.0	23.0	29.4	23.0	23.0	29.4
Lot 1	-	22.1	-	20.0	22.1	-	20.0
Lot 2	-	26.7	-	24.7	26.7	-	24.6
Lot 3	-	33.7	-	31.6	33.7	-	31.6
Ramp up to Rooftop Parking	-	11.8	-	9.7	11.8	-	9.7
Transformer	-	28.6	28.6	35.0	23.5	23.5	30.0
Trash Collection	-	27.9	-55.3	25.9	19.1	-55.3	17.0
Trash Compactor 1	-	6.8	-55.5	4.7	0.1	-62.2	-1.9
Trash Compactor 2	-	4.6	-57.7	2.5	0.3	-62.0	-1.8
Truck Loading	-	36.0	36.8	43.1	45.2	45.2	51.6
18	1.Fl	42.5	41.7	48.3	45.3	45.3	44.9
Auto Maintenance Noise 1	-	12.1	-84.1	10.0	12.1	-84.1	10.0
Auto Maintenance Noise 2	-	12.1	-84.1	10.0	12.1	-84.1	10.0
Auto Maintenance Noise 3	-	15.1	-81.1	13.1	15.1	-81.1	13.1
Auto Maintenance Noise 4	-	12.1	-84.1	10.1	12.1	-84.1	10.1
Driveway 7 - Lawrence to Warehouse	-	4.3	-	2.3	4.3	-	2.3
Driveway B - Graves to Truck Docks	-	32.5	31.2	37.8	32.5	31.3	37.9
Driveway B - Graves to Truck Docks1	-	26.8	26.0	32.5	25.1	24.6	31.1
Driveway B - Truck Docks to Up Ramp	-	16.8	-	14.7	16.6	-	14.6
Driveway C - Saratoga to Truck Docks	-	39.0	38.7	45.1	39.0	38.7	45.1
Driveway D - Prospect to Parking Lot 2	-	3.7	-	1.6	3.7	-	1.6
Driveway E - Prospect to Warehouse	-	7.6	-	5.5	7.6	-	5.5
Forklift operations	-	25.7	25.7	32.1	24.3	-64.9	22.3
Graves - B to A	-	8.4	-	6.4	7.7	-	5.7
HVAC 1	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 2	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 3	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 4	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 5	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 6	-	24.6	24.6	31.0	29.6	29.6	36.0
HVAC 7	-	24.8	24.8	31.2	29.8	29.8	36.2
HVAC 8	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 9	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 10	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 11	-	24.5	24.5	31.0	29.5	29.5	36.0
HVAC 12	-	24.5	24.5	31.0	29.5	29.5	36.0
HVAC 13	-	24.7	24.7	31.1	29.7	29.7	36.1
HVAC 14	-	24.9	24.9	31.3	29.9	29.9	36.3
HVAC 15	-	17.6	17.6	24.0	17.6	17.6	24.0
HVAC 16	-	17.6	17.6	24.1	17.6	17.6	24.1
HVAC 17	-	17.4	17.4	23.8	17.4	17.4	23.8
Lot 1	-	19.8	-	17.7	19.8	-	17.7
Lot 2	-	25.6	-	23.6	25.6	-	23.6
Lot 3	-	30.7	-	28.6	30.7	-	28.7
Ramp up to Rooftop Parking	-	11.1	-	9.1	11.1	-	9.1
Transformer	-	21.9	21.9	28.3	19.6	19.6	26.0
Trash Collection	-	21.0	-62.1	19.0	12.2	-62.1	10.2
Trash Compactor 1	-	-3.1	-65.4	-5.1	-3.9	-66.1	-5.9
Trash Compactor 2	-	-3.1	-65.3	-5.1	-3.8	-66.1	-5.8
Truck Loading	-	29.9	30.7	37.0	39.5	39.5	45.9
18	2.Fl	45.6	44.9	51.4	48.9	48.9	48.5
Auto Maintenance Noise 1	-	12.1	-84.1	10.1	12.1	-84.1	10.1
Auto Maintenance Noise 2	-	12.2	-84.0	10.1	12.2	-84.0	10.1
Auto Maintenance Noise 3	-	15.2	-81.0	13.2	15.2	-81.0	13.2
Auto Maintenance Noise 4	-	12.3	-83.9	10.3	12.3	-83.9	10.2
Driveway 7 - Lawrence to Warehouse	-	4.4	-	2.3	4.4	-	2.3

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Driveway B - Graves to Truck Docks	-	35.6	34.2	40.9	35.6	34.3	40.9
Driveway B - Graves to Truck Docks1	-	30.4	29.5	36.1	28.7	28.1	34.6
Driveway B - Truck Docks to Up Ramp	-	18.5	-	16.5	18.7	-	16.7
Driveway C - Saratoga to Truck Docks	-	41.3	41.0	47.4	41.3	41.0	47.4
Driveway D - Prospect to Parking Lot 2	-	2.8	-	0.8	2.8	-	0.8
Driveway E - Prospect to Warehouse	-	7.3	-	5.2	7.7	-	5.6
Forklift operations	-	33.2	33.2	39.6	29.3	-59.9	27.2
Graves - B to A	-	10.9	-	8.8	10.6	-	8.6
HVAC 1	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 2	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 3	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 4	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 5	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 6	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 7	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 8	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 9	-	26.5	26.5	33.0	31.5	31.5	38.0
HVAC 10	-	26.6	26.6	33.0	31.6	31.6	38.0
HVAC 11	-	26.6	26.6	33.0	31.6	31.6	38.0
HVAC 12	-	26.6	26.6	33.0	31.6	31.6	38.0
HVAC 13	-	26.6	26.6	33.0	31.6	31.6	38.0
HVAC 14	-	26.6	26.6	33.0	31.6	31.6	38.0
HVAC 15	-	23.0	23.0	29.4	23.0	23.0	29.4
HVAC 16	-	23.1	23.1	29.5	23.1	23.1	29.5
HVAC 17	-	22.9	22.9	29.3	22.9	22.9	29.3
Lot 1	-	22.2	-	20.1	22.2	-	20.1
Lot 2	-	27.4	-	25.4	27.4	-	25.3
Lot 3	-	33.7	-	31.6	33.7	-	31.6
Ramp up to Rooftop Parking	-	15.4	-	13.4	15.4	-	13.4
Transformer	-	29.3	29.3	35.7	23.4	23.4	29.8
Trash Collection	-	27.8	-55.4	25.7	19.0	-55.4	16.9
Trash Compactor 1	-	4.4	-57.9	2.4	0.2	-62.1	-1.8
Trash Compactor 2	-	4.5	-57.8	2.4	0.3	-62.0	-1.8
Truck Loading	-	36.4	37.2	43.5	45.5	45.5	51.9
19 1.Fl		45.3	44.8	51.3	47.7	47.7	47.3
Auto Maintenance Noise 1	-	12.0	-84.2	9.9	12.0	-84.2	9.9
Auto Maintenance Noise 2	-	12.0	-84.2	10.0	12.0	-84.2	10.0
Auto Maintenance Noise 3	-	15.1	-81.1	13.0	15.1	-81.1	13.0
Auto Maintenance Noise 4	-	12.1	-84.1	10.1	12.1	-84.1	10.1
Driveway 7 - Lawrence to Warehouse	-	19.9	-	17.8	15.6	-	13.5
Driveway B - Graves to Truck Docks	-	32.0	30.8	37.4	32.0	30.9	37.5
Driveway B - Graves to Truck Docks1	-	27.7	26.7	33.3	25.1	24.5	31.0
Driveway B - Truck Docks to Up Ramp	-	26.2	-	24.2	20.2	-	18.1
Driveway C - Saratoga to Truck Docks	-	42.8	42.6	49.0	42.8	42.6	49.0
Driveway D - Prospect to Parking Lot 2	-	6.0	-	3.9	6.0	-	3.9
Driveway E - Prospect to Warehouse	-	11.8	-	9.7	10.1	-	8.0
Forklift operations	-	26.4	26.4	32.8	24.9	-64.3	22.9
Graves - B to A	-	8.8	-	6.7	8.3	-	6.2
HVAC 1	-	25.2	25.2	31.6	30.2	30.2	36.6
HVAC 2	-	25.2	25.2	31.6	30.2	30.2	36.6
HVAC 3	-	25.2	25.2	31.6	30.2	30.2	36.6
HVAC 4	-	25.2	25.2	31.6	30.2	30.2	36.6
HVAC 5	-	25.2	25.2	31.6	30.2	30.2	36.6
HVAC 6	-	25.3	25.3	31.8	30.3	30.3	36.8
HVAC 7	-	25.5	25.5	31.9	30.5	30.5	36.9
HVAC 8	-	25.2	25.2	31.6	30.2	30.2	36.6
HVAC 9	-	25.2	25.2	31.6	30.2	30.2	36.6
HVAC 10	-	25.2	25.2	31.7	30.2	30.2	36.7
HVAC 11	-	25.3	25.3	31.7	30.3	30.3	36.7
HVAC 12	-	25.3	25.3	31.7	30.3	30.3	36.7
HVAC 13	-	25.4	25.4	31.8	30.4	30.4	36.8
HVAC 14	-	25.5	25.5	31.9	30.5	30.5	36.9
HVAC 15	-	22.8	22.8	29.2	22.8	22.8	29.2
HVAC 16	-	19.0	19.0	25.4	19.0	19.0	25.4

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 17	-	18.9	18.9	25.3	18.9	18.9	25.3
Lot 1	-	20.9	-	18.9	20.9	-	18.9
Lot 2	-	26.9	-	24.9	26.4	-	24.4
Lot 3	-	31.9	-	29.9	31.9	-	29.9
Ramp up to Rooftop Parking	-	16.9	-	14.9	16.4	-	14.4
Transformer	-	23.1	23.1	29.5	22.1	22.1	28.5
Trash Collection	-	22.2	-60.9	20.2	16.3	-58.1	14.3
Trash Compactor 1	-	-2.5	-64.8	-4.5	-3.4	-65.7	-5.4
Trash Compactor 2	-	-2.5	-64.7	-4.5	-3.3	-65.6	-5.4
Truck Loading	-	35.9	36.7	43.0	42.8	42.8	49.3
19 2.Fl		47.3	46.6	53.1	49.9	49.9	49.6
Auto Maintenance Noise 1	-	12.1	-84.1	10.0	12.1	-84.1	10.0
Auto Maintenance Noise 2	-	12.1	-84.1	10.1	12.1	-84.1	10.1
Auto Maintenance Noise 3	-	15.2	-81.0	13.2	15.2	-81.0	13.2
Auto Maintenance Noise 4	-	12.3	-83.9	10.3	12.3	-83.9	10.3
Driveway 7 - Lawrence to Warehouse	-	20.7	-	18.7	15.3	-	13.3
Driveway B - Graves to Truck Docks	-	34.7	33.3	40.0	34.7	33.4	40.0
Driveway B - Graves to Truck Docks1	-	30.0	28.9	35.5	27.1	26.5	33.0
Driveway B - Truck Docks to Up Ramp	-	28.2	-	26.2	21.4	-	19.4
Driveway C - Saratoga to Truck Docks	-	44.7	44.4	50.8	44.7	44.4	50.8
Driveway D - Prospect to Parking Lot 2	-	3.4	-	1.4	3.4	-	1.4
Driveway E - Prospect to Warehouse	-	11.6	-	9.5	8.5	-	6.4
Forklift operations	-	33.0	33.0	39.4	29.1	-60.1	27.1
Graves - B to A	-	11.0	-	9.0	10.8	-	8.7
HVAC 1	-	26.4	26.4	32.8	31.4	31.4	37.8
HVAC 2	-	26.4	26.4	32.8	31.4	31.4	37.8
HVAC 3	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 4	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 5	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 6	-	26.5	26.5	33.0	31.5	31.5	38.0
HVAC 7	-	26.6	26.6	33.0	31.6	31.6	38.0
HVAC 8	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 9	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 10	-	26.5	26.5	32.9	31.5	31.5	37.9
HVAC 11	-	26.6	26.6	33.0	31.6	31.6	38.0
HVAC 12	-	26.6	26.6	33.0	31.6	31.6	38.0
HVAC 13	-	26.6	26.6	33.0	31.6	31.6	38.0
HVAC 14	-	26.7	26.7	33.1	31.7	31.7	38.1
HVAC 15	-	23.0	23.0	29.4	23.0	23.0	29.4
HVAC 16	-	23.0	23.0	29.4	23.0	23.0	29.4
HVAC 17	-	22.8	22.8	29.3	22.8	22.8	29.3
Lot 1	-	22.7	-	20.7	22.5	-	20.5
Lot 2	-	29.9	-	27.8	27.4	-	25.3
Lot 3	-	33.7	-	31.7	33.7	-	31.7
Ramp up to Rooftop Parking	-	18.6	-	16.6	18.2	-	16.1
Transformer	-	28.8	28.8	35.2	24.7	24.7	31.1
Trash Collection	-	27.5	-55.7	25.5	20.0	-54.4	17.9
Trash Compactor 1	-	4.3	-58.0	2.2	0.1	-62.2	-1.9
Trash Compactor 2	-	4.3	-57.9	2.3	0.2	-62.1	-1.9
Truck Loading	-	37.1	37.9	44.2	46.1	46.1	52.5
20 1.Fl		46.5	46.3	52.7	48.1	48.1	48.0
Auto Maintenance Noise 1	-	13.5	-82.7	11.5	13.5	-82.7	11.5
Auto Maintenance Noise 2	-	13.6	-82.6	11.5	13.6	-82.6	11.5
Auto Maintenance Noise 3	-	16.6	-79.5	14.6	16.6	-79.5	14.6
Auto Maintenance Noise 4	-	13.7	-82.5	11.7	13.7	-82.5	11.7
Driveway 7 - Lawrence to Warehouse	-	18.7	-	16.7	10.9	-	8.8
Driveway B - Graves to Truck Docks	-	26.0	25.0	31.6	26.0	25.1	31.6
Driveway B - Graves to Truck Docks1	-	23.5	22.0	28.7	19.8	18.9	25.5
Driveway B - Truck Docks to Up Ramp	-	22.0	-	20.0	14.5	-	12.5
Driveway C - Saratoga to Truck Docks	-	45.8	45.7	52.1	45.8	45.7	52.1
Driveway D - Prospect to Parking Lot 2	-	4.0	-	2.0	4.0	-	2.0
Driveway E - Prospect to Warehouse	-	8.7	-	6.7	6.5	-	4.4
Forklift operations	-	14.4	14.4	20.8	13.5	-75.7	11.4

