The Shops at Jurupa Valley
Noise Impact Study
City of Jurupa Valley, CA

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This purpose of this noise impact study is to evaluate the potential noise impacts for the project study area and compare results to City and CEQA thresholds. The assessment was conducted and compared to the noise standards set forth by the Federal, State and Local agencies. Consistent with the California Environmental Quality Act (CEQA) and CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable agencies.
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

The following is provided in this report:

- A description of the study area and the proposed project
- Information regarding the fundamentals of noise
- A description of the local noise guidelines and standards
- An evaluation of the existing ambient noise environment
- An analysis of stationary noise impacts from the project site to adjacent land uses
- Construction noise and vibration evaluation

1.2 Site Location and Study Area

The project site is located at the northeast corner of Mission Boulevard and Pyrite Street in Jurupa Valley, California, as shown in Exhibit A. The site's current land use classification is Commercial Retail (CR) according to the City of Jurupa Valley General Plan Land Use Map and the proposed use is commercial. Land uses surrounding the site include commercial, single-family residential, and a mobile home park to the south (across Mission Boulevard), single-family residential uses (across Pyrite Street) to the west, single-family residential uses and vacant land to the east, and the Interstate 60 Freeway to the north.

1.3 Proposed Project Description

The Project proposes to develop a convenience market/gas station with 12 vehicle fuel positions, a single-tunnel automated car wash, 151,300 square feet of retail space, 46,000 square feet of office space, a hotel with 60 rooms, and 18,400 square feet of drive-thru restaurant space with 1,302 parking stalls on approximately 32 acres. Exhibit B demonstrates the site plan for the project.

Exhibit A
Location Map

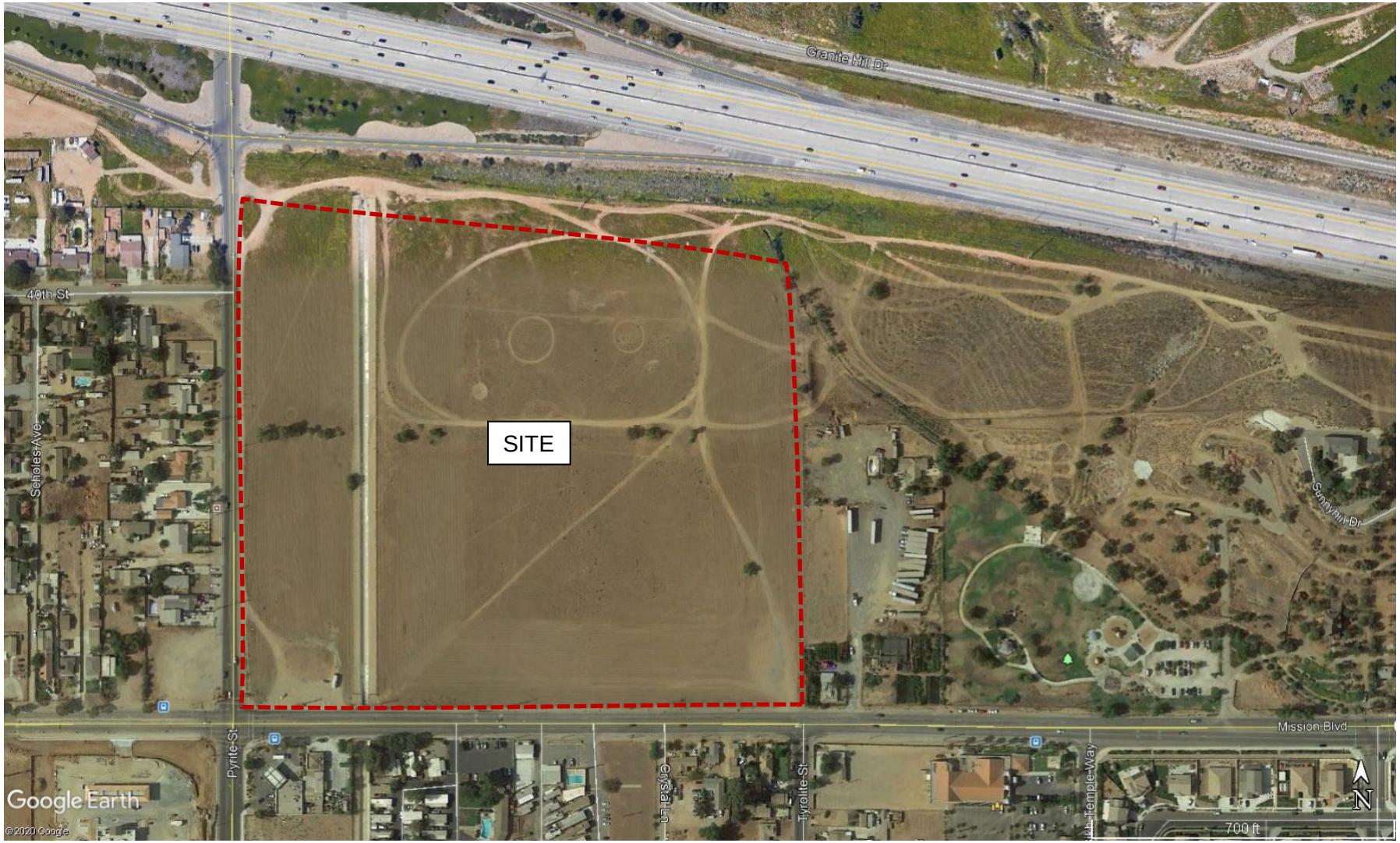
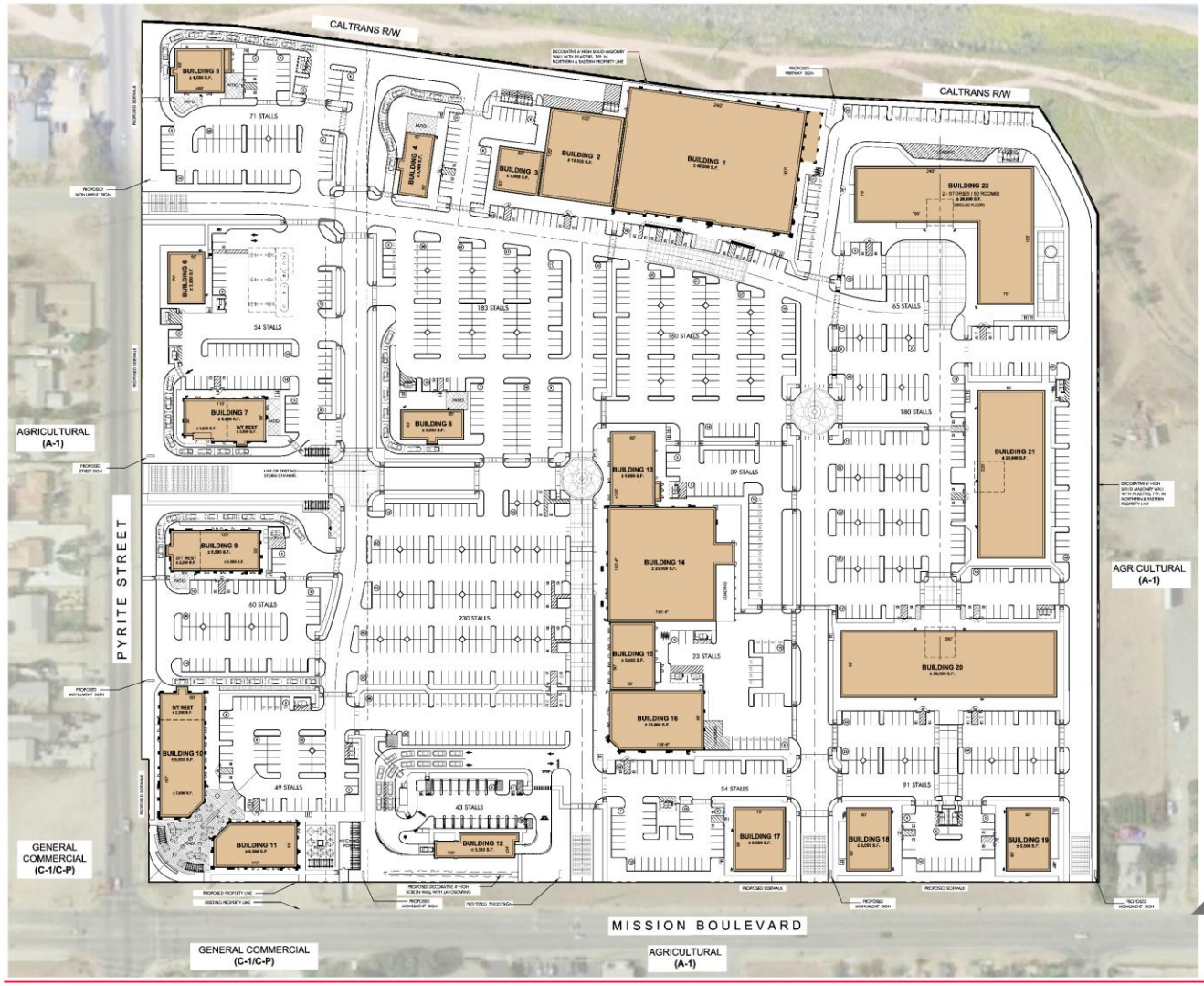


Exhibit B
Site Plan



SITE DATA

ZONING

APN	171-020-001, 171-020-025
PROPOSED USE	COMMERCIAL DEVELOPMENT
ZONING	GENERAL COMMERCIAL/SCENIC HIGHWAY COMMERCIAL

SITE AREA

GROSS SITE AREA	± 1,384,680 SF OR 32 AC

BUILDING SUMMARY

BUILDING 1 (FITNESS)	± 40,000 SF
BUILDING 2 (RETAIL)	± 12,000 SF
BUILDING 3 (RESTAURANT & RETAIL)	± 3,600 SF
BUILDING 4 (DRIVE-THRU)	± 3,500 SF
BUILDING 5 (REST./RETAIL/DRIVE-THRU)	± 4,000 SF
BUILDING 6 (C-STORE W/GAS STATION)	± 3,500 SF
BUILDING 7 (REST./RETAIL/DRIVE-THRU)	± 6,000 SF
BUILDING 8 (DRIVE-THRU)	± 3,500 SF
BUILDING 9 (REST./RETAIL/DRIVE-THRU)	± 6,500 SF
BUILDING 10 (REST./RETAIL/DRIVE-THRU)	± 9,800 SF
BUILDING 11 (RESTAURANT/RETAIL)	± 6,500 SF
BUILDING 12 (CAR WASH)	± 3,382 SF
BUILDING 13 (RETAIL)	± 6,000 SF
BUILDING 14 (ANCHOR RETAIL)	± 23,000 SF
BUILDING 15 (RETAIL)	± 5,400 SF
BUILDING 16 (RETAIL)	± 10,000 SF
BUILDING 17 (RESTAURANT & RETAIL)	± 6,000 SF
BUILDING 18 (RESTAURANT & RETAIL)	± 5,000 SF
BUILDING 19 (RESTAURANT & RETAIL)	± 5,000 SF
BUILDING 20 (OFFICE)	± 26,000 SF
BUILDING 21 (OFFICE)	± 20,000 SF
BUILDING 22 (60-ROOM HOTEL-GROUND)	± 26,000 SF
TOTAL FLOOR AREA:	± 234,682 SF
F.A.R	0.17

PARKING SUMMARY

BUILDING 1 (5.5/1,000)	220.00 STALLS
BUILDING 2 (5.5/1,000)	66.00 STALLS
BUILDING 3 (5.5/1,000)	20.00 STALLS
BUILDING 4 (5.5/1,000)	19.00 STALLS
BUILDING 5 (5.5/1,000)	22.00 STALLS
BUILDING 6 (1/200)	17.50 STALLS
BUILDING 7 (5.5/1,000)	33.00 STALLS
BUILDING 8 (5.5/1,000)	19.25 STALLS
BUILDING 9 (5.5/1,000)	35.75 STALLS
BUILDING 10 (5.5/1,000)	53.90 STALLS
BUILDING 11 (5.5/1,000)	33.00 STALLS
BUILDING 12 (2 spaces/stall)	38.00 STALLS
BUILDING 13 (5.5/1,000)	33.00 STALLS
BUILDING 14 (5.5/1,000)	126.50 STALLS
BUILDING 15 (5.5/1,000)	29.70 STALLS
BUILDING 16 (5.5/1,000)	55.00 STALLS
BUILDING 17 (5.5/1,000)	33.00 STALLS
BUILDING 18 (5.5/1,000)	27.50 STALLS
BUILDING 19 (5.5/1,000)	27.50 STALLS
BUILDING 20 (5.5/1,000)	143.00 STALLS
BUILDING 21 (5.5/1,000)	110.00 STALLS
BUILDING 22 (60-ROOM HOTEL)	65.00 STALLS
TOTAL PARKING REQUIRED:	1,228 STALLS
PARKING PROVIDED:	
STANDARD STALL: (9X18', 11X18')	1,231 STALLS
ADA ACCESSIBLE: (9X18')	71 STALLS
TOTAL PARKING PROVIDED:	1,302 STALLS
TOTAL PARKING RATIO: (SHOPPING CENTER ONLY NOT INCLUDING HOTEL)	5.93/1,000 SF

ELECTRICAL VEHICLE SPACES (EV):

FUTURE EV CHARGING STATIONS:	78 STALLS
VAN ACCESSIBLE, ADA & AMBULATORY: 7 STALLS	
STANDARD EV STALLS 71 STALLS	
ELECTRIC VEHICLES	26 STALLS
TOTAL ELECTRIC VEHICLES REQUIRED: (8% OF PARKING SPACES SHALL BE CLEAN AIR VEHICLES)	104 STALLS
TOTAL ELECTRIC VEHICLE SPACES PROVIDED:	110 STALLS

SHORT TERM BICYCLE PARKING:
REQUIRED: 1/25 STALLS (EMPLOYEES),
1/33 STALLS (PATRONS/VISITORS),
PROVIDED: 129 BICYCLES (43 RACKS x 3 BIKES EACH)
LONG TERM BICYCLE STORAGE:
PROVIDED: 18 BICYCLES (9 DOUBLE BIKE LOCKERS)

NOTE:
PRIOR TO ISSUANCE OF ANY BUILDING PERMIT, THE PROPERTY OWNER SHALL RECORD A RECIPROCAL NON-EXCLUSIVE EASEMENT FOR VEHICULAR AND OTHER RIGHTS OF INGRESS AND EGRESS OVER THE PARKING AREAS AND DRIVEWAYS TO ALLOW ACCESS FROM PUBLIC STREETS BETWEEN PARCELS. (SEE PROPOSED TENTATIVE PARCEL MAPS)

PROPOSED SITE PLAN

SCALE: 1" = 50'-0"

GRAPHIC SCALE

PRELIMINARY SITE PLAN SUBJECT TO CHANGE

PANORAMA DEVELOPMENT
2005 WINSTON COURT, UPLAND, CALIFORNIA 91784

THE SHOPS AT JURUPA VALLEY
NEC MISSION BOULEVARD & PYRITE STREET
JURUPA VALLEY, CALIFORNIA

McKently Malak ARCHITECTS
35 Hugus Alley, Suite 290
Pasadena, California 91103-3648
TEL 626.583.8348 FAX 626.583.8387

OVERALL SITE PLAN
05.26.2020 19235MMA
SP-10

2.0 Fundamentals of Noise

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

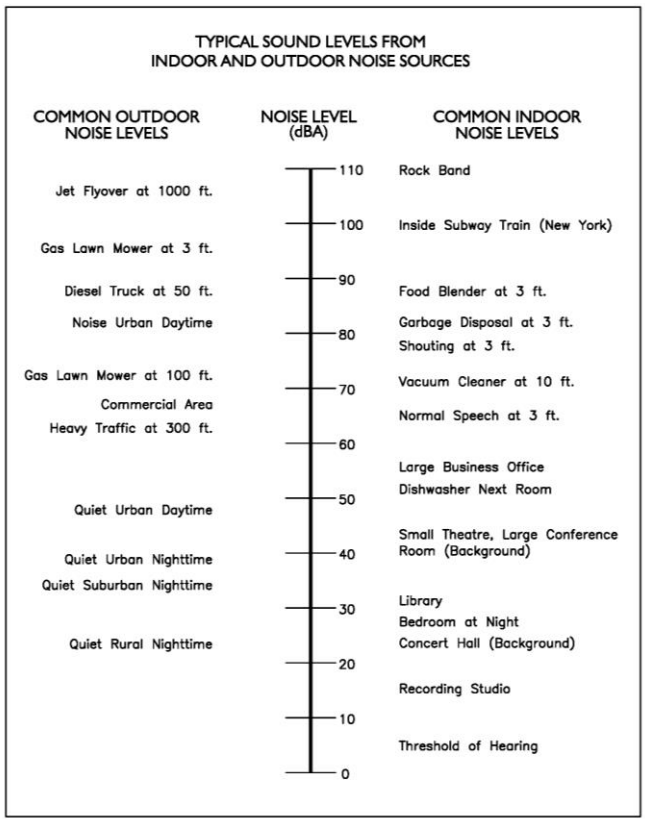
2.1 Sound, Noise and Acoustics

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

2.2 Frequency and Hertz

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

Exhibit C: Typical A-Weighted Noise Levels



2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measured in units of micro-Newton per square inch meter ($\mu N/m^2$), also called micro-Pascal (µPa). One µPa is approximately one hundred billionths (0.00000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels, abbreviated dB. Exhibit C illustrates references sound levels for different noise sources.