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Graves - B to A	-	3.0	-	0.9	2.6	-	0.5
HVAC 1	-	22.0	22.0	28.4	27.0	27.0	33.4
HVAC 2	-	22.1	22.1	28.5	27.1	27.1	33.5
HVAC 3	-	22.2	22.2	28.6	27.2	27.2	33.6
HVAC 4	-	22.3	22.3	28.7	27.3	27.3	33.7
HVAC 5	-	22.3	22.3	28.8	27.3	27.3	33.8
HVAC 6	-	22.9	22.9	29.3	27.9	27.9	34.3
HVAC 7	-	23.0	23.0	29.4	28.0	28.0	34.4
HVAC 8	-	22.0	22.0	28.4	27.0	27.0	33.4
HVAC 9	-	22.1	22.1	28.5	27.1	27.1	33.5
HVAC 10	-	22.2	22.2	28.6	27.2	27.2	33.6
HVAC 11	-	22.3	22.3	28.7	27.3	27.3	33.7
HVAC 12	-	22.4	22.4	28.8	27.4	27.4	33.8
HVAC 13	-	22.9	22.9	29.3	27.9	27.9	34.3
HVAC 14	-	23.0	23.0	29.4	28.0	28.0	34.4
HVAC 15	-	20.1	20.1	26.5	20.1	20.1	26.5
HVAC 16	-	20.1	20.1	26.5	20.1	20.1	26.5
HVAC 17	-	19.9	19.9	26.3	19.9	19.9	26.3
Lot 1	-	17.5	-	15.5	17.5	-	15.5
Lot 2	-	27.4	-	25.4	27.4	-	25.4
Lot 3	-	26.7	-	24.6	26.7	-	24.6
Ramp up to Rooftop Parking	-	13.3	-	11.2	12.4	-	10.4
Transformer	-	8.8	8.8	15.2	8.8	8.8	15.2
Trash Collection	-	7.7	-75.4	5.7	-1.4	-75.7	-3.4
Trash Compactor 1	-	-13.5	-75.8	-15.6	-13.5	-75.8	-15.6
Trash Compactor 2	-	-12.6	-74.8	-14.6	-12.6	-74.9	-14.7
Truck Loading	-	33.1	33.9	40.2	42.3	42.3	48.8
20 2.Fl		47.7	47.3	53.8	49.1	49.1	48.9
Auto Maintenance Noise 1	-	13.5	-82.7	11.5	13.5	-82.7	11.5
Auto Maintenance Noise 2	-	13.6	-82.6	11.6	13.6	-82.6	11.6
Auto Maintenance Noise 3	-	16.7	-79.5	14.7	16.7	-79.5	14.7
Auto Maintenance Noise 4	-	13.8	-82.4	11.8	13.8	-82.4	11.8
Driveway 7 - Lawrence to Warehouse	-	23.2	-	21.2	17.9	-	15.9
Driveway B - Graves to Truck Docks	-	25.6	24.3	31.0	25.7	24.4	31.0
Driveway B - Graves to Truck Docks1	-	28.3	27.0	33.6	22.8	22.1	28.6
Driveway B - Truck Docks to Up Ramp	-	26.7	-	24.6	19.4	-	17.3
Driveway C - Saratoga to Truck Docks	-	46.9	46.7	53.1	46.8	46.6	53.1
Driveway D - Prospect to Parking Lot 2	-	3.2	-	1.2	3.2	-	1.2
Driveway E - Prospect to Warehouse	-	11.2	-	9.1	7.9	-	5.8
Forklift operations	-	17.6	17.6	24.0	16.6	-72.6	14.6
Graves - B to A	-	2.7	-	0.7	2.7	-	0.6
HVAC 1	-	23.3	23.3	29.7	28.3	28.3	34.7
HVAC 2	-	23.4	23.4	29.8	28.4	28.4	34.8
HVAC 3	-	23.5	23.5	29.9	28.5	28.5	34.9
HVAC 4	-	23.5	23.5	30.0	28.5	28.5	35.0
HVAC 5	-	23.6	23.6	30.0	28.6	28.6	35.0
HVAC 6	-	23.7	23.7	30.1	28.7	28.7	35.1
HVAC 7	-	23.8	23.8	30.2	28.8	28.8	35.2
HVAC 8	-	23.3	23.3	29.8	28.3	28.3	34.8
HVAC 9	-	23.4	23.4	29.8	28.4	28.4	34.8
HVAC 10	-	23.5	23.5	29.9	28.5	28.5	34.9
HVAC 11	-	23.6	23.6	30.0	28.6	28.6	35.0
HVAC 12	-	23.7	23.7	30.1	28.7	28.7	35.1
HVAC 13	-	23.8	23.8	30.2	28.8	28.8	35.2
HVAC 14	-	23.9	23.9	30.3	28.9	28.9	35.3
HVAC 15	-	20.3	20.3	26.7	20.3	20.3	26.7
HVAC 16	-	20.2	20.2	26.7	20.2	20.2	26.7
HVAC 17	-	20.1	20.1	26.5	20.1	20.1	26.5
Lot 1	-	19.5	-	17.5	19.1	-	17.0
Lot 2	-	29.1	-	27.1	27.9	-	25.9
Lot 3	-	27.3	-	25.3	27.3	-	25.3
Ramp up to Rooftop Parking	-	17.8	-	15.7	17.1	-	15.0
Transformer	-	12.2	12.2	18.6	12.0	12.0	18.4
Trash Collection	-	11.5	-71.6	9.5	2.4	-72.0	0.4

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Trash Compactor 1	-	-10.2	-72.4	-12.2	-10.3	-72.6	-12.4
Trash Compactor 2	-	-9.3	-71.5	-11.3	-9.4	-71.7	-11.5
Truck Loading	-	34.6	35.4	41.7	43.0	43.0	49.5
21 1.Fl		45.5	45.3	51.7	45.6	45.6	45.4
Auto Maintenance Noise 1	-	10.5	-85.7	8.5	10.5	-85.7	8.5
Auto Maintenance Noise 2	-	10.6	-85.6	8.5	10.6	-85.6	8.5
Auto Maintenance Noise 3	-	13.6	-82.6	11.6	13.6	-82.6	11.6
Auto Maintenance Noise 4	-	10.7	-85.5	8.6	10.7	-85.5	8.6
Driveway 7 - Lawrence to Warehouse	-	18.6	-	16.6	12.1	-	10.1
Driveway B - Graves to Truck Docks	-	20.4	19.4	26.0	20.3	19.4	26.0
Driveway B - Graves to Truck Docks1	-	21.6	20.7	27.3	20.4	19.8	26.3
Driveway B - Truck Docks to Up Ramp	-	19.4	-	17.4	12.5	-	10.5
Driveway C - Saratoga to Truck Docks	-	45.4	45.3	51.7	45.4	45.2	51.7
Driveway D - Prospect to Parking Lot 2	-	0.9	-	-1.1	0.9	-	-1.1
Driveway E - Prospect to Warehouse	-	6.6	-	4.5	4.9	-	2.8
Forklift operations	-	11.9	11.9	18.3	11.0	-78.2	8.9
Graves - B to A	-	-0.2	-	-2.3	-0.3	-	-2.4
HVAC 1	-	9.0	9.0	15.4	14.0	14.0	20.4
HVAC 2	-	9.1	9.1	15.5	14.1	14.1	20.5
HVAC 3	-	9.3	9.3	15.7	14.3	14.3	20.7
HVAC 4	-	8.0	8.0	14.4	13.0	13.0	19.4
HVAC 5	-	8.3	8.3	14.7	13.3	13.3	19.7
HVAC 6	-	8.6	8.6	15.0	13.6	13.6	20.0
HVAC 7	-	9.0	9.0	15.4	14.0	14.0	20.4
HVAC 8	-	9.0	9.0	15.4	14.0	14.0	20.4
HVAC 9	-	9.2	9.2	15.6	14.2	14.2	20.6
HVAC 10	-	9.3	9.3	15.7	14.3	14.3	20.7
HVAC 11	-	9.5	9.5	15.9	14.5	14.5	20.9
HVAC 12	-	9.7	9.7	16.1	14.7	14.7	21.1
HVAC 13	-	9.9	9.9	16.3	14.9	14.9	21.3
HVAC 14	-	10.2	10.2	16.6	15.2	15.2	21.6
HVAC 15	-	1.3	1.3	7.7	1.3	1.3	7.7
HVAC 16	-	1.3	1.3	7.7	1.3	1.3	7.7
HVAC 17	-	1.2	1.2	7.6	1.2	1.2	7.6
Lot 1	-	14.7	-	12.7	14.7	-	12.7
Lot 2	-	26.9	-	24.9	26.9	-	24.9
Lot 3	-	24.7	-	22.6	24.7	-	22.6
Ramp up to Rooftop Parking	-	13.4	-	11.4	12.7	-	10.6
Transformer	-	7.0	7.0	13.4	7.0	7.0	13.4
Trash Collection	-	4.9	-78.3	2.8	-3.9	-78.3	-6.0
Trash Compactor 1	-	-16.1	-78.4	-18.1	-16.1	-78.4	-18.1
Trash Compactor 2	-	-16.0	-78.3	-18.0	-16.1	-78.4	-18.1
Truck Loading	-	16.5	17.3	23.6	26.2	26.2	32.6
21 2.Fl		46.7	46.4	52.8	46.8	46.8	46.5
Auto Maintenance Noise 1	-	10.5	-85.6	8.5	10.5	-85.6	8.5
Auto Maintenance Noise 2	-	10.6	-85.6	8.6	10.6	-85.6	8.6
Auto Maintenance Noise 3	-	13.7	-82.5	11.7	13.7	-82.5	11.7
Auto Maintenance Noise 4	-	10.8	-85.4	8.8	10.8	-85.4	8.8
Driveway 7 - Lawrence to Warehouse	-	21.2	-	19.1	16.7	-	14.6
Driveway B - Graves to Truck Docks	-	20.7	19.6	26.2	20.7	19.6	26.2
Driveway B - Graves to Truck Docks1	-	21.1	20.0	26.6	19.4	18.8	25.3
Driveway B - Truck Docks to Up Ramp	-	22.1	-	20.1	14.8	-	12.7
Driveway C - Saratoga to Truck Docks	-	46.5	46.3	52.7	46.5	46.3	52.7
Driveway D - Prospect to Parking Lot 2	-	0.0	-	-2.0	0.0	-	-2.0
Driveway E - Prospect to Warehouse	-	6.8	-	4.7	4.6	-	2.5
Forklift operations	-	15.3	15.3	21.7	14.4	-74.8	12.4
Graves - B to A	-	0.0	-	-2.1	-0.1	-	-2.2
HVAC 1	-	12.3	12.3	18.7	17.3	17.3	23.7
HVAC 2	-	12.3	12.3	18.7	17.3	17.3	23.7
HVAC 3	-	12.4	12.4	18.8	17.4	17.4	23.8
HVAC 4	-	10.6	10.6	17.0	15.6	15.6	22.0
HVAC 5	-	10.8	10.8	17.2	15.8	15.8	22.2
HVAC 6	-	11.0	11.0	17.5	16.0	16.0	22.5

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 7	-	11.3	11.3	17.7	16.3	16.3	22.7
HVAC 8	-	12.3	12.3	18.7	17.3	17.3	23.7
HVAC 9	-	12.4	12.4	18.8	17.4	17.4	23.8
HVAC 10	-	12.5	12.5	18.9	17.5	17.5	23.9
HVAC 11	-	12.6	12.6	19.0	17.6	17.6	24.0
HVAC 12	-	12.7	12.7	19.1	17.7	17.7	24.1
HVAC 13	-	12.8	12.8	19.2	17.8	17.8	24.2
HVAC 14	-	13.0	13.0	19.4	18.0	18.0	24.4
HVAC 15	-	5.8	5.8	12.2	5.8	5.8	12.2
HVAC 16	-	5.6	5.6	12.0	5.6	5.6	12.0
HVAC 17	-	5.3	5.3	11.7	5.3	5.3	11.7
Lot 1	-	17.3	-	15.3	16.9	-	14.9
Lot 2	-	27.8	-	25.7	27.8	-	25.8
Lot 3	-	24.6	-	22.5	24.6	-	22.5
Ramp up to Rooftop Parking	-	16.1	-	14.1	15.5	-	13.5
Transformer	-	10.5	10.5	16.9	10.2	10.2	16.6
Trash Collection	-	8.7	-74.5	6.6	-0.1	-74.5	-2.1
Trash Compactor 1	-	-12.8	-75.0	-14.8	-12.9	-75.2	-15.0
Trash Compactor 2	-	-12.7	-75.0	-14.8	-12.9	-75.2	-14.9
Truck Loading	-	24.3	25.1	31.5	30.3	30.3	36.7
22	1.Fl	44.4	44.2	50.6	44.4	44.4	44.2
Auto Maintenance Noise 1	-	9.7	-86.5	7.6	9.7	-86.5	7.6
Auto Maintenance Noise 2	-	9.7	-86.5	7.7	9.7	-86.5	7.7
Auto Maintenance Noise 3	-	12.8	-83.4	10.7	12.8	-83.4	10.7
Auto Maintenance Noise 4	-	9.8	-86.4	7.8	9.8	-86.4	7.8
Driveway 7 - Lawrence to Warehouse	-	17.3	-	15.2	10.6	-	8.5
Driveway B - Graves to Truck Docks	-	20.7	19.1	25.8	20.7	19.1	25.8
Driveway B - Graves to Truck Docks1	-	20.3	19.5	26.0	17.8	17.3	23.8
Driveway B - Truck Docks to Up Ramp	-	20.1	-	18.0	12.0	-	10.0
Driveway C - Saratoga to Truck Docks	-	44.2	44.1	50.5	44.2	44.1	50.5
Driveway D - Prospect to Parking Lot 2	-	-1.2	-	-3.3	-1.2	-	-3.2
Driveway E - Prospect to Warehouse	-	6.0	-	4.0	3.0	-	1.0
Forklift operations	-	10.5	10.5	16.9	9.6	-79.6	7.6
Graves - B to A	-	-3.4	-	-5.4	-3.6	-	-5.6
HVAC 1	-	5.6	5.6	12.0	10.6	10.6	17.0
HVAC 2	-	5.8	5.8	12.2	10.8	10.8	17.2
HVAC 3	-	6.0	6.0	12.4	11.0	11.0	17.4
HVAC 4	-	6.2	6.2	12.6	11.2	11.2	17.6
HVAC 5	-	6.5	6.5	12.9	11.5	11.5	17.9
HVAC 6	-	6.8	6.8	13.2	11.8	11.8	18.2
HVAC 7	-	7.2	7.2	13.6	12.2	12.2	18.6
HVAC 8	-	7.4	7.4	13.9	12.4	12.4	18.9
HVAC 9	-	7.6	7.6	14.0	12.6	12.6	19.0
HVAC 10	-	7.7	7.7	14.1	12.7	12.7	19.1
HVAC 11	-	7.9	7.9	14.3	12.9	12.9	19.3
HVAC 12	-	8.0	8.0	14.4	13.0	13.0	19.4
HVAC 13	-	8.2	8.2	14.6	13.2	13.2	19.6
HVAC 14	-	8.5	8.5	14.9	13.5	13.5	19.9
HVAC 15	-	0.4	0.4	6.8	0.4	0.4	6.8
HVAC 16	-	0.5	0.5	6.9	0.5	0.5	6.9
HVAC 17	-	0.3	0.3	6.7	0.3	0.3	6.7
Lot 1	-	14.1	-	12.1	14.1	-	12.1
Lot 2	-	25.9	-	23.8	25.9	-	23.8
Lot 3	-	19.5	-	17.5	19.5	-	17.5
Ramp up to Rooftop Parking	-	13.3	-	11.3	12.8	-	10.8
Transformer	-	5.8	5.8	12.2	5.8	5.8	12.2
Trash Collection	-	3.5	-79.6	1.5	-5.2	-79.6	-7.3
Trash Compactor 1	-	-17.4	-79.7	-19.5	-17.4	-79.7	-19.5
Trash Compactor 2	-	-17.4	-79.7	-19.4	-17.4	-79.7	-19.4
Truck Loading	-	15.0	15.8	22.1	24.7	24.7	31.1
22	2.Fl	45.7	45.4	51.8	45.7	45.7	45.5
Auto Maintenance Noise 1	-	9.7	-86.5	7.7	9.7	-86.5	7.7
Auto Maintenance Noise 2	-	9.8	-86.4	7.7	9.8	-86.4	7.7

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Auto Maintenance Noise 3	-	12.8	-83.3	10.8	12.8	-83.3	10.8
Auto Maintenance Noise 4	-	10.0	-86.2	7.9	10.0	-86.2	7.9
Driveway 7 - Lawrence to Warehouse	-	17.6	-	15.6	14.4	-	12.3
Driveway B - Graves to Truck Docks	-	18.8	17.6	24.2	18.9	17.7	24.3
Driveway B - Graves to Truck Docks1	-	19.8	18.6	25.2	17.6	17.1	23.5
Driveway B - Truck Docks to Up Ramp	-	18.5	-	16.4	13.5	-	11.5
Driveway C - Saratoga to Truck Docks	-	45.5	45.3	51.8	45.5	45.3	51.8
Driveway D - Prospect to Parking Lot 2	-	-1.2	-	-3.2	-1.2	-	-3.2
Driveway E - Prospect to Warehouse	-	3.4	-	1.3	2.9	-	0.8
Forklift operations	-	14.0	14.0	20.4	13.1	-76.1	11.0
Graves - B to A	-	-1.2	-	-3.2	-1.5	-	-3.5
HVAC 1	-	8.1	8.1	14.5	13.1	13.1	19.5
HVAC 2	-	8.9	8.9	15.3	13.9	13.9	20.3
HVAC 3	-	9.0	9.0	15.4	14.0	14.0	20.4
HVAC 4	-	9.1	9.1	15.5	14.1	14.1	20.5
HVAC 5	-	9.3	9.3	15.7	14.3	14.3	20.7
HVAC 6	-	9.5	9.5	15.9	14.5	14.5	20.9
HVAC 7	-	9.7	9.7	16.1	14.7	14.7	21.1
HVAC 8	-	10.6	10.6	17.0	15.6	15.6	22.0
HVAC 9	-	11.0	11.0	17.4	16.0	16.0	22.4
HVAC 10	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 11	-	11.2	11.2	17.6	16.2	16.2	22.6
HVAC 12	-	11.3	11.3	17.7	16.3	16.3	22.7
HVAC 13	-	11.4	11.4	17.8	16.4	16.4	22.8
HVAC 14	-	11.6	11.6	18.0	16.6	16.6	23.0
HVAC 15	-	4.9	4.9	11.3	4.9	4.9	11.3
HVAC 16	-	4.7	4.7	11.1	4.7	4.7	11.1
HVAC 17	-	4.5	4.5	10.9	4.5	4.5	10.9
Lot 1	-	17.0	-	14.9	16.4	-	14.4
Lot 2	-	26.6	-	24.6	26.6	-	24.6
Lot 3	-	20.6	-	18.5	20.6	-	18.5
Ramp up to Rooftop Parking	-	15.0	-	13.0	14.7	-	12.7
Transformer	-	9.4	9.4	15.8	9.0	9.0	15.4
Trash Collection	-	7.4	-75.8	5.3	-1.4	-75.8	-3.5
Trash Compactor 1	-	-14.1	-76.3	-16.1	-14.2	-76.5	-16.3
Trash Compactor 2	-	-14.0	-76.3	-16.1	-14.2	-76.5	-16.2
Truck Loading	-	23.0	23.8	30.1	28.8	28.8	35.2
23 (Prospect HS - Saratoga)	1.Fl	41.5	27.8	40.4	42.0	42.0	33.6
Auto Maintenance Noise 1	-	33.4	-62.8	31.4	33.4	-62.8	31.4
Auto Maintenance Noise 2	-	33.3	-62.9	31.2	33.3	-62.9	31.2
Auto Maintenance Noise 3	-	36.1	-60.0	34.1	36.1	-60.0	34.1
Auto Maintenance Noise 4	-	33.2	-63.0	31.2	33.2	-63.0	31.2
Driveway 7 - Lawrence to Warehouse	-	17.2	-	15.2	17.2	-	15.2
Driveway B - Graves to Truck Docks	-	11.4	10.3	16.9	11.3	10.3	16.9
Driveway B - Graves to Truck Docks1	-	10.7	10.0	16.5	10.7	10.0	16.5
Driveway B - Truck Docks to Up Ramp	-	14.6	-	12.5	14.6	-	12.5
Driveway C - Saratoga to Truck Docks	-	6.9	6.6	13.1	6.9	6.6	13.1
Driveway D - Prospect to Parking Lot 2	-	16.3	-	14.3	16.3	-	14.3
Driveway E - Prospect to Warehouse	-	11.3	-	9.3	11.3	-	9.3
Forklift operations	-	5.8	5.8	12.3	5.0	-84.2	3.0
Graves - B to A	-	6.7	-	4.7	6.7	-	4.7
HVAC 1	-	8.9	8.9	15.4	13.9	13.9	20.4
HVAC 2	-	8.8	8.8	15.2	13.8	13.8	20.2
HVAC 3	-	9.0	9.0	15.4	14.0	14.0	20.4
HVAC 4	-	8.8	8.8	15.2	13.8	13.8	20.2
HVAC 5	-	8.7	8.7	15.1	13.7	13.7	20.1
HVAC 6	-	8.7	8.7	15.2	13.7	13.7	20.2
HVAC 7	-	10.1	10.1	16.5	15.1	15.1	21.5
HVAC 8	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 9	-	11.2	11.2	17.6	16.2	16.2	22.6
HVAC 10	-	11.4	11.4	17.8	16.4	16.4	22.8
HVAC 11	-	11.4	11.4	17.8	16.4	16.4	22.8
HVAC 12	-	11.5	11.5	17.9	16.5	16.5	22.9
HVAC 13	-	13.5	13.5	20.0	18.5	18.5	25.0