2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

2.5 Human Response to Changes in Noise Levels

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

2.6 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

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

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

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

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

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

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

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

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

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

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum.

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

Single Event Noise Exposure Level (SENEL): The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

2.7 Traffic Noise Prediction

Noise levels associated with traffic depends on a variety of factors: (1) volume of traffic, (2) speed of traffic, (3) auto, medium truck (2–3 axle) and heavy truck percentage (4 axle and greater), and sound propagation. The greater the volume of traffic, higher speeds and truck percentages equate to a louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed in the sections above.

2.8 Sound Propagation

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

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the

receiver. Soft site conditions such as grass, soft dirt or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity, and turbulence can further impact have far sound can travel.

3.0 Ground-Borne Vibration Fundamentals

3.1 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

3.3 Vibration Propagation

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wavefront, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wavefront. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wavefront. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 Regulatory Setting

The proposed project is located in the City of Jurupa Valley, California and noise regulations are addressed through the efforts of various federal, state and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The Federal Office of Noise Abatement and Control (ONAC) originally was tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) is responsible for regulating noise from aircraft and airports. The Federal Highway Administration (FHWA) is responsible for regulating noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers. The Housing and Urban Development (HUD) is responsible for establishing noise regulations as it relates to exterior/interior noise levels for new HUD-assisted housing developments near high noise areas.

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or, or alternatively that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

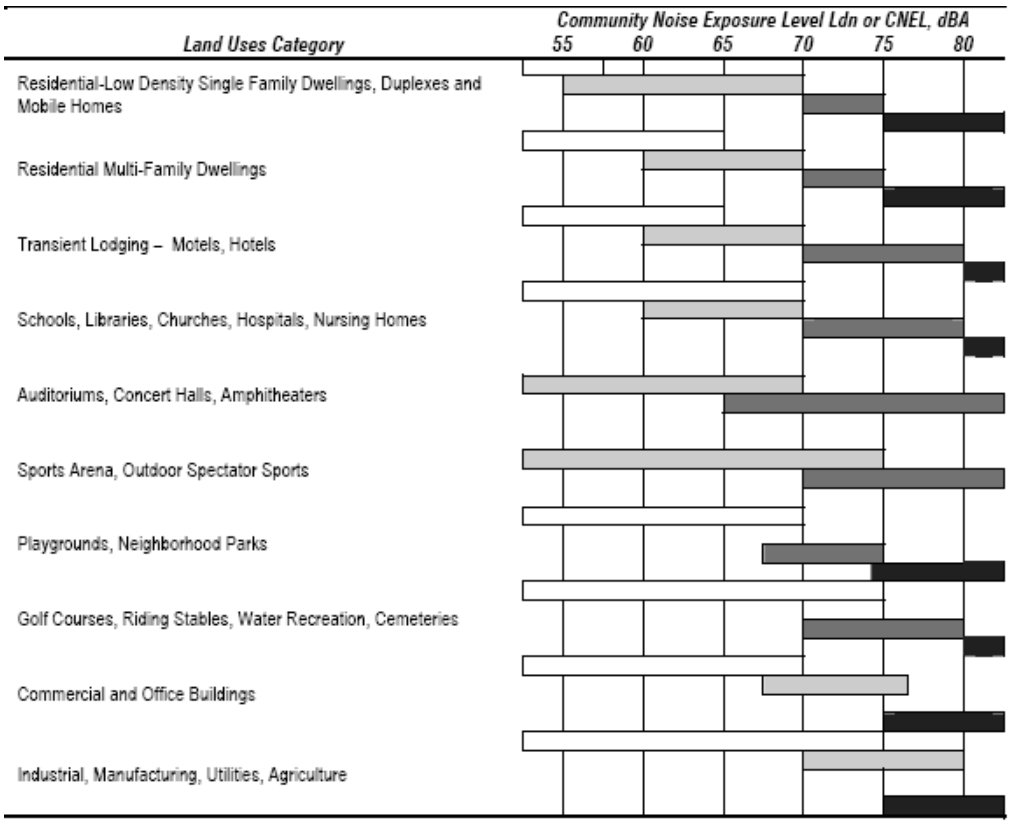
4.2 State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix.” The matrix allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 and the Uniform Building Code (UBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State 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 published 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 as illustrated in Exhibit D.

Exhibit D: Land Use Compatibility Guidelines



Source: California Office of Noise Control

4.3 City of Jurupa Valley Noise Regulations

The City of Jurupa Valley outlines their noise regulations and standards within the Municipal Code and the Noise Element of the City of Jurupa Valley General Plan.

City of Jurupa Municipal Code

CHAPTER 11.05. - NOISE REGULATIONS

Sec. 11.05.010. - Intent

At certain levels, sound becomes noise and may jeopardize the health, safety or general welfare of City of Jurupa Valley residents and degrade their quality of life. Pursuant to its police power, the City Council declares that noise shall be regulated in the manner described in this chapter. This chapter is intended to establish city-wide standards regulating noise. This chapter is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act (Pub. Resources Code Section 21000 *et seq.*) and no such thresholds are established.

(Ord. No. 2012-01, § 1(11.10.010), 2-16-2012)

Sec. 11.05.020. - Exemptions.

Sound emanating from the following sources is exempt from the provisions of this chapter:

(1) Facilities owned and operated by or for a governmental agency.
(2) Capital Improvement projects of a government agency.
(3) The maintenance or repair of public properties.
(4) Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile.
(5) Public or private schools and school-sponsored activities.
(6) Agricultural operations on land designed “agriculture” in the Jurupa Valley General Plan, or land zoned A-1 (light agriculture), or A-D (agriculture-dairy), provided such operations are carried out in a manner consistent with accepted industry standards. This exemption includes, without limitation, sound emanating from all equipment used during such operations, whether stationary or mobile.
(7) Wind energy conversion systems (WECS), provided such systems comply with the WECS noise provisions of Jurupa Valley Municipal Code or Title 9.

(8) Private construction projects located one-quarter (¼) of a mile or more from an inhabited dwelling;

(9) Private construction projects located within one-quarter (¼) of a mile from an inhabited dwelling, provided that:

(a) Construction does not occur between the hours of six (6:00) p.m. and six (6:00) a.m. during the months of June through September; and

(b) Construction does not occur between the hours of six (6:00) p.m. and seven (7:00) a.m. during the months of October through May;

(11) Motor vehicles, other than off-highway vehicles. This exemption does not include sound emanating from motor vehicle sound systems;

(12) Heating and air conditioning equipment;
(13) Safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety, and welfare; or
(14) the discharge of firearms consistent with all state laws.

(Ord. No. 2012-01, § 1(11.10.020), 2-16-2012)

Sec. 11.05.040. - General sound level standards.
No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 1 (see Page 13, next page) of this section or that violates the special sound source standards set forth in Section 11.05.06

Goals, Policies, and Implementation Measures
Policies, goals and implementation program measures from the Noise Element that would mitigate potential impacts on noise include the following.

NE 3.1 Noise Analysis. Require that a noise analysis be conducted by an acoustical specialist for all proposed development projects that have the potential to generate significant noise near a noise-sensitive land use, or on or near land designated for noise-sensitive land uses, and ensure that recommended mitigation measures are implemented.

NE 3.3 Noise Buffers. Require major stationary noise generating sources to install noise buffering or reduction mechanisms within their facilities to reduce noise generation levels to the lowest level practical as a condition of the approval or renewal of project entitlements.

NE 3.4 Construction Equipment. Require that all construction equipment utilize noise reduction features (i.e., mufflers and engine shrouds) that are at least as effective as those originally installed by the equipment's manufacturer.

NE 3.5 Construction Noise. Limit commercial construction activities adjacent to or within 200 feet of residential uses to weekdays, between 7:00 a.m. and 6:00 p.m., and limit high-noise-generating construction activities (e.g., Page 7-20 Jurupa Valley General Plan Update, 2017 grading, demolition, pile driving) near sensitive receptors to weekdays between 9:00 a.m. and 3:00 p.m.

NE 3.7 Automobile-Oriented Uses. Require that parking structures, terminals, drive-through restaurants, automobile sales and repair, fueling stations, minimarts, car washes, and similar automobile-oriented uses be sited and designed to minimize potential noise impacts on adjacent land uses.

City of Jurupa Valley – Noise Ordinance

Section 11.05.040 from the noise ordinance outlines the City's exterior noise limits as it relates to stationary noise sources.

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 1 of this section or that violates the special sound source standards set forth in Section 11.05.060.

Table 1: Allowable Exterior Noise Level[1]

Sound Level Standards (dBA Leq)*		
General Plan Land Use Designation	**Maximum Decibel Level**	
	7 a.m. - 10 p.m.	**10 p.m. - 7 a.m.**
Light density residential (LDR)	55	45
Medium density residential (MDR)		
High density residential (HDR)		
Retail commercial (CR)	65	55
Business Park (BP)	65	45

(Ord. No. 2012-01, § 1(11.10.040), 2-16-2012)

- **Sec. 11.05.060. - Special sound sources standards.**
  The general sound level standards set forth in Section 11.05.040 apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitute separate violations of this chapter:

  (2) Power tools and equipment. No person shall operate any power tools or equipment between the hours of ten (10:00) p.m. and eight (8:00) a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than one hundred (100) feet from the power tools or equipment. Sound level measurements may be used but are not required to establish a violation of this subsection.

(Ord. No. 2012-01, § 1(11.10.060), 2-16-2012; Ord. No. 2015-08, § 1, 6-18-2015)

1. Sec. 11.05.070. - Exceptions.

Exceptions may be requested from the standards set forth in Section 11.05.040 or 11.05.060 and may be characterized as construction-related or continuous events exceptions.

(1) Application and processing.

(a) Construction-related exceptions. An application for a construction-related exception shall be made to and considered by the Building Official of the city on forms provided by the Building and Safety Division and shall be accompanied by the appropriate filing fee. No public hearing is required.

(b) Continuous events exceptions. An application for a continuous events exception shall be made to the Planning Director on forms provided by the Planning Department and shall be accompanied by the appropriate filing fee. Upon receipt of an application for a continuous events exception, the Planning Director shall set the matter for public hearing before the Planning Commission, notice of which shall be given as provided in Section 9.240.250 of this Code. Notwithstanding the above, an application for a continuous events exception that is associated with an application for a land use permit shall be processed concurrently with the land use permit in the same manner that the land use permit is required to be processed.

(2) Requirements for approval. The appropriate decision-making body or officer shall not approve an exception application unless the applicant demonstrates that the activities described in the application would not be detrimental to the health, safety or general welfare of the community. In determining whether activities are detrimental to the health, safety or general welfare of the community, the appropriate decision-making body or officer shall consider such factors as the proposed duration of the activities and their location in relation to sensitive receptors. If an exception application is approved, reasonable conditions may be imposed to minimize the public detriment, including, but not limited to, restrictions on sound level, sound duration and operating hours.

(3) Appeals. The Building Official's decision on an application for a construction-related exception is considered final. After making a decision on an application for a continuous events exception, the appropriate decision-making body or officer shall mail notice of the decision to the applicant. Within ten (10) calendar days after the mailing of such notice, the applicant or an interested person may appeal the decision to the City Council pursuant to the provisions of Section 2.05.060.

(Ord. No. 2012-01, § 1(11.10.070), 2-16-2012; Ord. No. 2015-08, § 2, 6-18-2015)

5.0 Study Method and Procedure

The following section describes the noise modeling procedures and assumptions used for this assessment.

5.1 Noise Measurement Procedure and Criteria

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

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

MD conducted the sound level measurements in accordance to Federal Highway Transportation (FHWA) and Caltrans (TeNS) technical noise specifications. All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). The following gives a brief description of the Caltrans Technical Noise Supplement procedures for sound level measurements:

- Microphones for sound level meters were placed 5-feet above the ground for all measurements
- Sound level meters were calibrated (Larson Davis CAL 200) before and after each measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on “A” and slow response
- Results of the long-term noise measurements were recorded on field data sheets
- During any short-term noise measurements, any noise contaminations such as barking dogs, local traffic, lawn mowers, or aircraft fly-overs were noted
- Temperature and sky conditions were observed and documented

5.2 Noise Measurement Locations

Noise monitoring locations were selected based on the nearest sensitive receptors relative to the proposed onsite noise sources. Four (4) short-term 10-min noise measurements were conducted at or near the project site and are illustrated in Exhibit E. Appendix A includes photos, field sheet, and measured noise data.

5.3 Stationary Noise Modeling

SoundPLAN (SP) acoustical modeling software was utilized to model future worst-case stationary noise impacts to the adjacent land uses. SP is capable of evaluating multiple stationary noise source impacts at various receiver locations. SP’s software utilizes algorithms (based on the inverse square law and reference equipment noise level data) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations.

The future worst-case noise level projections were modeled using referenced sound level data for the various stationary on-site sources (parking spaces, restaurant drive through speakers, vacuums, and car wash blowers at the exit). The model assumes that the car wash tunnel is approximately 108 feet long with an approximate 9 foot tall by 10-foot wide exit opening, a twelve (12) vehicle fuel positions, a total of five (5) fast food restaurant drive through with speaker phones, and approximately 1,302 parking spaces.

A total of twelve (12) blowers (a Sonny Blower system) was modeled at 10 to 12 feet high as a point source with a reference level of 84 dBA at 10 feet. It is anticipated that the blowers will be located approximately 5 to 10 feet inside the exit of the tunnel. In addition, the Vacutech vacuums were modeled as point sources with a reference level of 74 dBA at 3 feet away. The reference equipment sound level data is provided in Appendix B.

The speakerphones were modeled as point source with a reference noise level of 65.0 dBA at 3 feet.

The gas canopy were modeled as area noise sources were reference levels of 70 dBA at 3 feet.

The cars idling at the drive-thrus were modeled as line sources with a reference noise level of 63.8 dBA at 6 feet.

The SP model assumes that all noise sources are operating simultaneously (worst-case scenario), when in actuality the noise will be intermittent and lower in noise level. The project proposes that all other noise producing equipment (e.g., compressors, pumps) will be housed within mechanical equipment room.

Finally, the model is able to evaluate the noise attenuating effects of any existing or proposed property line walls (approximately 6-feet tall existing wall on the east property line). Input and output calculations are provided in Appendix C.

5.4 FHWA Traffic Noise Prediction Model

Traffic noise from vehicular traffic was projected using a computer program that replicates the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Roadway volumes and percentages correspond to the project's traffic impact study as prepared by TJW Engineering (HDI-18-002 Van Buren Blvd Commercial Development Center Traffic Impact Assessment – Sept 2018) and roadway classification. The referenced traffic data was applied to the model and is in Appendix B. The following outlines the key adjustments made to the REMEL for the roadway inputs:

- Roadway classification – (e.g. freeway, major arterial, arterial, secondary, collector, etc),
- Roadway Active Width – (distance between the center of the outer most travel lanes on each side of the roadway)

- Average Daily Traffic Volumes (ADT), Travel Speeds, Percentages of automobiles, medium trucks and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g. soft vs. hard)
- Percentage of total ADT which flows each hour through-out a 24-hour period

Table 2 indicates the roadway parameters and vehicle distribution utilized for this study.

Table 2: Roadway Parameters and Vehicle Distribution

Roadway	Segment	Existing ADT	Existing Plus Project ADT	Speed (MPH)	Site Conditions
Pyrite St	US 60 to Mission Blvd	8,223	16,432	40	Soft
Mission Blvd	Pyrite to Camino Real	12,237	15,520	40	Soft
Roadway Vehicle Distribution (Truck Mix)[2]					
Motor-Vehicle Type		**Daytime % (7AM to 7 PM)**	**Evening % (7 PM to 10 PM)**	**Night % (10 PM to 7 AM)**	**Total % of Traffic Flow**
Automobiles		75.5	12.9	9.6	97.42
Medium Trucks		84.8	4.9	10.3	1.84
Heavy Trucks		86.5	2.7	10.8	0.74

Notes:
[1] Per TIA The Shops at Jurupa Valley – TJW Engineering, Inc.
[2] Vehicle distribution data is based on Riverside County Mix data for collectors and secondary roadways.

The following outlines key adjustments to the REMEL for project site parameter inputs:

- Vertical and horizontal distances (Sensitive receptor distance from noise source)
- Noise barrier vertical and horizontal distances (Noise barrier distance from sound source and receptor).
- Traffic noise source spectra
- Topography

The model incorporates the parameters outlined in Table 2 and is utilized to describe the change in traffic noise level as a result of said project. Modeling inputs and outputs are provided in Appendix D

5.5 FHWA Roadway Construction Noise Model

The construction noise analysis utilizes the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RNCM), together with several key construction parameters. Key inputs include distance to the sensitive receiver, equipment usage, % usage factor, and baseline parameters for the project site.

The project was analyzed based on the different construction phases. Construction noise is expected to be loudest during the grading, concrete and building phases of construction. The construction noise

calculation output worksheet is located in Appendix E. The following assumptions relevant to short-term construction noise impacts were used:

- It is estimated that construction will occur over a 12 to 18-month time period. Construction noise is expected to be the loudest during the grading, concrete, and building phases.

1 = Short-term Monitoring Location

Exhibit E
Measurement Locations

6.0 Existing Noise Environment

Four ten-minute (10) ambient noise measurement was conducted at the project site. Noise measurements were taken to determine the existing ambient noise levels. Noise data indicates that traffic along Mission Blvd is the primary sources of noise impacting the site and the surrounding area. The ambient data confirms that the existing noise levels exceed the City's noise ordinance for residential uses (55 dBA). Therefore, this assessment will utilize the ambient noise data as a basis and compare levels to said data.

6.1 Short-Term Noise Measurement Results

The results of the long-term noise data are presented in Table 3.

Table 3: Short-Term Noise Measurement Data[1]

Location	Time	10-Min dB(A) Leq							
		L_{EQ}	L_{MAX}	L_{MIN}	L_2	L_8	L_{25}	L_{50}	L_{90}
1	9:26AM-9:36AM	67.7	83.6	52	76.1	71.9	67.7	63.8	54.0
2	9:41AM-9:51AM	69.0	82.1	56.9	77.5	72.9	69.1	65.9	58.9
3	10:10AM-10:20AM	65.4	74.4	52.8	70.3	68.6	66.8	64.2	55.7
4	10:28AM-10:38AM	71.6	87.4	50.5	80.4	76.2	72.4	66.6	51.8

Notes:
1. Short-term noise monitoring location (ST1-4) is illustrated in Exhibit E.

Noise data indicates the ambient noise level ranges between 65.4 dBA Leq to 71.6 dBA Leq depending on location. Additional field notes and photographs are provided in Appendix A.

7.0 Future Noise Environment Impacts and Mitigation

This assessment analyzes future noise impacts as a result of the project. The analysis details the estimated exterior noise levels. Stationary noise impacts are analyzed from the on-site noise sources such as cars coming and going, drive thru restaurant speakers, dryers/blowers (associated with car wash equipment), vacuums and trucks loading and unloading.

7.1 Future Exterior Noise

The following outlines the exterior noise levels associated with the proposed project.

7.1.1 Noise Impacts to Off-Site Receptors Due to Stationary Sources

Sensitive receptors that may be affected by project operational noise include existing residences to the west, and south. The worst-case stationary noise was modeled using SoundPLAN acoustical modeling software. Worst-case assumes the all project activities are always operational when in reality the noise will be intermittent and cycle on/off depending on customer usage. Project car wash operational are assumed to occur within 7AM to 10PM, which falls within the allowable time per the City's noise ordinance (Section 11.05.040).

A total of six (6) receptors were modeled to evaluate the proposed project's operational impact. A receptor is denoted by a yellow dot. All yellow dots represent either a property line or a sensitive receptor such as an outdoor sensitive area (courtyard, patio, backyard, etc). It should be noted that the model includes a proposed 6-foot wall on the south property lines.

This study compares the Project's operational noise levels to two (2) different noise assessment scenarios: 1) Project Only operational noise level projections, 2) Project plus ambient noise level projections.

Project Operational Noise Levels

Exhibit F shows the "project only" operational noise levels at the property lines and/or sensitive receptor area. Exhibit G shows the noise contours at the project site and illustrates how the noise will propagate at the site. Operational noise levels at the adjacent uses are anticipated to range between 38.5 dBA to 54.4 dBA Leq (depending on the location).

The "project only" noise projections to the adjacent uses are below the City's 55 dBA residential limit, and 65 commercial limit as outlined within the City's noise ordinance (see Section 4.3).

Project Plus Ambient Operational Noise Levels

Table 4 demonstrates the project plus the ambient (quietest measured hourly average level) noise levels. Project plus ambient noise level projections are anticipated to range between 39.8 to 61.2 dBA Leq at receptors (R1 – R6). As previously discussed, the existing condition already exceeds the City's 55 dBA residential limit and 65 dBA commercial limit. Therefore, when the ambient already exceeds the standard the ambient then becomes the standard.

Table 4: Worst-case Predicted Operational Leq Noise Level[1]

Receptor[1]	Floor	Existing Ambient Noise Level (dBA, Leq)[2]	Project Noise Level (dBA, Leq)[3]	Total Combined Noise Level (dBA, Leq)	Daytime (7AM - 10PM) Stationary Noise Limit (dBA, Leq)	Change in Noise Level as Result of Project
1	1	71.6	38.5	71.6	**65.0**	0.0
2	1	67.7	47.4	67.7	**55.0**	0.0
3	1		54.4	67.9		0.2
4	1		53.9	67.9	**65.0**	0.2
5	1	69.0	54.4	69.1	**55.0**	0.1
6	1		53.8	69.1		0.1

Notes:
1. Receptors 2,3,6, and 5 represent residential uses Receptors 1, and 4 represent commercial uses
3. See Exhibit G for the operational noise level projections at said receptors.

As shown in Table 4, the project will increase the worst-case noise level by approximately 0.0 to 0.9 dBA Leq at receptors (R1 – R6). It takes a change of 3 dBA to hear a noticeable difference. The increase in noise level is below the typical noticeable difference in change of noise levels.

During nighttime hours (10AM to 7AM) the gas station and drive-thru restaurants would adhere to the City's noise ordinance and require that any loudspeakers not exceed 55 dBA (City's commercial limit) at the property line and/or 45 dBA at the nearest residential property line.

Table 5 provides the characteristics associated with changes in noise levels.

Table 5: Change in Noise Level Characteristics[1]

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

The change in noise level at the residences would fall within the "Not Perceptible" acoustic characteristic.

7.1.2 Noise Impacts to On/Off-Site Receptors Due to Project Generated Traffic

A worst-case project generated traffic noise level was modeled utilizing the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108. Traffic noise levels were calculated 50 feet from the centerline of the analyzed roadway. The modeling is theoretical and does not take into account any existing barriers, structures, and/or topographical features that may further reduce noise levels. Therefore, the

levels are shown for comparative purposes only to show the difference in with and without project conditions. In addition, the noise contours for 60, 65 and 70 dBA CNEL were calculated. The potential off-site noise impacts caused by an increase of traffic from operation of the proposed project on the nearby roadways were calculated for the following scenarios:

Existing Year (without Project): This scenario refers to existing year traffic noise conditions.

Existing Year (Plus Project): This scenario refers to existing year + project traffic noise conditions.

Table 6 compares the without and with project scenario and shows the change in traffic noise levels as a result of the proposed project. It takes a change of 3 dB or more to hear a perceptible difference. As demonstrated in Table 4, the project is anticipated to change the noise 1.0 to 3.0 dBA. Although there is a nominal increase along these two roadways, the proposed increase would still be below the 65 dBA CNEL residential standard at any off-site receptors. As shown in Table 4, the Existing Plus Project 65 dBA contour would extend an additional 183 feet from the centerline of the Pyrite Street and 28 feet from the centerline of Mission Blvd. All existing residences are located outside the 65 dBA contour.

Although there is an increase in traffic noise levels the impact is considered less than significant as the noise levels at or near any existing proposed sensitive receptor would be 65 dBA CNEL or less and the change in noise level is 3 dBA or less. No further mitigation is required

Table 6: Existing Scenario - Noise Levels Along Roadways (dBA CNEL)

Existing Without Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Pyrite St	US 60 to Mission Blvd	57.8	17	55	173	547
Mission Blvd	Pyrite St to Camino Real	59.5	26	81	257	813

Existing With Project Exterior Noise Levels

Roadway	Segment	CNEL at 50 Ft (dBA)	Distance to Contour (Ft)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Pyrite St	US 60 to Mission Blvd	60.8	58	183	579	1,832
Mission Blvd	Pyrite St to Camino Real	60.5	35	109	345	1,092

Change in Existing Noise Levels as a Result of Project

Roadway[1]	Segment	CNEL at 50 Feet dBA[2]			
		Existing Without Project	Existing With Project	Change in Noise Level	Potential Significant Impact
Pyrite St	US 60 to Mission Blvd	57.8	60.8	3.0	No
Mission Blvd	Pyrite St to Camino Real	59.5	60.5	1.0	No

Notes:
[1] Exterior noise levels calculated at 5 feet above ground level.
[2] Noise levels calculated from centerline of subject roadway.

7.2 Mitigation Measures

Project operations would be below the City's noise limits with the incorporation mitigation measures and therefore the impact is less than significant with mitigation. The project operations are consistent with the City's General Plan Noise Element and noise ordinance with the implementation of the mitigation measures.

The following mitigation measures are provided:

1. Trash collection shall occur during daytime hours.

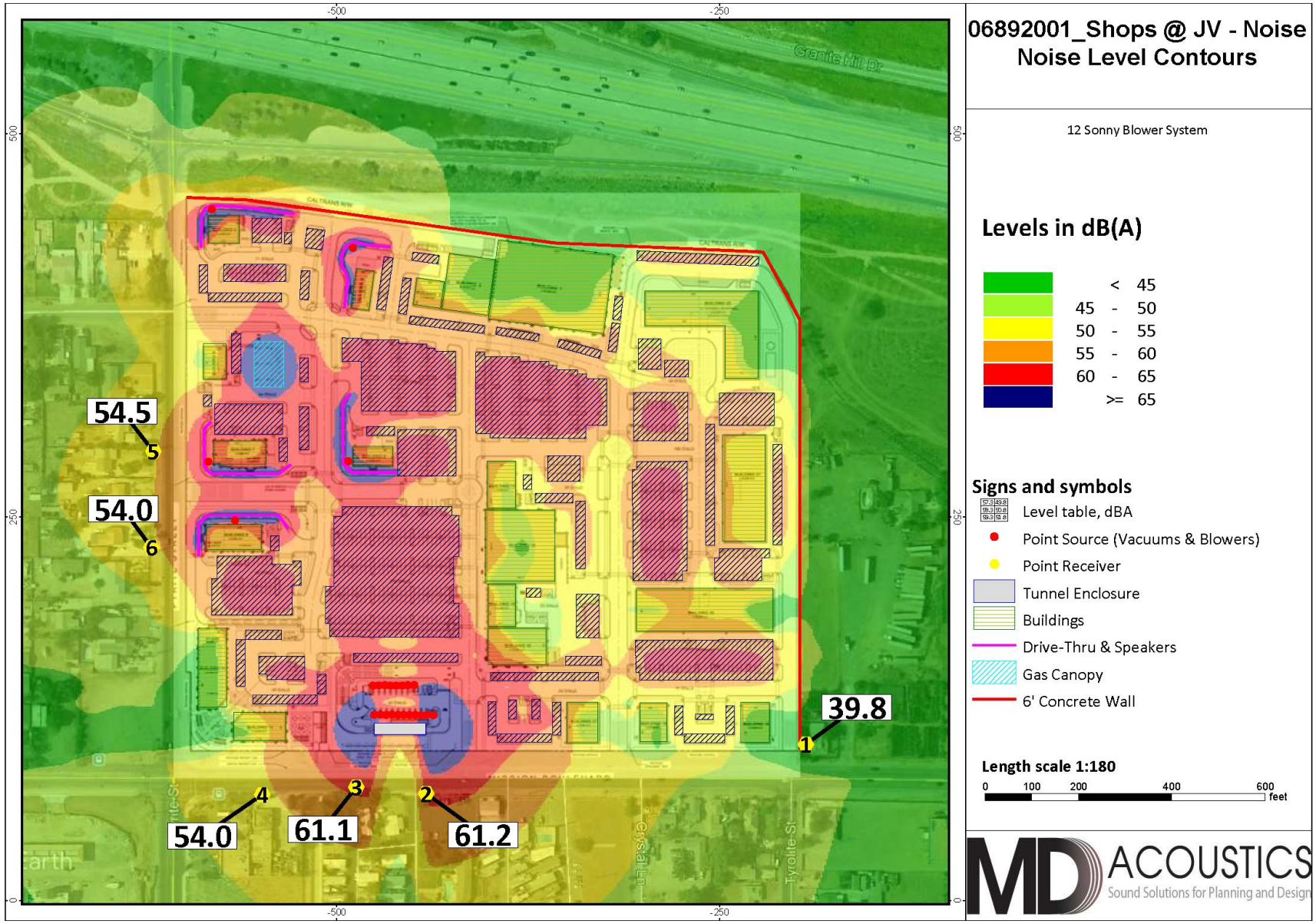
2. All drive through speakers should incorporate the use of HM Electronics automatic volume control (AVC) menu boards, or equivalent as to regulate volume during nighttime hours, see Appendix C.

3. Truck deliveries should occur during daylight hours.

4. Any rooftop or ground mounted HVAC units should be positioned at a physical distance as far as plausible from adjacent residences. In addition, the equipment should be shielded by a parapet wall with a height equal or greater than the equipment. The height of the wall must be taller than HVAC and be designed to completely shield any noise that may be able to flank around the wall.

Exhibit F

Operational Noise Levels Leq(h)



8.0 Construction Noise Impact

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Noise levels associated with the construction will vary with the different phases of construction.

9.2 **Construction Noise**

The Environmental Protection Agency (EPA) has compiled data regarding the noise generated characteristics of typical construction activities. The data is presented in Table 7.

Table 7: Typical Construction Equipment Noise Levels[1]

Type	Lmax (dBA) at 50 Feet
Backhoe	80
Truck	88
Concrete Mixer	85
Pneumatic Tool	85
Pump	76
Saw, Electric	76
Air Compressor	81
Generator	81
Paver	89
Roller	74

Notes:
[1] Referenced Noise Levels from FTA noise and vibration manual.

Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City's Noise Element Section 11.05.040 Table 1. Construction is anticipated to occur during the permissible hours according to the City's Municipal Code. Construction noise will have a temporary or periodic increase in the ambient noise level above the existing within the project vicinity. Furthermore, noise reduction measures are provided to further reduce construction noise. The impact is considered less than significant however construction noise level projections are provided.

Typical 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. Noise levels will be loudest during grading phase. A likely worst-case construction noise scenario during grading assumes the use of 1-grader, 1-dozer, 2-excavators, 2-scrapers and 2-backhoes operating at 725 feet from the nearest sensitive receptor.

Assuming a usage factor of 40 percent for each piece of equipment, unmitigated noise levels at 72550 feet have the potential to reach 61 dBA L_{eq} at the nearest sensitive receptors during building construction.

8.2 Construction Vibration

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer. A large bulldozer has a vibration impact of 0.089 inches per second peak particle velocity (PPV) at 25 feet which is perceptible but below any risk to architectural damage.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (100/D_{rec})^n$$

Where: PPV_{ref} = reference PPV at 100ft.
D_{rec} = distance from equipment to receiver in ft.
n = 1.1 (the value related to the attenuation rate through ground)

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 8 (below) provides general thresholds and guidelines as to the vibration damage potential from vibratory impacts.

Table 8: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Table 19, Transportation and Construction Vibration Guidance Manual, Caltrans, Sept. 2013.
Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Table 9 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

<Table 9, next page>

Table 9: Vibration Source Levels for Construction Equipment[1]

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

[1] Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.

At a distance of 33 feet (distance residential structure from the property line), a large bulldozer would yield a worst-case 0.066 PPV (in/sec) which may be perceptible for short periods of time during grading along the eastern property line of the project site, but is below any threshold of damage. The impact is less than significant and no mitigation is required.

8.3 Construction Noise Reduction Measures

Construction operations must follow the City's General Plan and the Noise Ordinance, which states that construction, repair or excavation work performed must occur within the permissible hours. To further ensure that construction activities do not disrupt the adjacent land uses, the following measures should be taken:

1. Construction should occur during the permissible hours as defined in NE3.5 Policy and Section 11.05.020.

2. During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices.

3. The contractor should locate equipment staging areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.

4. Idling equipment should be turned off when not in use.

5. Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.

9.0 References

State of California General Plan Guidelines: 1998. Governor's Office of Planning and Research

City of Jurupa Valley: General Plan Noise Element. Chapter 7.