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 14	-	13.7	13.7	20.1	18.7	18.7	25.1
HVAC 15	-	18.0	18.0	24.4	18.0	18.0	24.4
HVAC 16	-	19.3	19.3	25.7	19.3	19.3	25.7
HVAC 17	-	17.6	17.6	24.0	17.6	17.6	24.0
Lot 1	-	32.3	-	30.2	32.3	-	30.2
Lot 2	-	27.5	-	25.5	27.5	-	25.5
Lot 3	-	26.8	-	24.7	26.8	-	24.7
Ramp up to Rooftop Parking	-	9.6	-	7.6	9.6	-	7.6
Transformer	-	-0.9	-0.9	5.5	-0.9	-0.9	5.5
Trash Collection	-	-1.5	-84.7	-3.6	-8.7	-83.1	-10.8
Trash Compactor 1	-	-24.0	-86.3	-26.0	-24.0	-86.3	-26.0
Trash Compactor 2	-	-23.9	-86.2	-25.9	-23.9	-86.2	-25.9
Truck Loading	-	22.1	22.9	29.2	31.9	31.9	38.3
23 (Prospect HS - Saratoga)	2.Fl	43.1	29.8	42.2	43.5	43.5	34.6
Auto Maintenance Noise 1	-	34.9	-61.3	32.9	34.9	-61.3	32.9
Auto Maintenance Noise 2	-	35.0	-61.2	33.0	35.0	-61.2	33.0
Auto Maintenance Noise 3	-	38.1	-58.1	36.1	38.1	-58.1	36.1
Auto Maintenance Noise 4	-	35.3	-60.9	33.3	35.3	-60.9	33.3
Driveway 7 - Lawrence to Warehouse	-	18.9	-	16.9	18.9	-	16.9
Driveway B - Graves to Truck Docks	-	11.0	9.9	16.5	11.0	9.9	16.5
Driveway B - Graves to Truck Docks1	-	10.5	9.5	16.0	10.3	9.3	15.9
Driveway B - Truck Docks to Up Ramp	-	15.6	-	13.6	15.6	-	13.6
Driveway C - Saratoga to Truck Docks	-	8.4	8.1	14.6	8.4	8.1	14.6
Driveway D - Prospect to Parking Lot 2	-	18.1	-	16.1	18.1	-	16.1
Driveway E - Prospect to Warehouse	-	13.0	-	10.9	13.0	-	10.9
Forklift operations	-	6.7	6.7	13.1	5.8	-83.4	3.8
Graves - B to A	-	7.2	-	5.1	7.2	-	5.1
HVAC 1	-	10.9	10.9	17.3	15.9	15.9	22.3
HVAC 2	-	10.7	10.7	17.1	15.7	15.7	22.1
HVAC 3	-	10.9	10.9	17.3	15.9	15.9	22.3
HVAC 4	-	10.7	10.7	17.1	15.7	15.7	22.1
HVAC 5	-	10.4	10.4	16.8	15.4	15.4	21.8
HVAC 6	-	10.4	10.4	16.8	15.4	15.4	21.8
HVAC 7	-	10.5	10.5	16.9	15.5	15.5	21.9
HVAC 8	-	13.6	13.6	20.0	18.6	18.6	25.0
HVAC 9	-	13.6	13.6	20.1	18.6	18.6	25.1
HVAC 10	-	13.8	13.8	20.2	18.8	18.8	25.2
HVAC 11	-	13.8	13.8	20.2	18.8	18.8	25.2
HVAC 12	-	13.9	13.9	20.3	18.9	18.9	25.3
HVAC 13	-	14.0	14.0	20.4	19.0	19.0	25.4
HVAC 14	-	14.1	14.1	20.5	19.1	19.1	25.5
HVAC 15	-	21.9	21.9	28.3	21.9	21.9	28.3
HVAC 16	-	22.6	22.6	29.0	22.6	22.6	29.0
HVAC 17	-	21.4	21.4	27.8	21.4	21.4	27.8
Lot 1	-	32.7	-	30.7	32.7	-	30.7
Lot 2	-	28.3	-	26.3	28.3	-	26.3
Lot 3	-	28.4	-	26.3	28.4	-	26.3
Ramp up to Rooftop Parking	-	10.1	-	8.1	10.1	-	8.1
Transformer	-	-0.9	-0.9	5.5	-0.9	-0.9	5.5
Trash Collection	-	-0.8	-83.9	-2.8	-7.3	-81.6	-9.3
Trash Compactor 1	-	-24.0	-86.3	-26.0	-24.0	-86.3	-26.0
Trash Compactor 2	-	-23.9	-86.2	-25.9	-23.9	-86.2	-25.9
Truck Loading	-	22.2	23.0	29.3	32.0	32.0	38.4
24 (Commerical - Saratoga)	1.Fl	40.6	31.0	40.8	41.9	41.9	37.2
Auto Maintenance Noise 1	-	15.4	-80.8	13.4	15.4	-80.8	13.4
Auto Maintenance Noise 2	-	15.8	-80.4	13.8	15.8	-80.4	13.8
Auto Maintenance Noise 3	-	19.3	-76.9	17.3	19.3	-76.9	17.3
Auto Maintenance Noise 4	-	16.8	-79.4	14.7	16.8	-79.4	14.7
Driveway 7 - Lawrence to Warehouse	-	27.9	-	25.8	27.9	-	25.8
Driveway B - Graves to Truck Docks	-	13.7	12.5	19.1	13.7	12.5	19.1
Driveway B - Graves to Truck Docks1	-	16.2	15.1	21.7	15.6	14.5	21.1
Driveway B - Truck Docks to Up Ramp	-	26.3	-	24.3	26.3	-	24.3
Driveway C - Saratoga to Truck Docks	-	12.9	12.7	19.1	12.9	12.7	19.1

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Driveway D - Prospect to Parking Lot 2	-	30.2	-	28.1	30.2	-	28.1
Driveway E - Prospect to Warehouse	-	25.6	-	23.5	25.6	-	23.5
Forklift operations	-	12.3	12.3	18.7	11.5	-77.7	9.4
Graves - B to A	-	7.6	-	5.6	7.6	-	5.6
HVAC 1	-	13.1	13.1	19.6	18.1	18.1	24.6
HVAC 2	-	13.1	13.1	19.5	18.1	18.1	24.5
HVAC 3	-	13.3	13.3	19.7	18.3	18.3	24.7
HVAC 4	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 5	-	13.1	13.1	19.5	18.1	18.1	24.5
HVAC 6	-	13.1	13.1	19.5	18.1	18.1	24.5
HVAC 7	-	13.2	13.2	19.6	18.2	18.2	24.6
HVAC 8	-	14.7	14.7	21.1	19.7	19.7	26.1
HVAC 9	-	14.8	14.8	21.2	19.8	19.8	26.2
HVAC 10	-	14.9	14.9	21.3	19.9	19.9	26.3
HVAC 11	-	15.0	15.0	21.4	20.0	20.0	26.4
HVAC 12	-	15.1	15.1	21.5	20.1	20.1	26.5
HVAC 13	-	15.2	15.2	21.6	20.2	20.2	26.6
HVAC 14	-	15.3	15.3	21.7	20.3	20.3	26.7
HVAC 15	-	19.9	19.9	26.3	19.9	19.9	26.3
HVAC 16	-	21.2	21.2	27.6	21.2	21.2	27.6
HVAC 17	-	21.1	21.1	27.6	21.1	21.1	27.6
Lot 1	-	33.1	-	31.0	33.1	-	31.0
Lot 2	-	36.4	-	34.4	36.4	-	34.4
Lot 3	-	29.9	-	27.8	29.9	-	27.8
Ramp up to Rooftop Parking	-	24.4	-	22.4	24.4	-	22.4
Transformer	-	2.7	2.7	9.1	2.7	2.7	9.1
Trash Collection	-	3.4	-79.7	1.4	-3.8	-78.2	-5.9
Trash Compactor 1	-	-20.1	-82.4	-22.2	-20.1	-82.4	-22.2
Trash Compactor 2	-	-20.0	-82.3	-22.1	-20.0	-82.3	-22.1
Truck Loading	-	25.8	26.6	32.9	35.6	35.6	42.0
24 (Commerical - Saratoga)	2.Fl	41.7	34.1	42.8	43.5	43.5	40.0
Auto Maintenance Noise 1	-	15.4	-80.8	13.4	15.4	-80.8	13.4
Auto Maintenance Noise 2	-	15.9	-80.3	13.8	15.9	-80.3	13.8
Auto Maintenance Noise 3	-	19.4	-76.8	17.3	19.4	-76.8	17.3
Auto Maintenance Noise 4	-	16.8	-79.4	14.8	16.8	-79.4	14.8
Driveway 7 - Lawrence to Warehouse	-	28.6	-	26.5	28.6	-	26.5
Driveway B - Graves to Truck Docks	-	13.1	11.9	18.5	13.1	11.9	18.5
Driveway B - Graves to Truck Docks1	-	16.5	15.3	21.9	15.8	14.6	21.2
Driveway B - Truck Docks to Up Ramp	-	27.0	-	24.9	27.0	-	24.9
Driveway C - Saratoga to Truck Docks	-	13.4	13.2	19.6	13.4	13.2	19.6
Driveway D - Prospect to Parking Lot 2	-	32.0	-	30.0	32.0	-	30.0
Driveway E - Prospect to Warehouse	-	26.9	-	24.8	26.9	-	24.8
Forklift operations	-	15.3	15.3	21.7	14.4	-74.8	12.4
Graves - B to A	-	7.6	-	5.6	7.6	-	5.6
HVAC 1	-	15.3	15.3	21.8	20.3	20.3	26.8
HVAC 2	-	15.3	15.3	21.7	20.3	20.3	26.7
HVAC 3	-	15.5	15.5	21.9	20.5	20.5	26.9
HVAC 4	-	15.3	15.3	21.7	20.3	20.3	26.7
HVAC 5	-	15.2	15.2	21.6	20.2	20.2	26.6
HVAC 6	-	15.2	15.2	21.6	20.2	20.2	26.6
HVAC 7	-	15.3	15.3	21.7	20.3	20.3	26.7
HVAC 8	-	17.4	17.4	23.8	22.4	22.4	28.8
HVAC 9	-	17.5	17.5	23.9	22.5	22.5	28.9
HVAC 10	-	17.7	17.7	24.1	22.7	22.7	29.1
HVAC 11	-	17.8	17.8	24.2	22.8	22.8	29.2
HVAC 12	-	18.0	18.0	24.4	23.0	23.0	29.4
HVAC 13	-	18.2	18.2	24.6	23.2	23.2	29.6
HVAC 14	-	18.6	18.6	25.0	23.6	23.6	30.0
HVAC 15	-	24.6	24.6	31.0	24.6	24.6	31.0
HVAC 16	-	25.3	25.3	31.7	25.3	25.3	31.7
HVAC 17	-	24.9	24.9	31.3	24.9	24.9	31.3
Lot 1	-	34.1	-	32.0	34.1	-	32.0
Lot 2	-	36.2	-	34.2	36.2	-	34.2
Lot 3	-	32.3	-	30.3	32.3	-	30.3

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Ramp up to Rooftop Parking	-	24.4	-	22.4	24.4	-	22.4
Transformer	-	2.8	2.8	9.2	2.8	2.8	9.2
Trash Collection	-	4.6	-78.5	2.6	-2.5	-76.9	-4.6
Trash Compactor 1	-	-20.1	-82.4	-22.2	-20.1	-82.4	-22.2
Trash Compactor 2	-	-20.0	-82.3	-22.0	-20.0	-82.3	-22.0
Truck Loading	-	28.6	29.4	35.7	38.4	38.4	44.8
25 (Commerical - Saratoga) 1.Fl		41.2	39.4	46.1	46.9	46.9	46.4
Auto Maintenance Noise 1	-	14.2	-82.0	12.1	14.2	-82.0	12.1
Auto Maintenance Noise 2	-	14.7	-81.5	12.7	14.7	-81.5	12.7
Auto Maintenance Noise 3	-	18.7	-77.5	16.6	18.7	-77.5	16.6
Auto Maintenance Noise 4	-	17.5	-78.7	15.4	17.5	-78.7	15.4
Driveway 7 - Lawrence to Warehouse	-	21.0	-	19.0	21.0	-	19.0
Driveway B - Graves to Truck Docks	-	15.3	14.1	20.7	15.3	14.2	20.8
Driveway B - Graves to Truck Docks1	-	22.3	21.2	27.8	21.8	20.7	27.3
Driveway B - Truck Docks to Up Ramp	-	29.4	-	27.4	29.4	-	27.4
Driveway C - Saratoga to Truck Docks	-	14.6	14.2	20.7	14.6	14.2	20.7
Driveway D - Prospect to Parking Lot 2	-	21.8	-	19.8	21.8	-	19.8
Driveway E - Prospect to Warehouse	-	28.7	-	26.7	28.7	-	26.7
Forklift operations	-	20.3	20.3	26.7	19.5	-69.7	17.5
Graves - B to A	-	1.9	-	-0.1	1.9	-	-0.1
HVAC 1	-	24.3	24.3	30.8	29.3	29.3	35.8
HVAC 2	-	24.4	24.4	30.8	29.4	29.4	35.8
HVAC 3	-	24.4	24.4	30.8	29.4	29.4	35.8
HVAC 4	-	24.4	24.4	30.8	29.4	29.4	35.8
HVAC 5	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 6	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 7	-	24.5	24.5	30.9	29.5	29.5	35.9
HVAC 8	-	24.3	24.3	30.7	29.3	29.3	35.7
HVAC 9	-	24.4	24.4	30.8	29.4	29.4	35.8
HVAC 10	-	23.9	23.9	30.3	28.9	28.9	35.3
HVAC 11	-	23.9	23.9	30.3	28.9	28.9	35.3
HVAC 12	-	23.9	23.9	30.3	28.9	28.9	35.3
HVAC 13	-	23.9	23.9	30.3	28.9	28.9	35.3
HVAC 14	-	24.0	24.0	30.4	29.0	29.0	35.4
HVAC 15	-	24.4	24.4	30.9	24.4	24.4	30.9
HVAC 16	-	24.1	24.1	30.5	24.1	24.1	30.5
HVAC 17	-	23.7	23.7	30.1	23.7	23.7	30.1
Lot 1	-	29.5	-	27.5	29.5	-	27.5
Lot 2	-	28.7	-	26.7	28.7	-	26.7
Lot 3	-	31.2	-	29.2	31.2	-	29.2
Ramp up to Rooftop Parking	-	21.4	-	19.3	21.4	-	19.3
Transformer	-	6.8	6.8	13.2	6.8	6.8	13.2
Trash Collection	-	16.4	-66.7	14.4	7.8	-66.6	5.7
Trash Compactor 1	-	-7.2	-69.5	-9.3	-7.2	-69.5	-9.3
Trash Compactor 2	-	-17.8	-80.1	-19.9	-17.8	-80.1	-19.9
Truck Loading	-	35.1	35.9	42.2	44.9	44.9	51.3
25 (Commerical - Saratoga) 2.Fl		41.9	39.7	46.5	47.3	47.3	46.7
Auto Maintenance Noise 1	-	14.2	-82.0	12.1	14.2	-82.0	12.1
Auto Maintenance Noise 2	-	14.7	-81.5	12.7	14.7	-81.5	12.7
Auto Maintenance Noise 3	-	18.7	-77.5	16.7	18.7	-77.5	16.7
Auto Maintenance Noise 4	-	17.6	-78.6	15.5	17.6	-78.6	15.5
Driveway 7 - Lawrence to Warehouse	-	21.9	-	19.9	21.9	-	19.9
Driveway B - Graves to Truck Docks	-	16.0	15.0	21.5	16.0	15.0	21.6
Driveway B - Graves to Truck Docks1	-	22.6	21.5	28.1	22.2	21.0	27.6
Driveway B - Truck Docks to Up Ramp	-	30.2	-	28.1	30.2	-	28.1
Driveway C - Saratoga to Truck Docks	-	16.5	16.2	22.7	16.5	16.2	22.7
Driveway D - Prospect to Parking Lot 2	-	23.4	-	21.4	23.4	-	21.4
Driveway E - Prospect to Warehouse	-	30.3	-	28.2	30.3	-	28.2
Forklift operations	-	22.0	22.0	28.4	21.2	-68.0	19.1
Graves - B to A	-	1.5	-	-0.6	1.5	-	-0.5
HVAC 1	-	24.6	24.6	31.0	29.6	29.6	36.0
HVAC 2	-	24.6	24.6	31.0	29.6	29.6	36.0
HVAC 3	-	24.6	24.6	31.0	29.6	29.6	36.0

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 4	-	24.6	24.6	31.0	29.6	29.6	36.0
HVAC 5	-	24.7	24.7	31.1	29.7	29.7	36.1
HVAC 6	-	24.7	24.7	31.1	29.7	29.7	36.1
HVAC 7	-	24.7	24.7	31.1	29.7	29.7	36.1
HVAC 8	-	24.5	24.5	31.0	29.5	29.5	36.0
HVAC 9	-	24.6	24.6	31.0	29.6	29.6	36.0
HVAC 10	-	24.2	24.2	30.6	29.2	29.2	35.6
HVAC 11	-	24.2	24.2	30.6	29.2	29.2	35.6
HVAC 12	-	24.2	24.2	30.6	29.2	29.2	35.6
HVAC 13	-	24.2	24.2	30.7	29.2	29.2	35.7
HVAC 14	-	24.3	24.3	30.7	29.3	29.3	35.7
HVAC 15	-	24.8	24.8	31.2	24.8	24.8	31.2
HVAC 16	-	24.4	24.4	30.8	24.4	24.4	30.8
HVAC 17	-	23.9	23.9	30.3	23.9	23.9	30.3
Lot 1	-	30.9	-	28.9	30.9	-	28.9
Lot 2	-	29.8	-	27.7	29.8	-	27.7
Lot 3	-	32.2	-	30.2	32.2	-	30.2
Ramp up to Rooftop Parking	-	22.5	-	20.4	22.5	-	20.4
Transformer	-	10.1	10.1	16.5	10.1	10.1	16.5
Trash Collection	-	18.9	-64.3	16.8	10.2	-64.2	8.1
Trash Compactor 1	-	-5.3	-67.6	-7.4	-5.3	-67.6	-7.4
Trash Compactor 2	-	-12.9	-75.2	-14.9	-12.9	-75.2	-14.9
Truck Loading	-	35.5	36.3	42.6	45.3	45.3	51.7
26 (Residential - Saratoga)	1.Fl	40.0	24.5	38.6	40.3	40.3	30.1
Auto Maintenance Noise 1	-	32.2	-64.0	30.1	32.2	-64.0	30.1
Auto Maintenance Noise 2	-	32.4	-63.8	30.3	32.4	-63.8	30.3
Auto Maintenance Noise 3	-	35.7	-60.5	33.6	35.7	-60.5	33.6
Auto Maintenance Noise 4	-	32.9	-63.3	30.9	32.9	-63.3	30.9
Driveway 7 - Lawrence to Warehouse	-	10.9	-	8.8	10.9	-	8.8
Driveway B - Graves to Truck Docks	-	7.9	6.8	13.4	7.9	6.8	13.4
Driveway B - Graves to Truck Docks1	-	3.3	2.3	8.9	3.3	2.3	8.9
Driveway B - Truck Docks to Up Ramp	-	3.9	-	1.8	3.9	-	1.8
Driveway C - Saratoga to Truck Docks	-	4.4	4.1	10.6	4.4	4.1	10.6
Driveway D - Prospect to Parking Lot 2	-	4.6	-	2.6	4.6	-	2.6
Driveway E - Prospect to Warehouse	-	2.8	-	0.8	2.8	-	0.8
Forklift operations	-	5.5	5.5	12.0	4.7	-84.5	2.7
Graves - B to A	-	-0.4	-	-2.5	-0.4	-	-2.5
HVAC 1	-	7.4	7.4	13.8	12.4	12.4	18.8
HVAC 2	-	7.3	7.3	13.7	12.3	12.3	18.7
HVAC 3	-	7.4	7.4	13.8	12.4	12.4	18.8
HVAC 4	-	7.3	7.3	13.7	12.3	12.3	18.7
HVAC 5	-	7.2	7.2	13.6	12.2	12.2	18.6
HVAC 6	-	7.1	7.1	13.6	12.1	12.1	18.6
HVAC 7	-	7.2	7.2	13.6	12.2	12.2	18.6
HVAC 8	-	8.9	8.9	15.3	13.9	13.9	20.3
HVAC 9	-	8.9	8.9	15.4	13.9	13.9	20.4
HVAC 10	-	9.0	9.0	15.4	14.0	14.0	20.4
HVAC 11	-	9.1	9.1	15.5	14.1	14.1	20.5
HVAC 12	-	9.1	9.1	15.5	14.1	14.1	20.5
HVAC 13	-	9.2	9.2	15.6	14.2	14.2	20.6
HVAC 14	-	9.3	9.3	15.7	14.3	14.3	20.7
HVAC 15	-	14.4	14.4	20.8	14.4	14.4	20.8
HVAC 16	-	15.8	15.8	22.2	15.8	15.8	22.2
HVAC 17	-	14.6	14.6	21.1	14.6	14.6	21.1
Lot 1	-	24.2	-	22.2	24.2	-	22.2
Lot 2	-	23.5	-	21.5	23.5	-	21.5
Lot 3	-	23.0	-	21.0	23.0	-	21.0
Ramp up to Rooftop Parking	-	5.3	-	3.3	5.3	-	3.3
Transformer	-	-2.8	-2.8	3.6	-2.8	-2.8	3.6
Trash Collection	-	-2.8	-85.9	-4.8	-9.9	-84.3	-12.0
Trash Compactor 1	-	-25.9	-88.2	-27.9	-25.9	-88.2	-27.9
Trash Compactor 2	-	-25.8	-88.1	-27.9	-25.8	-88.1	-27.9
Truck Loading	-	18.2	19.0	25.3	28.0	28.0	34.4

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP Day	Level w/o NP Night	Level w/o NP Ldn	Level w NP Day	Level w NP Night	Level w NP Ldn
		dB(A)			dB(A)		
27 (Residential - Saratoga) 1.Fl		36.6	29.0	37.7	39.1	39.1	36.2
Auto Maintenance Noise 1	-	27.9	-68.3	25.8	27.9	-68.3	25.8
Auto Maintenance Noise 2	-	27.8	-68.4	25.7	27.8	-68.4	25.7
Auto Maintenance Noise 3	-	30.7	-65.5	28.6	30.7	-65.5	28.6
Auto Maintenance Noise 4	-	27.6	-68.6	25.5	27.6	-68.6	25.5
Driveway 7 - Lawrence to Warehouse	-	10.3	-	8.3	10.3	-	8.3
Driveway B - Graves to Truck Docks	-	9.1	7.8	14.4	8.7	7.5	14.1
Driveway B - Graves to Truck Docks1	-	7.3	6.3	12.9	7.0	6.0	12.6
Driveway B - Truck Docks to Up Ramp	-	7.9	-	5.9	7.9	-	5.9
Driveway C - Saratoga to Truck Docks	-	6.3	5.8	12.3	6.3	5.8	12.3
Driveway D - Prospect to Parking Lot 2	-	5.8	-	3.7	5.8	-	3.7
Driveway E - Prospect to Warehouse	-	4.5	-	2.5	4.5	-	2.5
Forklift operations	-	14.9	14.9	21.3	14.0	-75.2	12.0
Graves - B to A	-	-0.2	-	-2.3	-0.2	-	-2.3
HVAC 1	-	9.5	9.5	15.9	14.5	14.5	20.9
HVAC 2	-	9.5	9.5	15.9	14.5	14.5	20.9
HVAC 3	-	9.6	9.6	16.0	14.6	14.6	21.0
HVAC 4	-	9.5	9.5	15.9	14.5	14.5	20.9
HVAC 5	-	9.4	9.4	15.8	14.4	14.4	20.8
HVAC 6	-	9.3	9.3	15.7	14.3	14.3	20.7
HVAC 7	-	9.3	9.3	15.7	14.3	14.3	20.7
HVAC 8	-	11.1	11.1	17.5	16.1	16.1	22.5
HVAC 9	-	11.1	11.1	17.6	16.1	16.1	22.6
HVAC 10	-	11.2	11.2	17.6	16.2	16.2	22.6
HVAC 11	-	11.3	11.3	17.7	16.3	16.3	22.7
HVAC 12	-	11.3	11.3	17.8	16.3	16.3	22.8
HVAC 13	-	11.4	11.4	17.8	16.4	16.4	22.8
HVAC 14	-	15.4	15.4	21.8	20.4	20.4	26.8
HVAC 15	-	15.2	15.2	21.6	15.2	15.2	21.6
HVAC 16	-	17.1	17.1	23.5	17.1	17.1	23.5
HVAC 17	-	17.4	17.4	23.8	17.4	17.4	23.8
Lot 1	-	25.6	-	23.6	25.6	-	23.6
Lot 2	-	24.0	-	22.0	24.0	-	22.0
Lot 3	-	24.1	-	22.1	24.1	-	22.1
Ramp up to Rooftop Parking	-	7.1	-	5.1	7.1	-	5.1
Transformer	-	-2.1	-2.1	4.3	-2.1	-2.1	4.3
Trash Collection	-	-0.9	-84.0	-2.9	6.9	-67.5	4.8
Trash Compactor 1	-	-25.2	-87.5	-27.2	-25.2	-87.5	-27.2
Trash Compactor 2	-	-25.1	-87.4	-27.2	-25.1	-87.4	-27.2
Truck Loading	-	25.6	26.4	32.7	35.4	35.4	41.8
28 (Residential - Saratoga) 1.Fl		33.2	31.2	38.0	38.6	38.6	38.1
Auto Maintenance Noise 1	-	8.8	-87.4	6.8	8.8	-87.4	6.8
Auto Maintenance Noise 2	-	9.0	-87.2	7.0	9.0	-87.2	7.0
Auto Maintenance Noise 3	-	12.3	-83.9	10.3	12.3	-83.9	10.3
Auto Maintenance Noise 4	-	9.6	-86.6	7.5	9.6	-86.6	7.5
Driveway 7 - Lawrence to Warehouse	-	11.0	-	9.0	11.0	-	9.0
Driveway B - Graves to Truck Docks	-	8.8	7.5	14.1	8.7	7.5	14.1
Driveway B - Graves to Truck Docks1	-	5.0	3.6	10.2	4.9	3.5	10.2
Driveway B - Truck Docks to Up Ramp	-	9.4	-	7.3	9.4	-	7.3
Driveway C - Saratoga to Truck Docks	-	7.8	7.4	13.9	7.8	7.4	13.9
Driveway D - Prospect to Parking Lot 2	-	7.9	-	5.8	7.9	-	5.8
Driveway E - Prospect to Warehouse	-	5.9	-	3.8	5.9	-	3.8
Forklift operations	-	15.8	15.8	22.2	15.0	-74.2	12.9
Graves - B to A	-	-0.6	-	-2.7	-0.6	-	-2.7
HVAC 1	-	14.1	14.1	20.5	19.1	19.1	25.5
HVAC 2	-	14.1	14.1	20.5	19.1	19.1	25.5
HVAC 3	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 4	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 5	-	14.1	14.1	20.6	19.1	19.1	25.6
HVAC 6	-	14.2	14.2	20.6	19.2	19.2	25.6
HVAC 7	-	14.4	14.4	20.8	19.4	19.4	25.8
HVAC 8	-	14.7	14.7	21.1	19.7	19.7	26.1
HVAC 9	-	14.8	14.8	21.2	19.8	19.8	26.2