TJW Engineering, MA20035 – Per TIA The Shops at Jurupa Valley

Appendix A:

Photographs and Field Measurement Data

MD ACOUSTICS
Sound Solutions for Planning and Design
www.mdacoustics.com

AZ Office
4960 S. Gilbert Rd, Ste 1-461
Chandler, AZ 85249

CA Office
1197 E Los Angeles Ave, C-256
Simi Valley, CA 93065

10-Minute Continuous Noise Measurement Datasheet

Project: Shops @ Jurpa Valley
Site Observations: Overcast with intermitent drizzel. Temps in the high 70's no wind.
Site Address/Location: NE Corner of Pyrite St. & Mission Blvd. Jurupa Valley, CA
Date: 6/18/2020
Field Tech/Engineer: Jason Schuyler & Robert Pearson

General Location:
Sound Meter: NTi Audio **SN:** A2A-05967-E0
Settings: A-weighted, slow, 1-sec, 10-minute interval
Meteorological Con.: 78 degrees F,
Site ID: ST-1 thru ST-4

Site Topo: Mostly flat some grade in NE Corner of
Ground Type: soft site

Noise Source(s) w/ Distance:

1 - C/L of Pyrite is 36' from meter & CL of Mission is 42'
2 - C/L of Pyrite is 27' from NM
3 - jersey wall is 50ish ' from NM
4 - C/L Mission is 22' and PL is 12' to the east

Figure 1: Monitoring Locations

Figure 2: ST-1 Photo

Figure 3: ST-2 Photo

MD ACOUSTICS
Sound Solutions for Planning and Design
www.mdacoustics.com

AZ Office
4960 S. Gilbert Rd, Ste 1-461
Chandler, AZ 85249

CA Office
1197 E Los Angeles Ave, C-256
Simi Valley, CA 93065

10-Minute Noise Measurement Datasheet - Cont.

Project: Shops @ Jurpa Valley
Site Address/Location: NE Corner of Pyrite St. & Mission Blvd. Jurupa Valley, CA
Site ID: ST-1 thru ST-4

Figure 4: ST-3 Photo

Figure 5: ST-4 Photo

Table 1: Morning - Baseline Noise Measurement Summary

Location	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
1	9:26 AM	9:36 AM	67.7	83.6	52	76.1	71.9	67.7	63.8	54.0
2	9:41 AM	9:51 AM	69.0	82.1	56.9	77.5	72.9	69.1	65.9	58.9
3	10:10 AM	10:20 AM	65.4	74.4	52.8	70.3	68.6	66.8	64.2	55.7
4	10:28 AM	10:38 AM	71.6	87.4	50.5	80.4	76.2	72.4	66.6	51.8

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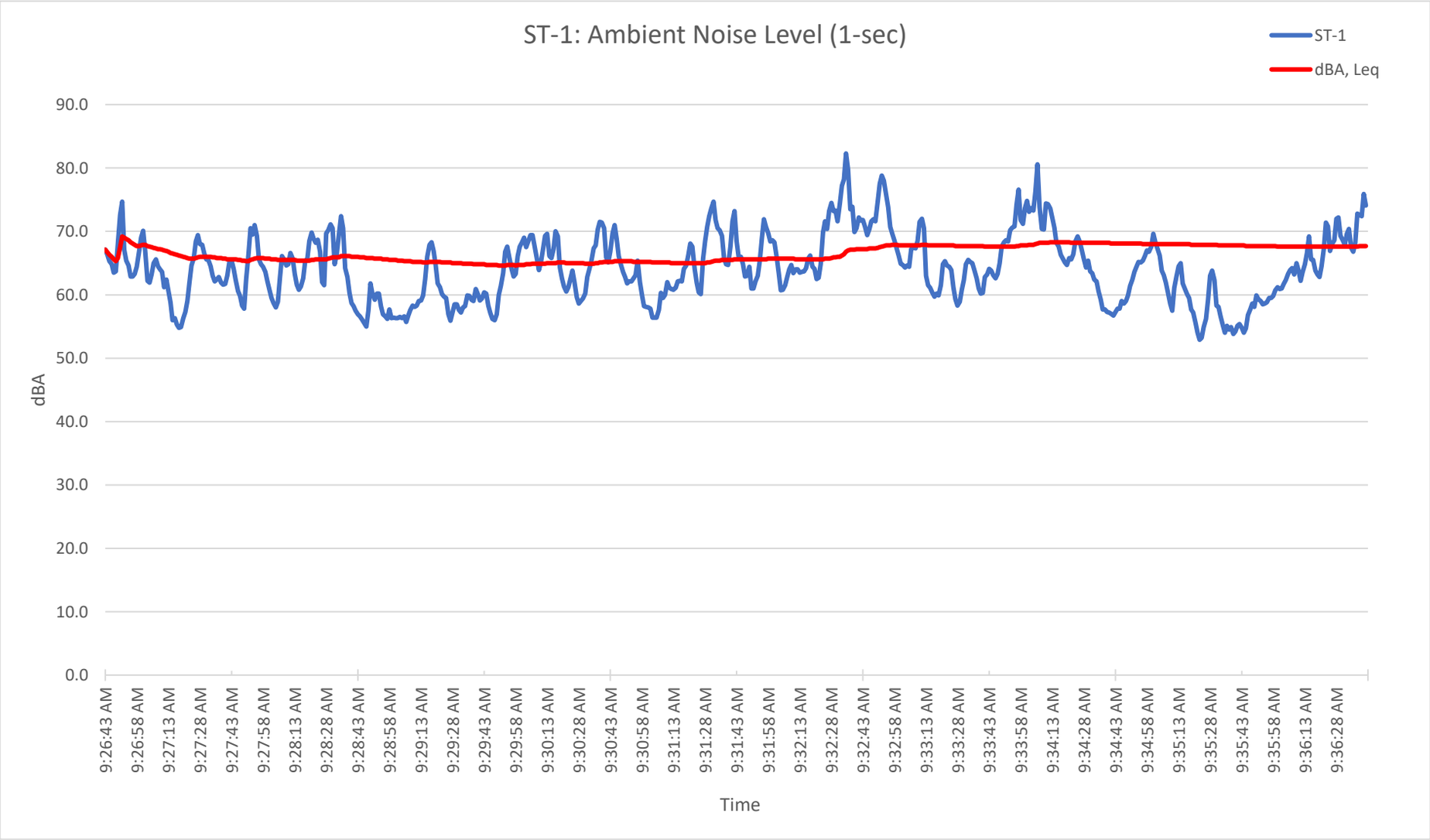
10-Minute Noise Measurement Datasheet - Cont.

Project: Shops @ Jurpa Valley
Site Address/Location: NE Corner of Pyrite St. & Mission Blvd. Jurupa Valley, CA
Site ID: ST-1



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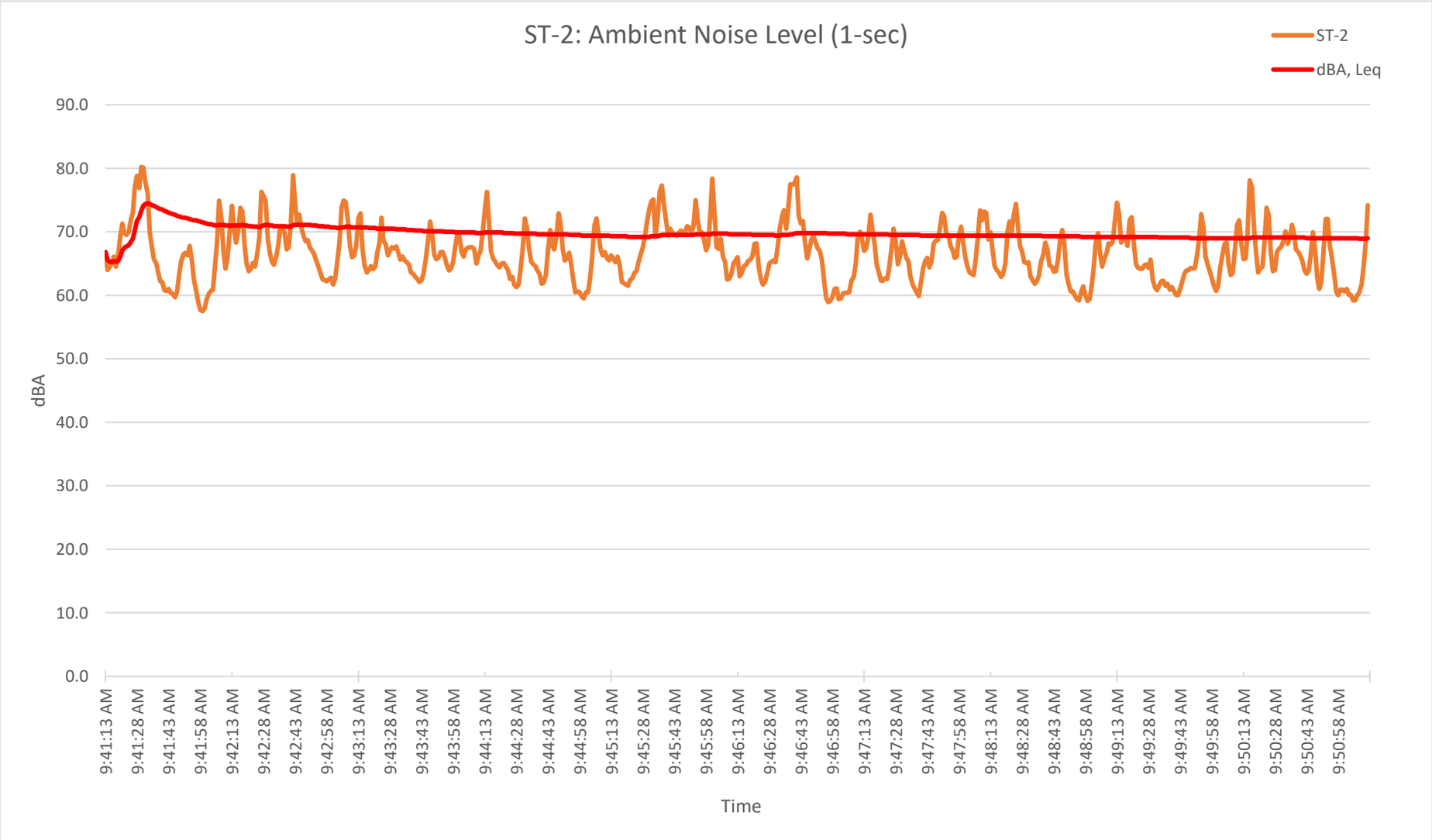
10-Minute Noise Measurement Datasheet - Cont.

Project: Shops @ Jurpa Valley
Site Address/Location: NE Corner of Pyrite St. & Mission Blvd. Jurupa Valley, CA
Site ID: ST-2



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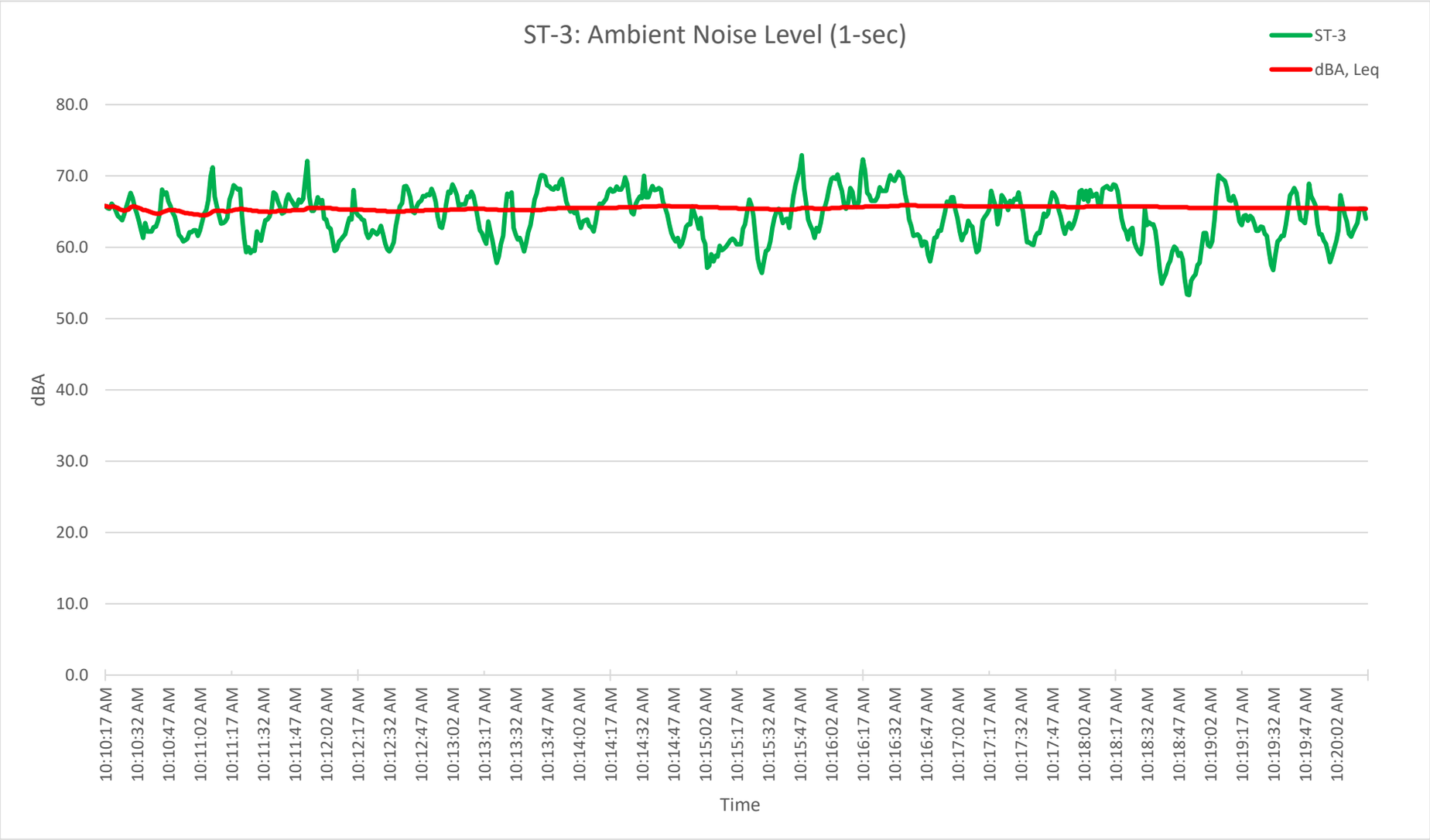
10-Minute Noise Measurement Datasheet - Cont.

Project: Shops @ Jurpa Valley
Site Address/Location: NE Corner of Pyrite St. & Mission Blvd. Jurupa Valley, CA
Site ID: ST-3



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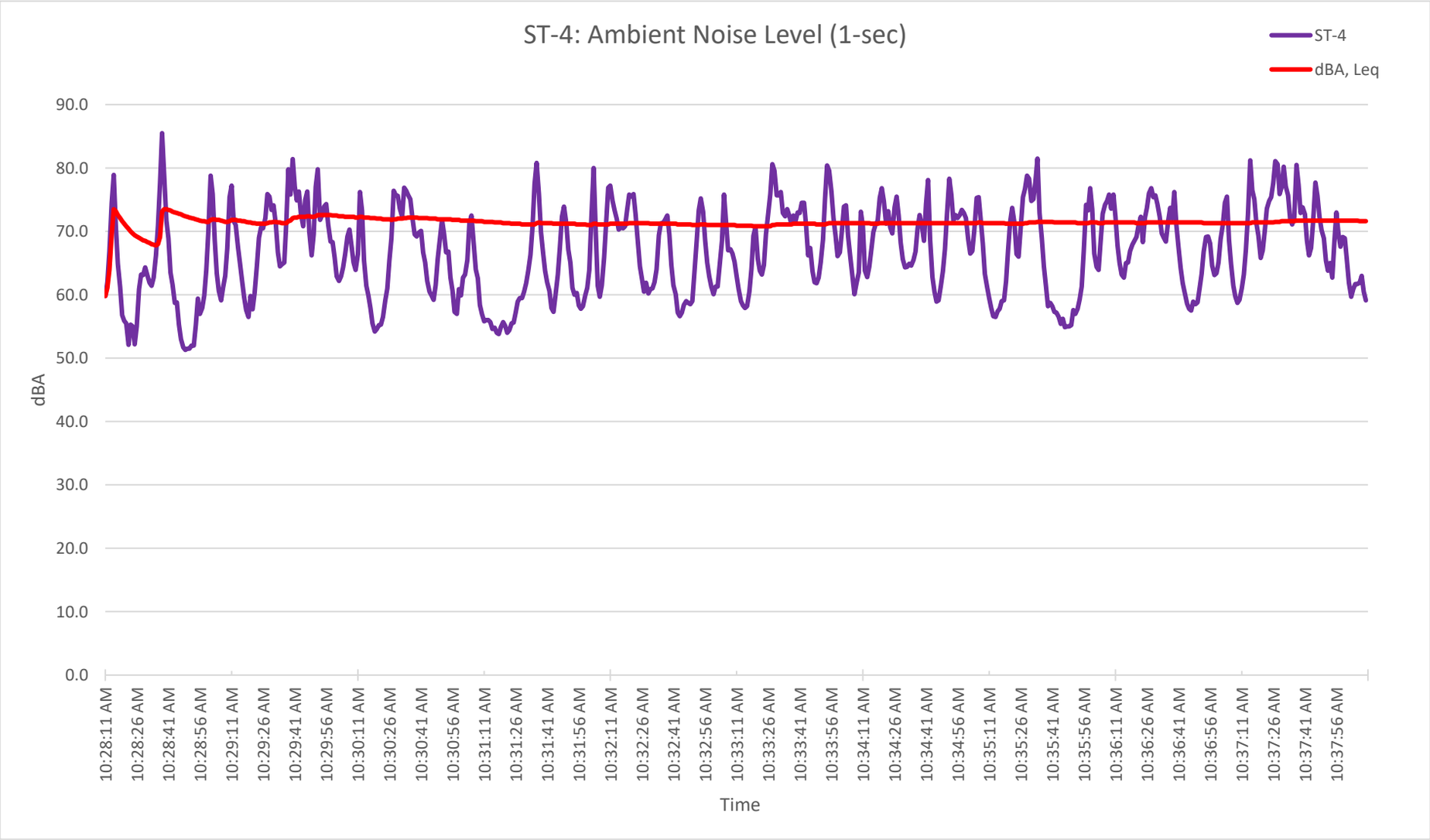
10-Minute Noise Measurement Datasheet - Cont.