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 10	-	14.8	14.8	21.2	19.8	19.8	26.2
HVAC 11	-	14.8	14.8	21.3	19.8	19.8	26.3
HVAC 12	-	14.9	14.9	21.3	19.9	19.9	26.3
HVAC 13	-	14.9	14.9	21.3	19.9	19.9	26.3
HVAC 14	-	15.0	15.0	21.4	20.0	20.0	26.4
HVAC 15	-	19.2	19.2	25.6	19.2	19.2	25.6
HVAC 16	-	19.5	19.5	25.9	19.5	19.5	25.9
HVAC 17	-	19.4	19.4	25.9	19.4	19.4	25.9
Lot 1	-	23.8	-	21.8	23.8	-	21.8
Lot 2	-	22.6	-	20.5	22.6	-	20.5
Lot 3	-	25.1	-	23.1	25.1	-	23.1
Ramp up to Rooftop Parking	-	8.0	-	6.0	8.0	-	6.0
Transformer	-	-2.5	-2.5	3.9	-2.5	-2.5	3.9
Trash Collection	-	15.6	-67.6	13.5	2.5	-71.9	0.4
Trash Compactor 1	-	-25.2	-87.5	-27.3	-25.2	-87.5	-27.3
Trash Compactor 2	-	-25.5	-87.8	-27.6	-25.5	-87.8	-27.6
Truck Loading	-	27.1	27.9	34.2	36.9	36.9	43.3
E Commercial Property - 1	1.Fl	54.1	53.0	59.6	0.0	0.0	0.0
Auto Maintenance Noise 1	-	17.0	-79.2	14.9	17.0	-79.2	15.0
Auto Maintenance Noise 2	-	16.9	-79.3	14.8	16.9	-79.3	14.9
Auto Maintenance Noise 3	-	19.7	-76.5	17.7	19.7	-76.4	17.7
Auto Maintenance Noise 4	-	16.5	-79.7	14.5	16.6	-79.6	14.6
Driveway 7 - Lawrence to Warehouse	-	0.5	-	-1.6	-3.4	-	-5.5
Driveway B - Graves to Truck Docks	-	48.0	46.6	53.2	44.6	43.0	49.7
Driveway B - Graves to Truck Docks1	-	48.7	47.3	54.0	37.3	36.4	42.9
Driveway B - Truck Docks to Up Ramp	-	28.7	-	26.6	19.4	-	17.3
Driveway C - Saratoga to Truck Docks	-	38.0	37.7	44.2	36.8	36.5	43.0
Driveway D - Prospect to Parking Lot 2	-	14.5	-	12.5	4.1	-	2.0
Driveway E - Prospect to Warehouse	-	16.7	-	14.7	10.2	-	8.1
Forklift operations	-	45.9	45.9	52.3	40.7	-48.5	38.7
Graves - B to A	-	29.2	-	27.1	15.7	-	13.7
HVAC 1	-	25.7	25.7	32.1	30.4	30.4	36.8
HVAC 2	-	26.0	26.0	32.4	30.6	30.6	37.0
HVAC 3	-	26.2	26.2	32.7	30.9	30.9	37.3
HVAC 4	-	26.5	26.5	32.9	31.0	31.0	37.5
HVAC 5	-	22.5	22.5	29.0	31.3	31.3	37.7
HVAC 6	-	23.2	23.2	29.6	32.0	32.0	38.4
HVAC 7	-	24.1	24.1	30.5	29.4	29.4	35.9
HVAC 8	-	26.2	26.2	32.6	31.0	31.0	37.4
HVAC 9	-	26.8	26.8	33.2	31.6	31.6	38.0
HVAC 10	-	27.5	27.5	33.9	32.2	32.2	38.6
HVAC 11	-	28.4	28.4	34.8	33.6	33.6	40.0
HVAC 12	-	29.4	29.4	35.8	33.9	33.9	40.3
HVAC 13	-	30.8	30.8	37.2	37.6	37.6	44.1
HVAC 14	-	33.9	33.9	40.3	37.5	37.5	43.9
HVAC 15	-	18.5	18.5	24.9	18.6	18.6	25.0
HVAC 16	-	18.8	18.8	25.2	18.8	18.8	25.2
HVAC 17	-	18.7	18.7	25.1	18.7	18.7	25.1
Lot 1	-	22.8	-	20.8	20.9	-	18.9
Lot 2	-	19.6	-	17.5	19.4	-	17.4
Lot 3	-	36.1	-	34.1	36.4	-	34.3
Ramp up to Rooftop Parking	-	5.1	-	3.1	5.2	-	3.1
Transformer	-	45.6	45.6	52.0	38.5	38.5	44.9
Trash Collection	-	41.9	-41.2	39.9	29.9	-44.5	27.9
Trash Compactor 1	-	20.7	-41.6	18.6	14.7	-47.6	12.6
Trash Compactor 2	-	19.9	-42.3	17.9	14.3	-48.0	12.3
Truck Loading	-	40.0	40.8	47.1	47.5	47.5	53.9
E Commercial Property - 2	1.Fl	56.3	55.3	61.9	0.0	0.0	0.0
Auto Maintenance Noise 1	-	17.1	-79.1	15.0	17.0	-79.2	14.9
Auto Maintenance Noise 2	-	17.0	-79.2	15.0	16.9	-79.3	14.9
Auto Maintenance Noise 3	-	19.9	-76.3	17.8	21.9	-74.3	19.8
Auto Maintenance Noise 4	-	16.8	-79.4	14.7	18.8	-77.4	16.7
Driveway 7 - Lawrence to Warehouse	-	-1.6	-	-3.6	1.4	-	-0.6

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Driveway B - Graves to Truck Docks	-	42.3	40.9	47.6	38.0	36.5	43.2
Driveway B - Graves to Truck Docks1	-	49.3	47.9	54.6	37.9	37.1	43.6
Driveway B - Truck Docks to Up Ramp	-	32.9	-	30.9	24.0	-	22.0
Driveway C - Saratoga to Truck Docks	-	41.3	40.9	47.4	37.4	37.1	43.5
Driveway D - Prospect to Parking Lot 2	-	14.8	-	12.8	10.4	-	8.3
Driveway E - Prospect to Warehouse	-	20.6	-	18.6	14.2	-	12.2
Forklift operations	-	50.5	50.5	56.9	43.6	-45.6	41.5
Graves - B to A	-	25.1	-	23.1	14.0	-	11.9
HVAC 1	-	29.4	29.4	35.8	35.5	35.5	41.9
HVAC 2	-	30.5	30.5	36.9	35.7	35.7	42.2
HVAC 3	-	30.6	30.6	37.1	36.0	36.0	42.4
HVAC 4	-	31.6	31.6	38.0	39.5	39.5	46.0
HVAC 5	-	32.8	32.8	39.2	40.7	40.7	47.2
HVAC 6	-	34.1	34.1	40.6	40.6	40.6	47.0
HVAC 7	-	37.2	37.2	43.6	40.3	40.3	46.7
HVAC 8	-	31.3	31.3	37.7	35.1	35.1	41.5
HVAC 9	-	32.1	32.1	38.5	37.2	37.2	43.6
HVAC 10	-	34.2	34.2	40.6	41.5	41.5	48.0
HVAC 11	-	38.8	38.8	45.2	41.2	41.2	47.6
HVAC 12	-	38.5	38.5	44.9	41.0	41.0	47.4
HVAC 13	-	38.2	38.2	44.6	41.1	41.1	47.5
HVAC 14	-	37.9	37.9	44.3	40.9	40.9	47.3
HVAC 15	-	18.7	18.7	25.1	22.5	22.5	28.9
HVAC 16	-	18.9	18.9	25.3	19.1	19.1	25.5
HVAC 17	-	18.8	18.8	25.2	19.0	19.0	25.4
Lot 1	-	21.2	-	19.1	21.0	-	18.9
Lot 2	-	21.3	-	19.3	21.0	-	19.0
Lot 3	-	36.8	-	34.8	36.9	-	34.8
Ramp up to Rooftop Parking	-	8.6	-	6.6	9.1	-	7.0
Transformer	-	47.5	47.5	53.9	39.7	39.7	46.1
Trash Collection	-	47.5	-35.7	45.4	33.0	-41.4	30.9
Trash Compactor 1	-	24.5	-37.8	22.4	16.5	-45.7	14.5
Trash Compactor 2	-	24.1	-38.2	22.0	16.4	-45.9	14.4
Truck Loading	-	45.3	46.1	52.4	52.8	52.8	59.2
E Commercial Property - 3	1.Fl	58.6	58.0	64.5	0.0	0.0	0.0
Auto Maintenance Noise 1	-	19.1	-77.1	17.1	19.1	-77.1	17.0
Auto Maintenance Noise 2	-	19.1	-77.1	17.1	19.1	-77.1	17.0
Auto Maintenance Noise 3	-	22.1	-74.1	20.0	22.1	-74.1	20.0
Auto Maintenance Noise 4	-	19.0	-77.2	17.0	19.0	-77.2	17.0
Driveway 7 - Lawrence to Warehouse	-	15.5	-	13.4	9.0	-	7.0
Driveway B - Graves to Truck Docks	-	39.0	37.8	44.4	34.9	33.4	40.1
Driveway B - Graves to Truck Docks1	-	49.6	48.3	54.9	38.4	37.6	44.1
Driveway B - Truck Docks to Up Ramp	-	35.1	-	33.1	24.5	-	22.5
Driveway C - Saratoga to Truck Docks	-	42.2	41.8	48.3	39.3	38.9	45.4
Driveway D - Prospect to Parking Lot 2	-	19.0	-	17.0	12.9	-	10.9
Driveway E - Prospect to Warehouse	-	23.0	-	20.9	14.6	-	12.6
Forklift operations	-	53.4	53.4	59.8	44.5	-44.7	42.5
Graves - B to A	-	23.9	-	21.8	12.6	-	10.6
HVAC 1	-	38.3	38.3	44.7	44.5	44.5	50.9
HVAC 2	-	41.4	41.4	47.8	44.4	44.4	50.8
HVAC 3	-	41.1	41.1	47.5	44.3	44.3	50.7
HVAC 4	-	42.1	42.1	48.5	44.3	44.3	50.7
HVAC 5	-	41.8	41.8	48.2	44.2	44.2	50.6
HVAC 6	-	41.6	41.6	48.0	44.1	44.1	50.6
HVAC 7	-	41.3	41.3	47.8	43.9	43.9	50.3
HVAC 8	-	41.6	41.6	48.0	44.6	44.6	51.0
HVAC 9	-	41.8	41.8	48.2	44.7	44.7	51.1
HVAC 10	-	41.7	41.7	48.1	44.7	44.7	51.1
HVAC 11	-	41.6	41.6	48.0	44.6	44.6	51.0
HVAC 12	-	42.2	42.2	48.6	44.5	44.5	51.0
HVAC 13	-	42.0	42.0	48.4	44.5	44.5	50.9
HVAC 14	-	41.8	41.8	48.2	44.3	44.3	50.7
HVAC 15	-	22.5	22.5	29.0	22.6	22.6	29.1
HVAC 16	-	22.7	22.7	29.1	22.7	22.7	29.1

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 17	-	22.6	22.6	29.0	22.6	22.6	29.0
Lot 1	-	23.0	-	20.9	21.8	-	19.8
Lot 2	-	24.5	-	22.5	23.0	-	21.0
Lot 3	-	37.5	-	35.5	37.2	-	35.1
Ramp up to Rooftop Parking	-	10.8	-	8.7	11.1	-	9.1
Transformer	-	45.6	45.6	52.0	38.5	38.5	44.9
Trash Collection	-	48.8	-34.4	46.7	32.2	-42.2	30.2
Trash Compactor 1	-	24.5	-37.8	22.4	15.9	-46.4	13.9
Trash Compactor 2	-	24.6	-37.7	22.5	16.1	-46.2	14.1
Truck Loading	-	48.5	49.3	55.6	54.9	54.9	61.3
E Commercial Property - 4	1.Fl	58.8	58.6	65.0	0.0	0.0	0.0
Auto Maintenance Noise 1	-	19.0	-77.2	17.0	19.0	-77.2	16.9
Auto Maintenance Noise 2	-	19.1	-77.1	17.1	19.1	-77.1	17.0
Auto Maintenance Noise 3	-	22.1	-74.1	20.1	22.1	-74.1	20.1
Auto Maintenance Noise 4	-	19.2	-77.0	17.1	19.1	-77.1	17.1
Driveway 7 - Lawrence to Warehouse	-	18.2	-	16.2	10.7	-	8.7
Driveway B - Graves to Truck Docks	-	38.1	36.9	43.5	33.6	32.3	38.9
Driveway B - Graves to Truck Docks1	-	49.2	47.8	54.5	38.0	37.1	43.6
Driveway B - Truck Docks to Up Ramp	-	37.0	-	34.9	24.8	-	22.8
Driveway C - Saratoga to Truck Docks	-	43.9	43.6	50.0	42.0	41.7	48.1
Driveway D - Prospect to Parking Lot 2	-	22.6	-	20.6	11.1	-	9.1
Driveway E - Prospect to Warehouse	-	24.3	-	22.3	14.1	-	12.0
Forklift operations	-	51.9	51.9	58.3	43.4	-45.8	41.4
Graves - B to A	-	23.1	-	21.0	13.5	-	11.4
HVAC 1	-	44.7	44.7	51.1	45.8	45.8	52.2
HVAC 2	-	43.7	43.7	50.1	45.8	45.8	52.2
HVAC 3	-	43.1	43.1	49.5	44.7	44.7	51.1
HVAC 4	-	43.1	43.1	49.5	44.9	44.9	51.3
HVAC 5	-	43.0	43.0	49.5	44.5	44.5	50.9
HVAC 6	-	43.0	43.0	49.4	44.5	44.5	50.9
HVAC 7	-	42.9	42.9	49.3	44.4	44.4	50.8
HVAC 8	-	43.7	43.7	50.1	46.2	46.2	52.6
HVAC 9	-	43.7	43.7	50.1	45.3	45.3	51.8
HVAC 10	-	43.8	43.8	50.2	45.2	45.2	51.6
HVAC 11	-	43.3	43.3	49.8	45.2	45.2	51.6
HVAC 12	-	43.3	43.3	49.7	45.2	45.2	51.6
HVAC 13	-	43.3	43.3	49.7	45.2	45.2	51.6
HVAC 14	-	43.3	43.3	49.8	44.9	44.9	51.3
HVAC 15	-	24.8	24.8	31.2	23.0	23.0	29.4
HVAC 16	-	25.0	25.0	31.4	23.1	23.1	29.5
HVAC 17	-	24.5	24.5	30.9	22.9	22.9	29.3
Lot 1	-	24.2	-	22.2	22.3	-	20.2
Lot 2	-	31.2	-	29.2	26.2	-	24.2
Lot 3	-	38.1	-	36.1	36.8	-	34.8
Ramp up to Rooftop Parking	-	12.7	-	10.7	11.6	-	9.6
Transformer	-	43.0	43.0	49.4	37.2	37.2	43.6
Trash Collection	-	44.9	-38.2	42.9	30.1	-44.3	28.1
Trash Compactor 1	-	21.1	-41.2	19.0	14.6	-47.7	12.5
Trash Compactor 2	-	21.5	-40.7	19.5	14.9	-47.4	12.8
Truck Loading	-	50.7	51.5	57.8	55.7	55.7	62.1
E Commercial Property - 5	1.Fl	58.0	57.9	64.3	0.0	0.0	0.0
Auto Maintenance Noise 1	-	16.8	-79.4	14.8	16.7	-79.5	14.6
Auto Maintenance Noise 2	-	16.9	-79.3	14.9	18.7	-77.5	16.7
Auto Maintenance Noise 3	-	20.0	-76.2	18.0	21.8	-74.4	19.8
Auto Maintenance Noise 4	-	17.1	-79.1	15.1	18.9	-77.3	16.8
Driveway 7 - Lawrence to Warehouse	-	8.9	-	6.9	9.3	-	7.2
Driveway B - Graves to Truck Docks	-	37.0	35.8	42.4	33.1	31.8	38.5
Driveway B - Graves to Truck Docks1	-	47.7	46.4	53.0	37.3	36.4	43.0
Driveway B - Truck Docks to Up Ramp	-	38.1	-	36.1	24.5	-	22.5
Driveway C - Saratoga to Truck Docks	-	46.0	45.6	52.1	45.4	45.0	51.5
Driveway D - Prospect to Parking Lot 2	-	18.2	-	16.2	8.5	-	6.4
Driveway E - Prospect to Warehouse	-	23.6	-	21.6	13.5	-	11.5
Forklift operations	-	47.0	47.0	53.4	40.6	-48.6	38.5

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Graves - B to A	-	22.0	-	20.0	13.0	-	10.9
HVAC 1	-	43.3	43.3	49.7	45.2	45.2	51.6
HVAC 2	-	43.2	43.2	49.6	45.2	45.2	51.6
HVAC 3	-	43.2	43.2	49.6	44.8	44.8	51.2
HVAC 4	-	43.2	43.2	49.6	44.8	44.8	51.2
HVAC 5	-	43.2	43.2	49.6	44.6	44.6	51.0
HVAC 6	-	42.8	42.8	49.2	44.6	44.6	51.0
HVAC 7	-	42.8	42.8	49.2	44.1	44.1	50.5
HVAC 8	-	43.5	43.5	49.9	45.4	45.4	51.8
HVAC 9	-	43.5	43.5	50.0	45.0	45.0	51.4
HVAC 10	-	43.7	43.7	50.1	45.0	45.0	51.4
HVAC 11	-	42.8	42.8	49.2	44.3	44.3	50.7
HVAC 12	-	42.9	42.9	49.3	44.4	44.4	50.8
HVAC 13	-	43.0	43.0	49.4	44.2	44.2	50.6
HVAC 14	-	43.1	43.1	49.5	44.6	44.6	51.0
HVAC 15	-	21.7	21.7	28.2	23.3	23.3	29.7
HVAC 16	-	21.9	21.9	28.3	23.4	23.4	29.8
HVAC 17	-	21.7	21.7	28.1	16.4	16.4	22.8
Lot 1	-	22.7	-	20.6	21.8	-	19.7
Lot 2	-	36.6	-	34.6	29.5	-	27.5
Lot 3	-	37.9	-	35.9	36.4	-	34.3
Ramp up to Rooftop Parking	-	15.3	-	13.3	12.2	-	10.2
Transformer	-	40.6	40.6	47.0	34.2	34.2	40.6
Trash Collection	-	40.9	-42.3	38.9	26.3	-48.1	24.3
Trash Compactor 1	-	18.5	-43.8	16.4	11.6	-50.7	9.5
Trash Compactor 2	-	18.3	-44.0	16.2	11.9	-50.4	9.8
Truck Loading	-	51.7	52.5	58.8	56.3	56.3	62.7
E Commercial Property - 6	1.Fl	56.5	56.4	62.8	0.0	0.0	0.0
Auto Maintenance Noise 1	-	16.5	-79.7	14.5	16.5	-79.6	14.5
Auto Maintenance Noise 2	-	16.7	-79.5	14.6	16.7	-79.5	14.7
Auto Maintenance Noise 3	-	19.9	-76.3	17.8	19.9	-76.3	17.8
Auto Maintenance Noise 4	-	17.1	-79.1	15.0	17.0	-79.2	15.0
Driveway 7 - Lawrence to Warehouse	-	29.4	-	27.4	14.6	-	12.6
Driveway B - Graves to Truck Docks	-	35.8	34.6	41.2	32.4	31.2	37.8
Driveway B - Graves to Truck Docks1	-	45.2	43.8	50.5	36.0	35.1	41.6
Driveway B - Truck Docks to Up Ramp	-	37.5	-	35.5	25.5	-	23.4
Driveway C - Saratoga to Truck Docks	-	50.1	49.7	56.2	48.1	47.7	54.2
Driveway D - Prospect to Parking Lot 2	-	8.6	-	6.6	6.9	-	4.9
Driveway E - Prospect to Warehouse	-	19.7	-	17.6	12.1	-	10.1
Forklift operations	-	43.3	43.3	49.7	39.7	-49.5	37.6
Graves - B to A	-	18.8	-	16.8	12.6	-	10.5
HVAC 1	-	40.2	40.2	46.6	42.6	42.6	49.0
HVAC 2	-	40.3	40.3	46.7	42.6	42.6	49.0
HVAC 3	-	40.4	40.4	46.8	42.7	42.7	49.1
HVAC 4	-	40.5	40.5	46.9	42.7	42.7	49.2
HVAC 5	-	40.6	40.6	47.0	42.8	42.8	49.2
HVAC 6	-	40.7	40.7	47.1	42.8	42.8	49.2
HVAC 7	-	40.8	40.8	47.2	42.7	42.7	49.1
HVAC 8	-	40.2	40.2	46.6	43.3	43.3	49.7
HVAC 9	-	40.4	40.4	46.8	42.6	42.6	49.0
HVAC 10	-	40.5	40.5	46.9	42.6	42.6	49.0
HVAC 11	-	40.8	40.8	47.2	42.7	42.7	49.1
HVAC 12	-	40.9	40.9	47.3	42.8	42.8	49.2
HVAC 13	-	40.4	40.4	46.8	42.0	42.0	48.4
HVAC 14	-	40.7	40.7	47.1	42.2	42.2	48.6
HVAC 15	-	21.8	21.8	28.2	16.4	16.4	22.9
HVAC 16	-	21.9	21.9	28.3	16.5	16.5	22.9
HVAC 17	-	21.7	21.7	28.1	16.3	16.3	22.7
Lot 1	-	24.8	-	22.8	21.9	-	19.9
Lot 2	-	36.0	-	34.0	30.0	-	27.9
Lot 3	-	37.2	-	35.2	35.4	-	33.4
Ramp up to Rooftop Parking	-	27.7	-	25.7	16.8	-	14.8
Transformer	-	36.5	36.5	42.9	33.5	33.5	39.9
Trash Collection	-	36.8	-46.4	34.7	25.2	-49.2	23.2