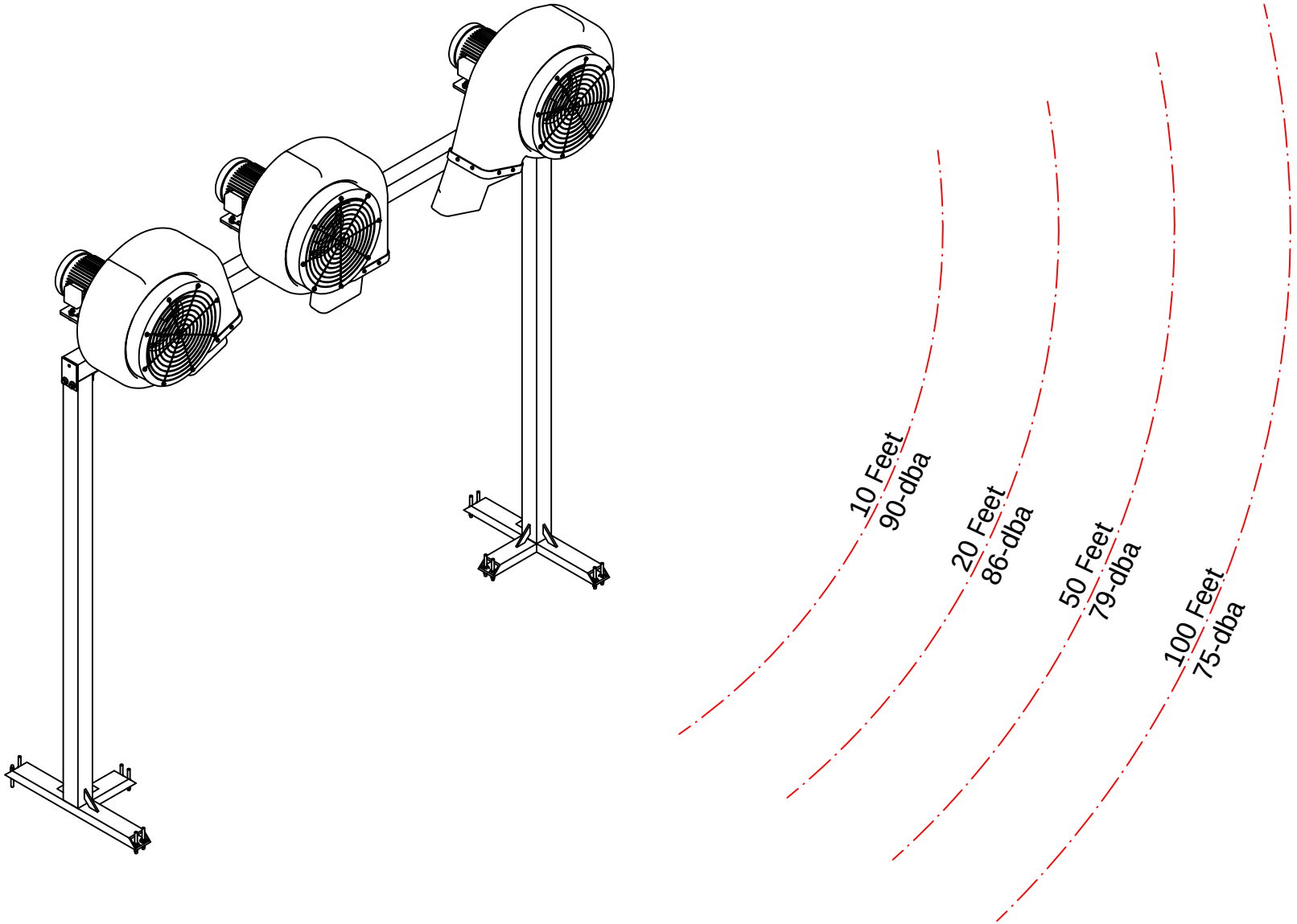
Project: Shops @ Jurpa Valley
Site Address/Location: NE Corner of Pyrite St. & Mission Blvd. Jurupa Valley, CA
Site ID: ST-4



Appendix B:

Manufacturers Cut Sheet

Enviromental Noise with Dryer OFF: 70 dba



THIRD ANGLE PROJECTION	MACHINING TOLERANCES	DRAWN LVerdecia	8/26/2011	**SONNY'S ENTERPRISES** THE CARWASH FACTORY
	FRACTION± 1/16"	APPROVED	8/1/2012	
BREAK ALL SHARP CORNERS. PART TO BE FREE OF BURRS.	.XX DECIMAL ± 0.030	CATEGORY BLOWER		DESCRIPTION BLOWER ASSEMBLY, ONE ARCH 45HP
	.XXX DECIMAL ± 0.005			
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES	ANGULARITY ± 2° FINISH 125	THIS SHEET CONTAINS CONFIDENTIAL INFORMATION, IMAGES AND TRADE SECRETS OF SONNY'S ENTERPRISES, INC. ANY UNAUTHORIZED USE OR DISCLOSURE OF ANY PORTION THEREOF IS STRICTLY PROHIBITED. THIS WORK IS THE EXCLUSIVE PROPERTY OF SONNY'S ENTERPRISES, INC. ALL RIGHTS RESERVED.		PART NUMBER BL1-45HP-1
MATERIAL				SHEET 2 OF 2 / SIZE A / SCALE N.T.S.

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Project: SuperStar Car Wash Chula Vista
Site Location: 1555 W Warner Rd, Gilbert, AZ 85233
Date: 4/5/2018
Field Tech/Engineer: Robert Pearson
Source/System: Vacutec System

Location: Vac Bay 1
Sound Meter: NTi XL2 **SN:** A2A-05967-E0
Settings: Z-weighted, slow, 1-sec, 10-sec duration
Meteorological Cond.: 80 degrees F, 2 mph wind

Site Observations:
Clear sky, measurements were performed within 1.5ft of source. Measurements were performed while the vacuum was positiioned at threee (3) different positions. Holstered, unholstered and inside a car. This data is utilized for acoustic modeling purposes and represents an average sound level at a vacuum station.

Table 1: Summary Measurement Data

Source	System	Overall dB(A)	3rd Octave Band Data (dBA)																														
			20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1K	1.25K	1.6K	2K	2.5K	3.15K	4K	5K	6.3K	8K	10K	12.5K	16K	20K
Vacutech (Holstered)	**Vacuum**	**63.3**	9	17	22	29	31	35	40	41	44	43	46	48	47	49	51	51	51	52	53	52	52	50	52	53	50	47	47	48	45	39	30
Vacutech (Un Holstered)	**Vacuum**	**80.7**	6	19	22	28	34	37	40	43	47	46	48	48	48	49	54	55	58	58	62	65	68	70	74	75	73	69	67	65	63	60	55
Vacutech (Inside Car)	**Vacuum**	**69.6**	16	28	31	38	42	45	49	51	52	55	60	61	57	55	59	53	55	56	54	57	57	57	57	57	55	54	51	48	46	42	36
Arth. Average Level*	**Vacuum**	**71.2**	11	21	25	32	36	39	43	45	47	48	52	53	51	51	55	53	55	55	56	58	59	59	61	62	59	56	55	53	51	47	40

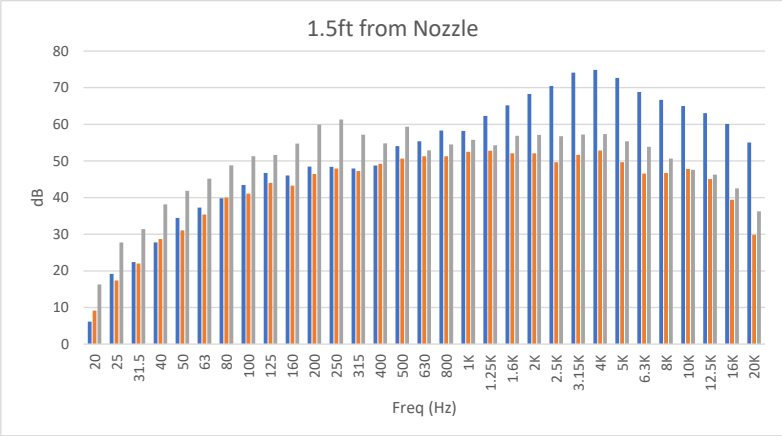
* Refers to the arthitmetic average of all measurements. This measurement represents an average of the multiple vacuum positions.

Figure 1: Example Measurement Position

Figure 1: Holstered

Figure 2: Un Holstered

Figure 3: Inside Car



Site Operational Noise

Menu Board

Noise data was obtained from the menu board manufacturer, HM Electronics, selected for use at the proposed site. The data is presented in terms of Sound Pressure Levels (SPL). SPL is the noise generated when the menu sound board is operating. As a worst case it is assumed that the SPL equals L_{50}, or that the speaker is on for 30 minutes/hour.

An option offered by the manufacturer incorporates automatic volume control (AVC). AVC will adjust the outbound volume based on the outdoor ambient noise level. When ambient noise levels naturally decrease at night, AVC will reduce the outbound volume on the system. The following data are provided by the manufacturer for different distances from the speaker post, with and without AVC:

Distance from Speaker	**Decibel Level of Standard System with 45 dB of outside noise without AVC**	**Decibel Level of Standard System with 45 dB of outside noise with AVC**
1 foot	84 dBA	60 dBA
2 feet	78 dBA	54 dBA
4 feet	72 dBA	48 dBA
8 feet	66 dBA	42 dBA
16 feet	60 dBA	36 dBA
32 feet	54 dBA	-
50 feet	50 dBA	-

Appendix C:

SoundPlan Input/Output

Shops @ JV - Noise
Input data parking lots - Situation 1: Outdoor SP

Parking lot	PLT	f	Unit B0	rence val	Sep.Mtd.	NRT	KPA dB	KI dB	KD dB	KStrO	ne hist.
	Housing estate	1.0	1 parking bay	12			0.0	4.0	1.2	0.0	-1
	Housing estate	1.0	1 parking bay	7			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	7			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	4			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	4			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	9			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	6			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	6			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	2			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	8			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	15			0.0	4.0	1.9	0.0	-1
	Visitors and staff	1.0	1 parking bay	80			0.0	4.0	4.6	0.0	-1
	Housing estate	1.0	1 parking bay	60			0.0	4.0	4.3	0.0	-1
	Housing estate	1.0	1 parking bay	50			0.0	4.0	4.0	0.0	-1
	Housing estate	1.0	1 parking bay	19			0.0	4.0	2.5	0.0	-1
	Housing estate	1.0	1 parking bay	12			0.0	4.0	1.2	0.0	-1
	Housing estate	1.0	1 parking bay	8			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	15			0.0	4.0	1.9	0.0	-1
	Housing estate	1.0	1 parking bay	14			0.0	4.0	1.7	0.0	-1
	Housing estate	1.0	1 parking bay	24			0.0	4.0	2.9	0.0	-1
	Housing estate	1.0	1 parking bay	11			0.0	4.0	0.8	0.0	-1
	Housing estate	1.0	1 parking bay	3			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	8			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	35			0.0	4.0	3.5	0.0	-1
	Housing estate	1.0	1 parking bay	40			0.0	4.0	3.7	0.0	-1
	Housing estate	1.0	1 parking bay	70			0.0	4.0	4.5	0.0	-1
	Housing estate	1.0	1 parking bay	21			0.0	4.0	2.7	0.0	-1
	Housing estate	1.0	1 parking bay	18			0.0	4.0	2.4	0.0	-1
	Housing estate	1.0	1 parking bay	19			0.0	4.0	2.5	0.0	-1
	Housing estate	1.0	1 parking bay	19			0.0	4.0	2.5	0.0	-1
	Housing estate	1.0	1 parking bay	30			0.0	4.0	3.3	0.0	-1
	Housing estate	1.0	1 parking bay	7			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	3			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	3			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	10			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	6			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	5			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	5			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	8			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	14			0.0	4.0	1.7	0.0	-1
	Housing estate	1.0	1 parking bay	15			0.0	4.0	1.9	0.0	-1
	Housing estate	1.0	1 parking bay	6			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	10			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	10			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	8			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	25			0.0	4.0	3.0	0.0	-1
	Housing estate	1.0	1 parking bay	5			0.0	4.0	0.0	0.0	-1

Shops @ JV - Noise
Input data parking lots - Situation 1: Outdoor SP

Parking lot	PLT	f	Unit B0	rence val	Sep.Mtd.	NRT	KPA dB	KI dB	KD dB	KStrO	e hist.
	Housing estate	1.0	1 parking bay	3			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	6			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	5			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	24			0.0	4.0	2.9	0.0	-1
	Housing estate	1.0	1 parking bay	8			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	7			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	15			0.0	4.0	1.9	0.0	-1
	Housing estate	1.0	1 parking bay	8			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	6			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	11			0.0	4.0	0.8	0.0	-1
	Housing estate	1.0	1 parking bay	6			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	8			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	2			0.0	4.0	0.0	0.0	-1
	Housing estate	1.0	1 parking bay	2			0.0	4.0	0.0	0.0	-1

Shops @ JV - Noise
Octave spectra of the sources in dB(A) - Situation 1: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Drive-Thru 1	Line	86.43			75.3	94.7	0.0	0.0		0	100%/24h	Car start up	78.0	89.6	82.1	86.6	86.7	87.1	84.4	78.2	65.4
Drive-Thru 2	Line	84.94			75.4	94.7	0.0	0.0		0	100%/24h	Car start up	78.0	89.6	82.1	86.6	86.7	87.1	84.4	78.2	65.4
Drive-Thru 3	Line	91.31			75.0	94.7	0.0	0.0		0	100%/24h	Car start up	78.0	89.6	82.1	86.6	86.7	87.1	84.4	78.2	65.4
Drive-Thru 4	Line	84.34			77.5	96.8	0.0	0.0		0	100%/24h	Car start up	80.1	91.7	84.2	88.7	88.8	89.2	86.5	80.3	67.5
Drive-Thru 5	Line	72.15			76.1	94.7	0.0	0.0		0	100%/24h	Car start up	78.0	89.6	82.1	86.6	86.7	87.1	84.4	78.2	65.4
Exit - Tunnel Enclosure	Area	8.37	93.2	0.0	93.2	102.4	0.0	0.0		3	100%/24h	145_Transmissive area 01_	66.8	75.5	88.5	96.7	97.6	97.4	89.0	78.3	
Facade 01 - Tunnel Enclosure	Area	151.91	92.4	47.0	48.6	70.4	0.0	0.0		3	100%/24h	136_Facade 01_	57.2	52.0	64.9	68.0	58.4	49.7	34.7	22.4	
Facade 02 - Tunnel Enclosure	Area	24.89	93.0	47.0	48.7	62.7	0.0	0.0		3	100%/24h	137_Facade 02_	49.4	44.1	57.2	60.3	51.1	42.9	28.3	17.4	
Facade 03 - Tunnel Enclosure	Area	151.91	92.4	47.0	48.6	70.4	0.0	0.0		3	100%/24h	138_Facade 03_	57.2	52.0	64.9	68.0	58.4	49.7	34.7	22.4	
Facade 04 - Tunnel Enclosure	Area	24.89	91.9	47.0	48.0	62.0	0.0	0.0		3	100%/24h	139_Facade 04_	48.8	43.5	56.5	59.6	50.1	41.4	26.2	12.8	
Gas Canopy	Area	575.29			71.7	99.3	0.0	0.0		0	100%/24h	Pump housing at fuel pump	78.4	85.2	89.2	92.4	94.0	92.4	89.8	84.4	
Roof 01 - Tunnel Enclosure	Area	249.49	91.9	47.0	48.1	72.0	0.0	0.0		0	100%/24h	134_Roof 01_	58.9	53.6	66.5	69.7	60.0	51.3	36.4	24.2	
Speaker Phone 1	Point				65.0	65.0	0.0	0.0		0	100%/24h	Speaker Phone				65.0					
Speaker Phone 2	Point				65.0	65.0	0.0	0.0		0	100%/24h	Speaker Phone				65.0					
Speaker Phone 3	Point				65.0	65.0	0.0	0.0		0	100%/24h	Speaker Phone				65.0					
Speaker Phone 4	Point				65.0	65.0	0.0	0.0		0	100%/24h	Speaker Phone				65.0					
Speaker Phone 5	Point				65.0	65.0	0.0	0.0		0	100%/24h	Speaker Phone				65.0					
Transmissive area 02 - Tunnel Enclosure	Area	8.37	92.0	0.0	92.0	101.2	0.0	0.0		3	100%/24h	146_Transmissive area 02_	66.1	74.8	87.8	95.9	96.4	95.7	86.6	73.2	
Vac 1	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 2	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 3	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 4	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 5	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 6	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 7	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 8	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 9	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 10	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0

Shops @ JV - Noise
Octave spectra of the sources in dB(A) - Situation 1: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac 11	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 12	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 13	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 14	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 15	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 16	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 17	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 18	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
Vac 19	Point				72.6	72.6	0.0	0.0		0	100%/24h	Vacutech	47.3	57.5	54.5	51.8	55.8	59.5	66.1	69.3	65.0
	PLot	104.47			54.6	74.8	0.0	0.0		0	100%/24h					74.8					
	PLot	447.43			54.2	80.7	0.0	0.0		0	100%/24h					80.7					
	PLot	272.12			55.9	80.2	0.0	0.0		0	100%/24h					80.2					
	PLot	296.21			52.3	77.0	0.0	0.0		0	100%/24h					77.0					
	PLot	1148.22			53.4	84.0	0.0	0.0		0	100%/24h					84.0					
	PLot	297.63			51.3	76.0	0.0	0.0		0	100%/24h					76.0					
	PLot	164.00			54.9	77.0	0.0	0.0		0	100%/24h					77.0					
	PLot	163.03			53.9	76.0	0.0	0.0		0	100%/24h					76.0					
	PLot	52.37			54.6	71.8	0.0	0.0		0	100%/24h					71.8					
	PLot	51.96			54.6	71.8	0.0	0.0		0	100%/24h					71.8					
	PLot	156.58			53.5	75.5	0.0	0.0		0	100%/24h					75.5					
	PLot	875.25			47.6	77.0	0.0	0.0		0	100%/24h					77.0					
	PLot	82.32			54.8	74.0	0.0	0.0		0	100%/24h					74.0					
	PLot	84.49			54.7	74.0	0.0	0.0		0	100%/24h					74.0					
	PLot	172.38			52.4	74.8	0.0	0.0		0	100%/24h					74.8					
	PLot	204.62			55.1	78.2	0.0	0.0		0	100%/24h					78.2					
	PLot	95.60			55.0	74.8	0.0	0.0		0	100%/24h					74.8					
	PLot	127.68			55.0	76.0	0.0	0.0		0	100%/24h					76.0					
	PLot	106.70			54.5	74.8	0.0	0.0		0	100%/24h					74.8					
	PLot	39.76			54.0	70.0	0.0	0.0		0	100%/24h					70.0					
	PLot	34.80			54.6	70.0	0.0	0.0		0	100%/24h					70.0					

Shops @ JV - Noise
Octave spectra of the sources in dB(A) - Situation 1: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	PLot	152.75			54.2	76.0	0.0	0.0		0	100%/24h					76.0					
	PLot	258.13			56.6	80.7	0.0	0.0		0	100%/24h					80.7					
	PLot	100.65			54.8	74.8	0.0	0.0		0	100%/24h					74.8					
	PLot	56.35			54.3	71.8	0.0	0.0		0	100%/24h					71.8					
	PLot	108.59			53.6	74.0	0.0	0.0		0	100%/24h					74.0					
	PLot	80.68			54.9	74.0	0.0	0.0		0	100%/24h					74.0					
	PLot	136.92			54.1	75.5	0.0	0.0		0	100%/24h					75.5					
	PLot	152.85			54.2	76.0	0.0	0.0		0	100%/24h					76.0					
	PLot	502.27			56.7	83.7	0.0	0.0		0	100%/24h					83.7					
	PLot	1128.18			54.6	85.1	0.0	0.0		0	100%/24h					85.1					
	PLot	436.15			54.3	80.7	0.0	0.0		0	100%/24h					80.7					
	PLot	145.30			54.4	76.0	0.0	0.0		0	100%/24h					76.0					
	PLot	41.24			53.9	70.0	0.0	0.0		0	100%/24h					70.0					
	PLot	6918.66			52.3	90.7	0.0	0.0		0	100%/24h					90.7					
	PLot	401.70			56.2	82.3	0.0	0.0		0	100%/24h					82.3					
	PLot	2340.54			54.3	88.0	0.0	0.0		0	100%/24h					88.0					
	PLot	2725.53			54.7	89.1	0.0	0.0		0	100%/24h					89.1					
	PLot	101.39			54.7	74.8	0.0	0.0		0	100%/24h					74.8					
	PLot	116.60			54.8	75.5	0.0	0.0		0	100%/24h					75.5					
	PLot	116.60			54.8	75.5	0.0	0.0		0	100%/24h					75.5					
	PLot	191.22			56.2	79.0	0.0	0.0		0	100%/24h					79.0					
	PLot	63.80			55.0	73.0	0.0	0.0		0	100%/24h					73.0					
	PLot	100.43			54.8	74.8	0.0	0.0		0	100%/24h					74.8					
	PLot	147.08			54.9	76.5	0.0	0.0		0	100%/24h					76.5					
	PLot	68.79			54.6	73.0	0.0	0.0		0	100%/24h					73.0					
	PLot	3959.43			53.9	89.9	0.0	0.0		0	100%/24h					89.9					
	PLot	2859.01			52.2	86.7	0.0	0.0		0	100%/24h					86.7					
	PLot	1997.98			53.0	86.0	0.0	0.0		0	100%/24h					86.0					
	PLot	755.47			54.1	82.9	0.0	0.0		0	100%/24h					82.9					
	PLot	457.16			55.7	82.3	0.0	0.0		0	100%/24h					82.3					

Shops @ JV - Noise
Octave spectra of the sources in dB(A) - Situation 1: Outdoor SP

Name	Source type	l or A	Li	R'w	L'w	Lw	KI	KT	LwMax	DO-Wall	Time histogram	Emission spectrum	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	16kHz
		m,m²	dB(A)	dB	dB(A)	dB(A)	dB	dB	dB(A)	dB			dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
	PLot	382.00			56.5	82.3	0.0	0.0		0	100%/24h					82.3					
	PLot	656.18			53.8	81.9	0.0	0.0		0	100%/24h					81.9					
	PLot	169.90			53.7	76.0	0.0	0.0		0	100%/24h					76.0					
	PLot	262.76			56.5	80.7	0.0	0.0		0	100%/24h					80.7					
	PLot	134.44			54.7	76.0	0.0	0.0		0	100%/24h					76.0					
	PLot	419.03			52.8	79.0	0.0	0.0		0	100%/24h					79.0					
	PLot	355.33			54.7	80.2	0.0	0.0		0	100%/24h					80.2					
	PLot	70.28			53.3	71.8	0.0	0.0		0	100%/24h					71.8					
	PLot	243.33			54.3	78.2	0.0	0.0		0	100%/24h					78.2					
	PLot	390.39			57.8	83.7	0.0	0.0		0	100%/24h					83.7					

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
Receiver -194,102 Fl G Lr,lim dB(A) Leq,d 38.5 dB(A) Sigma(Leq,d) 0.1 dB(A)						
Drive-Thru 1	Default industrial noise	Line		17.9	0.0	
Drive-Thru 2	Default industrial noise	Line		16.5	0.0	
Drive-Thru 3	Default industrial noise	Line		18.9	0.0	
Drive-Thru 4	Default industrial noise	Line		21.3	0.0	
Drive-Thru 5	Default industrial noise	Line		16.5	0.0	
Gas Canopy	Default industrial noise	Area		21.0	0.0	
	Default parking lot noise	PLot		8.3	0.0	
	Default parking lot noise	PLot		0.1	0.0	
	Default parking lot noise	PLot		4.0	0.0	
	Default parking lot noise	PLot		1.0	0.0	
	Default parking lot noise	PLot		0.1	0.0	
	Default parking lot noise	PLot		21.9	0.0	
	Default parking lot noise	PLot		10.3	0.0	
	Default parking lot noise	PLot		12.8	0.0	
	Default parking lot noise	PLot		8.1	0.0	
	Default parking lot noise	PLot		4.2	0.0	
	Default parking lot noise	PLot		7.3	0.0	
	Default parking lot noise	PLot		16.5	0.0	
	Default parking lot noise	PLot		21.7	0.0	
	Default parking lot noise	PLot		35.6	0.0	
	Default parking lot noise	PLot		13.5	0.0	
	Default parking lot noise	PLot		12.6	0.0	
	Default parking lot noise	PLot		8.8	0.0	
	Default parking lot noise	PLot		12.6	0.0	
	Default parking lot noise	PLot		12.4	0.0	
	Default parking lot noise	PLot		11.9	0.0	
	Default parking lot noise	PLot		4.9	0.0	
	Default parking lot noise	PLot		-1.3	0.0	
	Default parking lot noise	PLot		4.7	0.0	
	Default parking lot noise	PLot		11.9	0.0	
	Default parking lot noise	PLot		13.3	0.0	
	Default parking lot noise	PLot		23.3	0.0	
	Default parking lot noise	PLot		18.2	0.0	
	Default parking lot noise	PLot		18.4	0.0	
	Default parking lot noise	PLot		25.4	0.0	
	Default parking lot noise	PLot		12.7	0.0	
	Default parking lot noise	PLot		18.7	0.0	
	Default parking lot noise	PLot		4.8	0.0	
	Default parking lot noise	PLot		1.4	0.0	
	Default parking lot noise	PLot		-0.9	0.0	
	Default parking lot noise	PLot		1.5	0.0	
	Default parking lot noise	PLot		0.4	0.0	
	Default parking lot noise	PLot		1.6	0.0	
	Default parking lot noise	PLot		-0.3	0.0	

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB
	Default parking lot noise	PLot		2.2	0.0
	Default parking lot noise	PLot		5.7	0.0
	Default parking lot noise	PLot		6.3	0.0
	Default parking lot noise	PLot		1.3	0.0
	Default parking lot noise	PLot		2.4	0.0
	Default parking lot noise	PLot		11.3	0.0
	Default parking lot noise	PLot		11.5	0.0
	Default parking lot noise	PLot		9.9	0.0
	Default parking lot noise	PLot		-1.0	0.0
	Default parking lot noise	PLot		7.0	0.0
	Default parking lot noise	PLot		8.8	0.0
	Default parking lot noise	PLot		10.2	0.0
	Default parking lot noise	PLot		9.6	0.0
	Default parking lot noise	PLot		12.0	0.0
	Default parking lot noise	PLot		11.9	0.0
	Default parking lot noise	PLot		15.7	0.0
	Default parking lot noise	PLot		3.9	0.0
	Default parking lot noise	PLot		-4.0	0.0
	Default parking lot noise	PLot		7.7	0.0
	Default parking lot noise	PLot		0.6	0.0
	Default parking lot noise	PLot		-2.7	0.0
	Default parking lot noise	PLot		-7.7	0.0
	Default parking lot noise	PLot		-4.6	0.0
Speaker Phone 1	Default industrial noise	Point		-19.9	0.0
Speaker Phone 2	Default industrial noise	Point		-14.1	0.0
Speaker Phone 3	Default industrial noise	Point		-9.3	0.0
Speaker Phone 4	Default industrial noise	Point		-17.5	0.0
Speaker Phone 5	Default industrial noise	Point		-17.3	0.0
Vac 1	Default industrial noise	Point		-8.2	0.0
Vac 2	Default industrial noise	Point		-8.1	0.0
Vac 3	Default industrial noise	Point		-8.4	0.0
Vac 4	Default industrial noise	Point		-8.3	0.0
Vac 5	Default industrial noise	Point		-8.2	0.0
Vac 6	Default industrial noise	Point		-8.2	0.0
Vac 7	Default industrial noise	Point		-8.1	0.0
Vac 8	Default industrial noise	Point		-8.0	0.0
Vac 9	Default industrial noise	Point		-7.9	0.0
Vac 10	Default industrial noise	Point		-7.9	0.0
Vac 11	Default industrial noise	Point		-7.8	0.0
Vac 12	Default industrial noise	Point		-9.0	0.0
Vac 13	Default industrial noise	Point		-8.9	0.0
Vac 14	Default industrial noise	Point		-8.8	0.0
Vac 15	Default industrial noise	Point		-8.8	0.0
Vac 16	Default industrial noise	Point		-8.7	0.0
Vac 17	Default industrial noise	Point		-8.6	0.0

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB
Vac 18	Default industrial noise	Point		-8.1	0.0
Vac 19	Default industrial noise	Point		-8.0	0.0
Roof 01 - Tunnel Enclosure	Default industrial noise	Area		2.7	0.0
Facade 01 - Tunnel Enclosure	Default industrial noise	Area		4.7	0.0
Facade 02 - Tunnel Enclosure	Default industrial noise	Area		-3.6	0.0
Exit - Tunnel Enclosure	Default industrial noise	Area		30.9	0.0
Facade 03 - Tunnel Enclosure	Default industrial noise	Area		-4.1	0.0
Facade 04 - Tunnel Enclosure	Default industrial noise	Area		-11.5	0.0
Transmissive area 02 - Tunnel Enclosure	Default industrial noise	Area		20.5	0.0
Receiver -441,67 Fl G Lr,lim dB(A) Leq,d 47.4 dB(A) Sigma(Leq,d) 0.0 dB(A)					
Drive-Thru 1	Default industrial noise	Line		24.0	0.0
Drive-Thru 2	Default industrial noise	Line		16.8	0.0
Drive-Thru 3	Default industrial noise	Line		21.9	0.0
Drive-Thru 4	Default industrial noise	Line		25.5	0.0
Drive-Thru 5	Default industrial noise	Line		17.1	0.0
Gas Canopy	Default industrial noise	Area		21.2	0.0
	Default parking lot noise	PLot		22.2	0.0
	Default parking lot noise	PLot		18.4	0.0
	Default parking lot noise	PLot		18.3	0.0
	Default parking lot noise	PLot		15.4	0.0
	Default parking lot noise	PLot		16.3	0.0
	Default parking lot noise	PLot		15.5	0.0
	Default parking lot noise	PLot		11.0	0.0
	Default parking lot noise	PLot		-0.3	0.0
	Default parking lot noise	PLot		4.5	0.0
	Default parking lot noise	PLot		15.0	0.0
	Default parking lot noise	PLot		21.0	0.0
	Default parking lot noise	PLot		23.1	0.0
	Default parking lot noise	PLot		17.5	0.0
	Default parking lot noise	PLot		18.7	0.0
	Default parking lot noise	PLot		22.7	0.0
	Default parking lot noise	PLot		12.1	0.0
	Default parking lot noise	PLot		13.3	0.0
	Default parking lot noise	PLot		7.0	0.0
	Default parking lot noise	PLot		4.3	0.0
	Default parking lot noise	PLot		20.0	0.0
	Default parking lot noise	PLot		20.3	0.0
	Default parking lot noise	PLot		13.3	0.0
	Default parking lot noise	PLot		16.9	0.0
	Default parking lot noise	PLot		20.5	0.0