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Trash Compactor 1	-	14.2	-48.0	12.2	10.8	-51.5	8.7
Trash Compactor 2	-	14.7	-47.6	12.6	11.0	-51.2	9.0
Truck Loading	-	50.2	51.0	57.3	54.7	54.7	61.1
E Commercial Property - 7	1.Fl	54.6	54.3	60.7	0.0	0.0	0.0
Auto Maintenance Noise 1	-	15.6	-80.6	13.6	15.6	-80.6	13.6
Auto Maintenance Noise 2	-	15.8	-80.4	13.7	15.8	-80.4	13.7
Auto Maintenance Noise 3	-	18.9	-77.3	16.9	18.9	-77.3	16.9
Auto Maintenance Noise 4	-	16.1	-80.1	14.1	16.1	-80.1	14.0
Driveway 7 - Lawrence to Warehouse	-	28.3	-	26.3	16.3	-	14.2
Driveway B - Graves to Truck Docks	-	33.4	32.3	38.9	28.9	27.9	34.5
Driveway B - Graves to Truck Docks1	-	43.0	41.7	48.3	33.9	33.0	39.6
Driveway B - Truck Docks to Up Ramp	-	34.6	-	32.5	23.9	-	21.9
Driveway C - Saratoga to Truck Docks	-	50.4	50.0	56.4	49.1	48.7	55.1
Driveway D - Prospect to Parking Lot 2	-	4.9	-	2.9	4.5	-	2.5
Driveway E - Prospect to Warehouse	-	16.5	-	14.4	11.6	-	9.6
Forklift operations	-	42.4	42.4	48.9	38.3	-50.9	36.3
Graves - B to A	-	18.5	-	16.4	9.7	-	7.6
HVAC 1	-	37.2	37.2	43.6	42.3	42.3	48.7
HVAC 2	-	37.2	37.2	43.6	42.3	42.3	48.7
HVAC 3	-	37.2	37.2	43.7	42.3	42.3	48.7
HVAC 4	-	37.3	37.3	43.7	42.3	42.3	48.8
HVAC 5	-	37.3	37.3	43.7	41.4	41.4	47.8
HVAC 6	-	36.4	36.4	42.8	41.4	41.4	47.8
HVAC 7	-	36.5	36.5	42.9	41.4	41.4	47.8
HVAC 8	-	37.4	37.4	43.8	42.5	42.5	48.9
HVAC 9	-	37.4	37.4	43.8	42.5	42.5	48.9
HVAC 10	-	37.5	37.5	43.9	41.2	41.2	47.6
HVAC 11	-	36.4	36.4	42.8	41.3	41.3	47.7
HVAC 12	-	36.5	36.5	42.9	41.4	41.4	47.8
HVAC 13	-	36.6	36.6	43.0	41.5	41.5	47.9
HVAC 14	-	36.8	36.8	43.2	41.6	41.6	48.1
HVAC 15	-	22.9	22.9	29.3	22.9	22.9	29.3
HVAC 16	-	23.0	23.0	29.4	23.0	23.0	29.4
HVAC 17	-	22.8	22.8	29.2	22.8	22.8	29.2
Lot 1	-	24.4	-	22.4	22.8	-	20.8
Lot 2	-	33.6	-	31.5	30.6	-	28.6
Lot 3	-	36.7	-	34.6	36.6	-	34.6
Ramp up to Rooftop Parking	-	25.7	-	23.7	19.4	-	17.3
Transformer	-	36.4	36.4	42.8	33.6	33.6	40.0
Trash Collection	-	35.7	-47.5	33.6	25.4	-49.0	23.4
Trash Compactor 1	-	13.9	-48.4	11.8	10.7	-51.6	8.7
Trash Compactor 2	-	14.1	-48.1	12.1	10.9	-51.4	8.9
Truck Loading	-	46.9	47.7	54.0	53.1	53.1	59.5
E Commercial Property - 8	1.Fl	53.8	53.5	60.0	0.0	0.0	0.0
Auto Maintenance Noise 1	-	14.8	-81.4	12.7	18.7	-77.5	16.7
Auto Maintenance Noise 2	-	14.9	-81.3	12.8	18.7	-77.5	16.6
Auto Maintenance Noise 3	-	18.0	-78.1	16.0	21.6	-74.6	19.5
Auto Maintenance Noise 4	-	15.2	-81.0	13.2	18.5	-77.7	16.5
Driveway 7 - Lawrence to Warehouse	-	28.5	-	26.4	4.2	-	2.2
Driveway B - Graves to Truck Docks	-	30.9	29.8	36.4	35.9	34.6	41.2
Driveway B - Graves to Truck Docks1	-	40.1	38.8	45.4	37.5	36.5	43.1
Driveway B - Truck Docks to Up Ramp	-	33.1	-	31.0	22.8	-	20.8
Driveway C - Saratoga to Truck Docks	-	51.0	50.6	57.1	33.1	32.8	39.3
Driveway D - Prospect to Parking Lot 2	-	5.5	-	3.5	8.6	-	6.6
Driveway E - Prospect to Warehouse	-	14.9	-	12.9	14.1	-	12.1
Forklift operations	-	37.4	37.4	43.8	43.5	-45.7	41.5
Graves - B to A	-	15.6	-	13.6	16.0	-	14.0
HVAC 1	-	36.0	36.0	42.4	36.6	36.6	43.0
HVAC 2	-	35.7	35.7	42.1	39.9	39.9	46.3
HVAC 3	-	35.7	35.7	42.2	42.1	42.1	48.5
HVAC 4	-	35.2	35.2	41.6	42.4	42.4	48.8
HVAC 5	-	35.1	35.1	41.5	43.0	43.0	49.4
HVAC 6	-	35.1	35.1	41.5	43.3	43.3	49.7

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
HVAC 7	-	34.8	34.8	41.2	43.2	43.2	49.6
HVAC 8	-	35.8	35.8	42.2	38.5	38.5	44.9
HVAC 9	-	35.2	35.2	41.6	42.9	42.9	49.3
HVAC 10	-	35.2	35.2	41.6	42.8	42.8	49.2
HVAC 11	-	35.3	35.3	41.7	42.5	42.5	48.9
HVAC 12	-	35.3	35.3	41.7	42.4	42.4	48.8
HVAC 13	-	35.3	35.3	41.7	43.4	43.4	49.8
HVAC 14	-	34.9	34.9	41.3	43.0	43.0	49.4
HVAC 15	-	23.5	23.5	29.9	23.2	23.2	29.6
HVAC 16	-	23.5	23.5	29.9	23.4	23.4	29.8
HVAC 17	-	23.3	23.3	29.8	23.2	23.2	29.7
Lot 1	-	24.3	-	22.3	22.1	-	20.0
Lot 2	-	31.4	-	29.3	23.2	-	21.1
Lot 3	-	35.9	-	33.9	37.6	-	35.5
Ramp up to Rooftop Parking	-	24.1	-	22.0	10.7	-	8.6
Transformer	-	31.6	31.6	38.0	39.1	39.1	45.5
Trash Collection	-	30.9	-52.2	28.9	32.6	-41.8	30.6
Trash Compactor 1	-	9.2	-53.1	7.1	15.8	-46.4	13.8
Trash Compactor 2	-	9.4	-52.9	7.4	15.8	-46.5	13.8
Truck Loading	-	45.6	46.4	52.7	53.0	53.0	59.4
E Commercial Property - 9	1.Fl	52.9	52.5	59.0	0.0	0.0	0.0
Auto Maintenance Noise 1	-	14.0	-82.2	12.0	14.0	-	-
Auto Maintenance Noise 2	-	14.2	-82.0	12.1	14.2	-	-
Auto Maintenance Noise 3	-	17.3	-78.9	15.2	17.3	-	-
Auto Maintenance Noise 4	-	14.4	-81.7	12.4	14.4	-	-
Driveway 7 - Lawrence to Warehouse	-	27.8	-	25.8	-	-	-
Driveway B - Graves to Truck Docks	-	29.4	28.4	35.0	-	-	-
Driveway B - Graves to Truck Docks1	-	38.1	36.8	43.4	-	-	-
Driveway B - Truck Docks to Up Ramp	-	32.2	-	30.1	-	-	-
Driveway C - Saratoga to Truck Docks	-	51.0	50.6	57.1	-	-	-
Driveway D - Prospect to Parking Lot 2	-	6.2	-	4.2	-	-	-
Driveway E - Prospect to Warehouse	-	16.1	-	14.0	-	-	-
Forklift operations	-	34.9	34.9	41.3	34.9	-	-
Graves - B to A	-	12.1	-	10.0	-	-	-
HVAC 1	-	33.3	33.3	39.7	38.3	-	-
HVAC 2	-	33.4	33.4	39.8	38.4	-	-
HVAC 3	-	32.5	32.5	38.9	37.5	-	-
HVAC 4	-	32.6	32.6	39.0	37.6	-	-
HVAC 5	-	33.1	33.1	39.5	38.1	-	-
HVAC 6	-	33.1	33.1	39.5	38.1	-	-
HVAC 7	-	33.2	33.2	39.6	38.2	-	-
HVAC 8	-	33.1	33.1	39.5	38.1	-	-
HVAC 9	-	32.8	32.8	39.2	37.8	-	-
HVAC 10	-	32.2	32.2	38.6	37.2	-	-
HVAC 11	-	32.3	32.3	38.7	37.3	-	-
HVAC 12	-	32.3	32.3	38.7	37.3	-	-
HVAC 13	-	32.6	32.6	39.0	37.6	-	-
HVAC 14	-	32.2	32.2	38.6	37.2	-	-
HVAC 15	-	23.6	23.6	30.0	23.6	-	-
HVAC 16	-	23.7	23.7	30.1	23.7	-	-
HVAC 17	-	23.5	23.5	29.9	23.5	-	-
Lot 1	-	24.1	-	22.0	-	-	-
Lot 2	-	30.8	-	28.8	-	-	-
Lot 3	-	35.1	-	33.1	-	-	-
Ramp up to Rooftop Parking	-	22.7	-	20.6	-	-	-
Transformer	-	29.6	29.6	36.0	29.6	-	-
Trash Collection	-	29.1	-54.1	27.0	29.1	-	-
Trash Compactor 1	-	6.7	-55.5	4.7	6.7	-	-
Trash Compactor 2	-	6.9	-55.4	4.9	6.9	-	-
Truck Loading	-	43.3	44.1	50.4	44.1	-	-
E Commercial Property - 10	1.Fl	52.4	51.9	58.4	0.0	0.0	0.0
Auto Maintenance Noise 1	-	13.4	-82.8	11.4	13.4	-	-
Auto Maintenance Noise 2	-	13.5	-82.7	11.5	13.5	-	-

Contribution levels of the receivers

Source name	Traffic lane	Level w/o NP			Level w NP		
		Day	Night	Ldn	Day	Night	Ldn
			dB(A)			dB(A)	
Auto Maintenance Noise 3	-	16.7	-79.5	14.6	16.7	-	-
Auto Maintenance Noise 4	-	13.8	-82.4	11.8	13.8	-	-
Driveway 7 - Lawrence to Warehouse	-	27.5	-	25.4	-	-	-
Driveway B - Graves to Truck Docks	-	29.5	28.4	35.0	-	-	-
Driveway B - Graves to Truck Docks1	-	36.8	35.6	42.2	-	-	-
Driveway B - Truck Docks to Up Ramp	-	32.3	-	30.2	-	-	-
Driveway C - Saratoga to Truck Docks	-	51.3	50.9	57.3	-	-	-
Driveway D - Prospect to Parking Lot 2	-	5.4	-	3.4	-	-	-
Driveway E - Prospect to Warehouse	-	16.5	-	14.5	-	-	-
Forklift operations	-	34.2	34.2	40.6	34.2	-	-
Graves - B to A	-	9.4	-	7.4	-	-	-
HVAC 1	-	30.8	30.8	37.2	35.8	-	-
HVAC 2	-	29.9	29.9	36.3	34.9	-	-
HVAC 3	-	29.2	29.2	35.6	34.2	-	-
HVAC 4	-	28.1	28.1	34.5	33.1	-	-
HVAC 5	-	28.2	28.2	34.6	33.2	-	-
HVAC 6	-	28.9	28.9	35.3	33.9	-	-
HVAC 7	-	29.6	29.6	36.0	34.6	-	-
HVAC 8	-	30.9	30.9	37.3	35.9	-	-
HVAC 9	-	29.9	29.9	36.3	34.9	-	-
HVAC 10	-	29.2	29.2	35.6	34.2	-	-
HVAC 11	-	29.2	29.2	35.6	34.2	-	-
HVAC 12	-	29.2	29.2	35.7	34.2	-	-
HVAC 13	-	28.9	28.9	35.3	33.9	-	-
HVAC 14	-	29.1	29.1	35.5	34.1	-	-
HVAC 15	-	23.5	23.5	29.9	23.5	-	-
HVAC 16	-	23.6	23.6	30.0	23.6	-	-
HVAC 17	-	23.4	23.4	29.8	23.4	-	-
Lot 1	-	23.9	-	21.8	-	-	-
Lot 2	-	30.5	-	28.4	-	-	-
Lot 3	-	35.0	-	32.9	-	-	-
Ramp up to Rooftop Parking	-	22.4	-	20.3	-	-	-
Transformer	-	29.0	29.0	35.5	29.0	-	-
Trash Collection	-	28.4	-54.7	26.4	28.4	-	-
Trash Compactor 1	-	6.1	-56.2	4.1	6.1	-	-
Trash Compactor 2	-	6.3	-56.0	4.2	6.3	-	-
Truck Loading	-	40.6	41.4	47.7	41.4	-	-