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB
	Default parking lot noise	PLot		13.7	0.0
	Default parking lot noise	PLot		16.0	0.0
	Default parking lot noise	PLot		6.6	0.0
	Default parking lot noise	PLot		6.8	0.0
	Default parking lot noise	PLot		2.9	0.0
	Default parking lot noise	PLot		12.1	0.0
	Default parking lot noise	PLot		9.3	0.0
	Default parking lot noise	PLot		-1.8	0.0
	Default parking lot noise	PLot		-4.1	0.0
	Default parking lot noise	PLot		0.6	0.0
	Default parking lot noise	PLot		0.8	0.0
	Default parking lot noise	PLot		0.5	0.0
	Default parking lot noise	PLot		0.2	0.0
	Default parking lot noise	PLot		-1.5	0.0
	Default parking lot noise	PLot		1.3	0.0
	Default parking lot noise	PLot		3.4	0.0
	Default parking lot noise	PLot		3.8	0.0
	Default parking lot noise	PLot		-0.5	0.0
	Default parking lot noise	PLot		-0.8	0.0
	Default parking lot noise	PLot		0.3	0.0
	Default parking lot noise	PLot		-0.5	0.0
	Default parking lot noise	PLot		14.1	0.0
	Default parking lot noise	PLot		-3.9	0.0
	Default parking lot noise	PLot		1.7	0.0
	Default parking lot noise	PLot		-2.3	0.0
	Default parking lot noise	PLot		-3.6	0.0
	Default parking lot noise	PLot		3.2	0.0
	Default parking lot noise	PLot		1.6	0.0
	Default parking lot noise	PLot		3.9	0.0
	Default parking lot noise	PLot		11.4	0.0
	Default parking lot noise	PLot		-0.6	0.0
	Default parking lot noise	PLot		-6.2	0.0
	Default parking lot noise	PLot		1.6	0.0
	Default parking lot noise	PLot		-2.1	0.0
	Default parking lot noise	PLot		-2.4	0.0
	Default parking lot noise	PLot		-7.6	0.0
	Default parking lot noise	PLot		-5.3	0.0
Speaker Phone 1	Default industrial noise	Point		-19.1	0.0
Speaker Phone 2	Default industrial noise	Point		-15.5	0.0
Speaker Phone 3	Default industrial noise	Point		-10.5	0.0
Speaker Phone 4	Default industrial noise	Point		-8.3	0.0
Speaker Phone 5	Default industrial noise	Point		-14.4	0.0
Vac 1	Default industrial noise	Point		2.0	0.0
Vac 2	Default industrial noise	Point		1.8	0.0
Vac 3	Default industrial noise	Point		1.7	0.0

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB
Vac 4	Default industrial noise	Point		1.8	0.0
Vac 5	Default industrial noise	Point		1.9	0.0
Vac 6	Default industrial noise	Point		2.1	0.0
Vac 7	Default industrial noise	Point		2.3	0.0
Vac 8	Default industrial noise	Point		2.3	0.0
Vac 9	Default industrial noise	Point		2.4	0.0
Vac 10	Default industrial noise	Point		9.0	0.0
Vac 11	Default industrial noise	Point		8.9	0.0
Vac 12	Default industrial noise	Point		9.3	0.0
Vac 13	Default industrial noise	Point		9.0	0.0
Vac 14	Default industrial noise	Point		8.8	0.0
Vac 15	Default industrial noise	Point		8.6	0.0
Vac 16	Default industrial noise	Point		8.3	0.0
Vac 17	Default industrial noise	Point		8.1	0.0
Vac 18	Default industrial noise	Point		7.9	0.0
Vac 19	Default industrial noise	Point		7.7	0.0
Roof 01 - Tunnel Enclosure	Default industrial noise	Area		13.4	0.0
Facade 01 - Tunnel Enclosure	Default industrial noise	Area		19.7	0.0
Facade 02 - Tunnel Enclosure	Default industrial noise	Area		11.3	0.0
Exit - Tunnel Enclosure	Default industrial noise	Area		46.7	0.0
Facade 03 - Tunnel Enclosure	Default industrial noise	Area		9.3	0.0
Facade 04 - Tunnel Enclosure	Default industrial noise	Area		3.8	0.0
Transmissive area 02 - Tunnel Enclosure	Default industrial noise	Area		36.6	0.0
Receiver -486,69 Fl G Lr,lim dB(A) Leq,d 54.4 dB(A) Sigma(Leq,d) 0.1 dB(A)					
Drive-Thru 1	Default industrial noise	Line		30.0	0.0
Drive-Thru 2	Default industrial noise	Line		23.6	0.0
Drive-Thru 3	Default industrial noise	Line		28.8	0.0
Drive-Thru 4	Default industrial noise	Line		33.8	0.0
Drive-Thru 5	Default industrial noise	Line		25.2	0.0
Gas Canopy	Default industrial noise	Area		32.9	0.0
	Default parking lot noise	PLot		25.0	0.0
	Default parking lot noise	PLot		21.7	0.0
	Default parking lot noise	PLot		22.1	0.0
	Default parking lot noise	PLot		18.5	0.0
	Default parking lot noise	PLot		19.3	0.0
	Default parking lot noise	PLot		16.3	0.0
	Default parking lot noise	PLot		10.3	0.0
	Default parking lot noise	PLot		-1.6	0.0
	Default parking lot noise	PLot		0.9	0.0
	Default parking lot noise	PLot		20.9	0.0

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
	Default parking lot noise	PLot		27.4	0.0	
	Default parking lot noise	PLot		32.4	0.0	
	Default parking lot noise	PLot		18.8	0.0	
	Default parking lot noise	PLot		24.1	0.0	
	Default parking lot noise	PLot		27.1	0.0	
	Default parking lot noise	PLot		11.5	0.0	
	Default parking lot noise	PLot		18.1	0.0	
	Default parking lot noise	PLot		8.4	0.0	
	Default parking lot noise	PLot		6.7	0.0	
	Default parking lot noise	PLot		27.1	0.0	
	Default parking lot noise	PLot		26.5	0.0	
	Default parking lot noise	PLot		22.1	0.0	
	Default parking lot noise	PLot		18.3	0.0	
	Default parking lot noise	PLot		29.5	0.0	
	Default parking lot noise	PLot		21.8	0.0	
	Default parking lot noise	PLot		19.1	0.0	
	Default parking lot noise	PLot		11.2	0.0	
	Default parking lot noise	PLot		8.5	0.0	
	Default parking lot noise	PLot		3.8	0.0	
	Default parking lot noise	PLot		14.1	0.0	
	Default parking lot noise	PLot		13.4	0.0	
	Default parking lot noise	PLot		-1.2	0.0	
	Default parking lot noise	PLot		-3.2	0.0	
	Default parking lot noise	PLot		13.4	0.0	
	Default parking lot noise	PLot		10.8	0.0	
	Default parking lot noise	PLot		13.4	0.0	
	Default parking lot noise	PLot		13.1	0.0	
	Default parking lot noise	PLot		11.3	0.0	
	Default parking lot noise	PLot		5.7	0.0	
	Default parking lot noise	PLot		14.9	0.0	
	Default parking lot noise	PLot		16.5	0.0	
	Default parking lot noise	PLot		3.0	0.0	
	Default parking lot noise	PLot		11.8	0.0	
	Default parking lot noise	PLot		4.9	0.0	
	Default parking lot noise	PLot		4.0	0.0	
	Default parking lot noise	PLot		21.9	0.0	
	Default parking lot noise	PLot		-3.0	0.0	
	Default parking lot noise	PLot		1.9	0.0	
	Default parking lot noise	PLot		2.6	0.0	
	Default parking lot noise	PLot		-0.2	0.0	
	Default parking lot noise	PLot		6.6	0.0	
	Default parking lot noise	PLot		6.0	0.0	
	Default parking lot noise	PLot		8.5	0.0	
	Default parking lot noise	PLot		18.5	0.0	
	Default parking lot noise	PLot		4.4	0.0	

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB
	Default parking lot noise	PLot		2.5	0.0
	Default parking lot noise	PLot		6.5	0.0
	Default parking lot noise	PLot		10.5	0.0
	Default parking lot noise	PLot		11.0	0.0
	Default parking lot noise	PLot		5.0	0.0
	Default parking lot noise	PLot		-1.1	0.0
Speaker Phone 1	Default industrial noise	Point		-17.9	0.0
Speaker Phone 2	Default industrial noise	Point		-10.4	0.0
Speaker Phone 3	Default industrial noise	Point		-5.2	0.0
Speaker Phone 4	Default industrial noise	Point		4.6	0.0
Speaker Phone 5	Default industrial noise	Point		-12.7	0.0
Vac 1	Default industrial noise	Point		15.7	0.0
Vac 2	Default industrial noise	Point		3.3	0.0
Vac 3	Default industrial noise	Point		3.0	0.0
Vac 4	Default industrial noise	Point		2.9	0.0
Vac 5	Default industrial noise	Point		2.6	0.0
Vac 6	Default industrial noise	Point		2.5	0.0
Vac 7	Default industrial noise	Point		2.2	0.0
Vac 8	Default industrial noise	Point		1.9	0.0
Vac 9	Default industrial noise	Point		1.6	0.0
Vac 10	Default industrial noise	Point		1.4	0.0
Vac 11	Default industrial noise	Point		1.2	0.0
Vac 12	Default industrial noise	Point		12.7	0.0
Vac 13	Default industrial noise	Point		12.7	0.0
Vac 14	Default industrial noise	Point		4.6	0.0
Vac 15	Default industrial noise	Point		4.5	0.0
Vac 16	Default industrial noise	Point		4.4	0.0
Vac 17	Default industrial noise	Point		4.4	0.0
Vac 18	Default industrial noise	Point		4.3	0.0
Vac 19	Default industrial noise	Point		4.2	0.0
Roof 01 - Tunnel Enclosure	Default industrial noise	Area		21.2	0.0
Facade 01 - Tunnel Enclosure	Default industrial noise	Area		23.7	0.0
Facade 02 - Tunnel Enclosure	Default industrial noise	Area		2.8	0.0
Exit - Tunnel Enclosure	Default industrial noise	Area		34.8	0.0
Facade 03 - Tunnel Enclosure	Default industrial noise	Area		10.6	0.0
Facade 04 - Tunnel Enclosure	Default industrial noise	Area		16.0	0.0
Transmissive area 02 - Tunnel Enclosure	Default industrial noise	Area		54.1	0.0
Receiver -549,69 Fl G Lr,lim dB(A) Leq,d 53.9 dB(A) Sigma(Leq,d) 0.0 dB(A)					
Drive-Thru 1	Default industrial noise	Line		26.4	0.0
Drive-Thru 2	Default industrial noise	Line		20.9	0.0

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB
Drive-Thru 3	Default industrial noise	Line		27.4	0.0
Drive-Thru 4	Default industrial noise	Line		32.5	0.0
Drive-Thru 5	Default industrial noise	Line		24.1	0.0
Gas Canopy	Default industrial noise	Area		26.5	0.0
	Default parking lot noise	PLot		21.7	0.0
	Default parking lot noise	PLot		18.8	0.0
	Default parking lot noise	PLot		18.0	0.0
	Default parking lot noise	PLot		15.2	0.0
	Default parking lot noise	PLot		16.5	0.0
	Default parking lot noise	PLot		14.2	0.0
	Default parking lot noise	PLot		9.2	0.0
	Default parking lot noise	PLot		-2.2	0.0
	Default parking lot noise	PLot		2.9	0.0
	Default parking lot noise	PLot		11.5	0.0
	Default parking lot noise	PLot		18.0	0.0
	Default parking lot noise	PLot		32.9	0.0
	Default parking lot noise	PLot		22.2	0.0
	Default parking lot noise	PLot		25.1	0.0
	Default parking lot noise	PLot		22.6	0.0
	Default parking lot noise	PLot		8.0	0.0
	Default parking lot noise	PLot		14.7	0.0
	Default parking lot noise	PLot		8.1	0.0
	Default parking lot noise	PLot		9.1	0.0
	Default parking lot noise	PLot		28.9	0.0
	Default parking lot noise	PLot		23.4	0.0
	Default parking lot noise	PLot		21.0	0.0
	Default parking lot noise	PLot		13.7	0.0
	Default parking lot noise	PLot		21.4	0.0
	Default parking lot noise	PLot		19.4	0.0
	Default parking lot noise	PLot		24.9	0.0
	Default parking lot noise	PLot		16.0	0.0
	Default parking lot noise	PLot		9.5	0.0
	Default parking lot noise	PLot		4.1	0.0
	Default parking lot noise	PLot		18.5	0.0
	Default parking lot noise	PLot		18.3	0.0
	Default parking lot noise	PLot		-0.7	0.0
	Default parking lot noise	PLot		-4.5	0.0
	Default parking lot noise	PLot		5.4	0.0
	Default parking lot noise	PLot		4.6	0.0
	Default parking lot noise	PLot		6.8	0.0
	Default parking lot noise	PLot		6.1	0.0
	Default parking lot noise	PLot		5.3	0.0
	Default parking lot noise	PLot		2.9	0.0
	Default parking lot noise	PLot		7.9	0.0
	Default parking lot noise	PLot		9.6	0.0

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
	Default parking lot noise	PLot		0.6	0.0	
	Default parking lot noise	PLot		5.6	0.0	
	Default parking lot noise	PLot		10.7	0.0	
	Default parking lot noise	PLot		10.1	0.0	
	Default parking lot noise	PLot		22.5	0.0	
	Default parking lot noise	PLot		-3.3	0.0	
	Default parking lot noise	PLot		1.3	0.0	
	Default parking lot noise	PLot		8.6	0.0	
	Default parking lot noise	PLot		1.8	0.0	
	Default parking lot noise	PLot		10.5	0.0	
	Default parking lot noise	PLot		13.1	0.0	
	Default parking lot noise	PLot		13.8	0.0	
	Default parking lot noise	PLot		15.6	0.0	
	Default parking lot noise	PLot		3.4	0.0	
	Default parking lot noise	PLot		-0.6	0.0	
	Default parking lot noise	PLot		9.0	0.0	
	Default parking lot noise	PLot		5.2	0.0	
	Default parking lot noise	PLot		6.1	0.0	
	Default parking lot noise	PLot		0.0	0.0	
	Default parking lot noise	PLot		-1.0	0.0	
Speaker Phone 1	Default industrial noise	Point		-17.4	0.0	
Speaker Phone 2	Default industrial noise	Point		-4.5	0.0	
Speaker Phone 3	Default industrial noise	Point		-5.7	0.0	
Speaker Phone 4	Default industrial noise	Point		-1.5	0.0	
Speaker Phone 5	Default industrial noise	Point		-12.0	0.0	
Vac 1	Default industrial noise	Point		17.6	0.0	
Vac 2	Default industrial noise	Point		17.2	0.0	
Vac 3	Default industrial noise	Point		16.8	0.0	
Vac 4	Default industrial noise	Point		7.1	0.0	
Vac 5	Default industrial noise	Point		4.3	0.0	
Vac 6	Default industrial noise	Point		3.0	0.0	
Vac 7	Default industrial noise	Point		2.1	0.0	
Vac 8	Default industrial noise	Point		1.6	0.0	
Vac 9	Default industrial noise	Point		1.2	0.0	
Vac 10	Default industrial noise	Point		1.0	0.0	
Vac 11	Default industrial noise	Point		0.9	0.0	
Vac 12	Default industrial noise	Point		16.2	0.0	
Vac 13	Default industrial noise	Point		15.9	0.0	
Vac 14	Default industrial noise	Point		15.6	0.0	
Vac 15	Default industrial noise	Point		15.4	0.0	
Vac 16	Default industrial noise	Point		15.1	0.0	
Vac 17	Default industrial noise	Point		14.8	0.0	
Vac 18	Default industrial noise	Point		14.5	0.0	
Vac 19	Default industrial noise	Point		14.1	0.0	
Roof 01 - Tunnel Enclosure	Default industrial noise	Area		16.5	0.0	

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB
Facade 01 - Tunnel Enclosure	Default industrial noise	Area		20.5	0.0
Facade 02 - Tunnel Enclosure	Default industrial noise	Area		1.2	0.0
Exit - Tunnel Enclosure	Default industrial noise	Area		33.1	0.0
Facade 03 - Tunnel Enclosure	Default industrial noise	Area		9.8	0.0
Facade 04 - Tunnel Enclosure	Default industrial noise	Area		13.4	0.0
Transmissive area 02 - Tunnel Enclosure	Default industrial noise	Area		53.6	0.0
Receiver -620,293 Fl G Lr,lim dB(A) Leq,d 54.4 dB(A) Sigma(Leq,d) 2.3 dB(A)					
Drive-Thru 1	Default industrial noise	Line		47.5	0.0
Drive-Thru 2	Default industrial noise	Line		37.4	0.0
Drive-Thru 3	Default industrial noise	Line		50.8	0.0
Drive-Thru 4	Default industrial noise	Line		40.1	0.0
Drive-Thru 5	Default industrial noise	Line		38.4	0.0
Gas Canopy	Default industrial noise	Area		48.0	0.0
	Default parking lot noise	PLot		15.5	0.0
	Default parking lot noise	PLot		13.4	0.0
	Default parking lot noise	PLot		10.7	0.0
	Default parking lot noise	PLot		9.8	0.0
	Default parking lot noise	PLot		10.2	0.0
	Default parking lot noise	PLot		8.9	0.0
	Default parking lot noise	PLot		10.7	0.0
	Default parking lot noise	PLot		-1.0	0.0
	Default parking lot noise	PLot		4.2	0.0
	Default parking lot noise	PLot		16.4	0.0
	Default parking lot noise	PLot		21.8	0.0
	Default parking lot noise	PLot		32.4	0.0
	Default parking lot noise	PLot		17.9	0.0
	Default parking lot noise	PLot		20.3	0.0
	Default parking lot noise	PLot		13.7	0.0
	Default parking lot noise	PLot		9.9	0.0
	Default parking lot noise	PLot		3.1	0.0
	Default parking lot noise	PLot		5.6	0.0
	Default parking lot noise	PLot		8.0	0.0
	Default parking lot noise	PLot		21.1	0.0
	Default parking lot noise	PLot		20.0	0.0
	Default parking lot noise	PLot		6.8	0.0
	Default parking lot noise	PLot		17.8	0.0
	Default parking lot noise	PLot		28.0	0.0
	Default parking lot noise	PLot		29.3	0.0
	Default parking lot noise	PLot		26.5	0.0
	Default parking lot noise	PLot		14.0	0.0

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
	Default parking lot noise	PLot		11.2	0.0	
	Default parking lot noise	PLot		-0.3	0.0	
	Default parking lot noise	PLot		13.1	0.0	
	Default parking lot noise	PLot		17.0	0.0	
	Default parking lot noise	PLot		1.2	0.0	
	Default parking lot noise	PLot		-6.2	0.0	
	Default parking lot noise	PLot		7.4	0.0	
	Default parking lot noise	PLot		29.5	0.0	
	Default parking lot noise	PLot		19.4	0.0	
	Default parking lot noise	PLot		8.8	0.0	
	Default parking lot noise	PLot		20.4	0.0	
	Default parking lot noise	PLot		17.4	0.0	
	Default parking lot noise	PLot		21.8	0.0	
	Default parking lot noise	PLot		23.2	0.0	
	Default parking lot noise	PLot		20.7	0.0	
	Default parking lot noise	PLot		16.2	0.0	
	Default parking lot noise	PLot		11.5	0.0	
	Default parking lot noise	PLot		12.2	0.0	
	Default parking lot noise	PLot		16.9	0.0	
	Default parking lot noise	PLot		11.1	0.0	
	Default parking lot noise	PLot		-1.6	0.0	
	Default parking lot noise	PLot		10.6	0.0	
	Default parking lot noise	PLot		4.5	0.0	
	Default parking lot noise	PLot		13.8	0.0	
	Default parking lot noise	PLot		16.1	0.0	
	Default parking lot noise	PLot		16.8	0.0	
	Default parking lot noise	PLot		23.2	0.0	
	Default parking lot noise	PLot		18.1	0.0	
	Default parking lot noise	PLot		9.4	0.0	
	Default parking lot noise	PLot		16.0	0.0	
	Default parking lot noise	PLot		13.7	0.0	
	Default parking lot noise	PLot		11.4	0.0	
	Default parking lot noise	PLot		5.4	0.0	
	Default parking lot noise	PLot		24.4	0.0	
Speaker Phone 1	Default industrial noise	Point		0.1	0.0	
Speaker Phone 2	Default industrial noise	Point		5.3	0.0	
Speaker Phone 3	Default industrial noise	Point		24.8	0.0	
Speaker Phone 4	Default industrial noise	Point		2.7	0.0	
Speaker Phone 5	Default industrial noise	Point		18.5	0.0	
Vac 1	Default industrial noise	Point		-1.2	0.0	
Vac 2	Default industrial noise	Point		-0.7	0.0	
Vac 3	Default industrial noise	Point		-0.1	0.0	
Vac 4	Default industrial noise	Point		-0.2	0.0	
Vac 5	Default industrial noise	Point		-0.2	0.0	
Vac 6	Default industrial noise	Point		-0.3	0.0	

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB
Vac 7	Default industrial noise	Point		-0.3	0.0
Vac 8	Default industrial noise	Point		-0.3	0.0
Vac 9	Default industrial noise	Point		-0.3	0.0
Vac 10	Default industrial noise	Point		-0.4	0.0
Vac 11	Default industrial noise	Point		1.4	0.0
Vac 12	Default industrial noise	Point		-0.8	0.0
Vac 13	Default industrial noise	Point		-0.8	0.0
Vac 14	Default industrial noise	Point		-0.8	0.0
Vac 15	Default industrial noise	Point		-0.4	0.0
Vac 16	Default industrial noise	Point		-0.4	0.0
Vac 17	Default industrial noise	Point		-0.4	0.0
Vac 18	Default industrial noise	Point		-0.1	0.0
Vac 19	Default industrial noise	Point		2.7	0.0
Roof 01 - Tunnel Enclosure	Default industrial noise	Area		6.4	0.0
Facade 01 - Tunnel Enclosure	Default industrial noise	Area		-2.4	0.0
Facade 02 - Tunnel Enclosure	Default industrial noise	Area		-9.4	0.0
Exit - Tunnel Enclosure	Default industrial noise	Area		23.1	0.0
Facade 03 - Tunnel Enclosure	Default industrial noise	Area		7.8	0.0
Facade 04 - Tunnel Enclosure	Default industrial noise	Area		-0.4	0.0
Transmissive area 02 - Tunnel Enclosure	Default industrial noise	Area		36.1	0.0
Receiver -621,230 Fl G Lr,lim dB(A) Leq,d 53.8 dB(A) Sigma(Leq,d) 2.1 dB(A)					
Drive-Thru 1	Default industrial noise	Line		50.4	0.0
Drive-Thru 2	Default industrial noise	Line		33.5	0.0
Drive-Thru 3	Default industrial noise	Line		46.4	0.0
Drive-Thru 4	Default industrial noise	Line		41.0	0.0
Drive-Thru 5	Default industrial noise	Line		30.1	0.0
Gas Canopy	Default industrial noise	Area		40.5	0.0
	Default parking lot noise	PLot		19.0	0.0
	Default parking lot noise	PLot		15.2	0.0
	Default parking lot noise	PLot		14.4	0.0
	Default parking lot noise	PLot		11.6	0.0
	Default parking lot noise	PLot		11.8	0.0
	Default parking lot noise	PLot		6.2	0.0
	Default parking lot noise	PLot		9.9	0.0
	Default parking lot noise	PLot		-3.8	0.0
	Default parking lot noise	PLot		3.7	0.0
	Default parking lot noise	PLot		24.2	0.0
	Default parking lot noise	PLot		26.5	0.0
	Default parking lot noise	PLot		32.5	0.0
	Default parking lot noise	PLot		16.8	0.0

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
	Default parking lot noise	PLot		21.4	0.0	
	Default parking lot noise	PLot		17.2	0.0	
	Default parking lot noise	PLot		10.4	0.0	
	Default parking lot noise	PLot		3.4	0.0	
	Default parking lot noise	PLot		4.5	0.0	
	Default parking lot noise	PLot		5.9	0.0	
	Default parking lot noise	PLot		26.2	0.0	
	Default parking lot noise	PLot		19.9	0.0	
	Default parking lot noise	PLot		15.9	0.0	
	Default parking lot noise	PLot		16.2	0.0	
	Default parking lot noise	PLot		37.7	0.0	
	Default parking lot noise	PLot		26.7	0.0	
	Default parking lot noise	PLot		23.9	0.0	
	Default parking lot noise	PLot		11.0	0.0	
	Default parking lot noise	PLot		12.7	0.0	
	Default parking lot noise	PLot		0.5	0.0	
	Default parking lot noise	PLot		11.6	0.0	
	Default parking lot noise	PLot		15.1	0.0	
	Default parking lot noise	PLot		1.0	0.0	
	Default parking lot noise	PLot		-6.4	0.0	
	Default parking lot noise	PLot		9.3	0.0	
	Default parking lot noise	PLot		20.1	0.0	
	Default parking lot noise	PLot		16.7	0.0	
	Default parking lot noise	PLot		17.9	0.0	
	Default parking lot noise	PLot		9.0	0.0	
	Default parking lot noise	PLot		17.6	0.0	
	Default parking lot noise	PLot		19.1	0.0	
	Default parking lot noise	PLot		19.5	0.0	
	Default parking lot noise	PLot		16.9	0.0	
	Default parking lot noise	PLot		12.5	0.0	
	Default parking lot noise	PLot		7.4	0.0	
	Default parking lot noise	PLot		5.5	0.0	
	Default parking lot noise	PLot		17.1	0.0	
	Default parking lot noise	PLot		15.4	0.0	
	Default parking lot noise	PLot		-0.5	0.0	
	Default parking lot noise	PLot		9.5	0.0	
	Default parking lot noise	PLot		5.2	0.0	
	Default parking lot noise	PLot		12.2	0.0	
	Default parking lot noise	PLot		15.0	0.0	
	Default parking lot noise	PLot		15.8	0.0	
	Default parking lot noise	PLot		20.0	0.0	
	Default parking lot noise	PLot		11.8	0.0	
	Default parking lot noise	PLot		8.2	0.0	
	Default parking lot noise	PLot		9.0	0.0	
	Default parking lot noise	PLot		15.0	0.0	

Shops @ JV - Noise
Contribution level - Situation 1: Outdoor SP

Source	Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
	Default parking lot noise	PLot		15.8	0.0	
	Default parking lot noise	PLot		9.4	0.0	
	Default parking lot noise	PLot		17.6	0.0	
Speaker Phone 1	Default industrial noise	Point		-4.0	0.0	
Speaker Phone 2	Default industrial noise	Point		1.5	0.0	
Speaker Phone 3	Default industrial noise	Point		16.5	0.0	
Speaker Phone 4	Default industrial noise	Point		10.2	0.0	
Speaker Phone 5	Default industrial noise	Point		7.1	0.0	
Vac 1	Default industrial noise	Point		10.3	0.0	
Vac 2	Default industrial noise	Point		9.9	0.0	
Vac 3	Default industrial noise	Point		11.1	0.0	
Vac 4	Default industrial noise	Point		10.9	0.0	
Vac 5	Default industrial noise	Point		10.7	0.0	
Vac 6	Default industrial noise	Point		10.6	0.0	
Vac 7	Default industrial noise	Point		10.9	0.0	
Vac 8	Default industrial noise	Point		10.8	0.0	
Vac 9	Default industrial noise	Point		11.0	0.0	
Vac 10	Default industrial noise	Point		10.8	0.0	
Vac 11	Default industrial noise	Point		10.2	0.0	
Vac 12	Default industrial noise	Point		10.4	0.0	
Vac 13	Default industrial noise	Point		10.1	0.0	
Vac 14	Default industrial noise	Point		10.8	0.0	
Vac 15	Default industrial noise	Point		10.6	0.0	
Vac 16	Default industrial noise	Point		10.4	0.0	
Vac 17	Default industrial noise	Point		10.4	0.0	
Vac 18	Default industrial noise	Point		10.0	0.0	
Vac 19	Default industrial noise	Point		9.8	0.0	
Roof 01 - Tunnel Enclosure	Default industrial noise	Area		10.3	0.0	
Facade 01 - Tunnel Enclosure	Default industrial noise	Area		3.3	0.0	
Facade 02 - Tunnel Enclosure	Default industrial noise	Area		-3.3	0.0	
Exit - Tunnel Enclosure	Default industrial noise	Area		28.7	0.0	
Facade 03 - Tunnel Enclosure	Default industrial noise	Area		14.6	0.0	
Facade 04 - Tunnel Enclosure	Default industrial noise	Area		6.3	0.0	
Transmissive area 02 - Tunnel Enclosure	Default industrial noise	Area		47.0	0.0	

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Receiver -194,102 Fl G Lr,lim dB(A) Leq,d 38.5 dB(A) Sigma(Leq,d) 0.1 dB(A)																												
Drive-Thru 1	Leq,d	17.9		11.5			15.3			5.2			7.3			4.2			2.0			-12.2			-53.0			
Drive-Thru 2	Leq,d	16.5		9.7			13.7			4.1			6.7			3.5			2.5			-12.2			-65.3			
Drive-Thru 3	Leq,d	18.9		12.3			16.2			6.4			8.9			5.7			3.2			-11.8			-55.0			
Drive-Thru 4	Leq,d	21.3		14.8			18.6			9.4			11.0			7.8			5.6			-7.6			-43.8			
Drive-Thru 5	Leq,d	16.5		10.2			14.0			3.9			5.5			2.4			0.9			-13.9			-57.7			
Exit - Tunnel Enclosure	Leq,d	30.9		9.5			11.5			21.1			26.7			25.6			23.7			6.0			-28.8			
Facade 01 - Tunnel Enclosure	Leq,d	4.7		0.1			-11.4			-1.0			-0.1			-11.4			-23.7			-47.7			-85.1			
Facade 02 - Tunnel Enclosure	Leq,d	-3.6		-8.0			-19.6			-9.4			-8.7			-19.6			-30.2			-53.9			-89.0			
Facade 03 - Tunnel Enclosure	Leq,d	-4.1		-7.6			-20.0			-10.2			-10.0			-21.1			-31.8			-53.4			-87.9			
Facade 04 - Tunnel Enclosure	Leq,d	-11.5		-14.7			-27.3			-18.0			-17.6			-28.4			-39.3			-62.1			-100.0			
Gas Canopy	Leq,d	21.0		12.9			12.5			14.0			14.5			14.7			8.3			-7.2			-51.5			
Roof 01 - Tunnel Enclosure	Leq,d	2.7		-3.0			-13.5			-2.4			-1.6			-12.9			-23.4			-47.9			-86.5			
Speaker Phone 1	Leq,d	-19.9											-19.9															
Speaker Phone 2	Leq,d	-14.1											-14.1															
Speaker Phone 3	Leq,d	-9.3											-9.3															
Speaker Phone 4	Leq,d	-17.5											-17.5															
Speaker Phone 5	Leq,d	-17.3											-17.3															
Transmissive area 02 - Tunnel Enclosure	Leq,d	20.5		0.7			1.5			9.6			15.1			15.6			14.7			-1.6			-39.4			
Vac 1	Leq,d	-8.2	-29.3	-22.7	-16.2	-18.4	-16.1	-15.6	-21.2	-22.7	-24.0	-26.8	-29.3	-28.1	-27.0	-26.9	-24.6	-21.3	-22.4	-26.1	-23.6	-25.8	-31.0	-37.5	-48.2	-66.9	-90.8	
Vac 2	Leq,d	-8.1	-29.2	-22.6	-16.1	-18.3	-16.0	-15.5	-21.2	-22.6	-24.0	-26.8	-29.3	-28.0	-27.0	-26.9	-24.6	-21.3	-22.3	-25.9	-23.5	-25.7	-30.7	-37.1	-47.7	-66.1	-89.7	
Vac 3	Leq,d	-8.4	-29.2	-22.5	-16.0	-18.2	-15.9	-15.4	-21.1	-22.6	-23.9	-26.7	-29.2	-27.9	-26.9	-26.8	-24.5	-24.0	-24.9	-28.6	-26.1	-28.1	-33.0	-39.0	-48.9	-66.9	-89.9	
Vac 4	Leq,d	-8.3	-29.1	-22.5	-16.0	-18.1	-15.8	-15.3	-21.0	-22.5	-23.8	-26.7	-29.1	-27.9	-26.9	-26.7	-24.4	-23.9	-24.9	-28.5	-25.9	-28.0	-32.8	-38.6	-48.3	-66.1	-88.8	
Vac 5	Leq,d	-8.2	-29.0	-22.4	-15.9	-18.0	-15.7	-15.2	-21.0	-22.5	-23.8	-26.6	-29.1	-27.8	-26.8	-26.7	-24.4	-23.8	-24.8	-28.4	-25.8	-27.8	-32.6	-38.2	-47.7	-65.3	-87.6	
Vac 6	Leq,d	-8.2	-29.0	-22.3	-15.9	-17.9	-15.6	-15.2	-20.9	-22.4	-23.7	-26.5	-29.0	-27.7	-26.8	-26.6	-24.3	-23.8	-24.7	-28.3	-25.7	-27.6	-32.3	-37.8	-47.2	-64.5	-86.6	
Vac 7	Leq,d	-8.1	-28.9	-22.3	-15.8	-17.8	-15.5	-15.1	-20.8	-22.3	-23.7	-26.5	-29.0	-27.7	-26.7	-26.6	-24.2	-23.7	-24.6	-28.2	-25.6	-27.5	-32.1	-37.4	-46.7	-63.8	-85.5	
Vac 8	Leq,d	-8.0	-28.8	-22.2	-15.8	-17.7	-15.5	-15.0	-20.8	-22.3	-23.6	-26.4	-28.9	-27.6	-26.7	-26.5	-24.2	-23.6	-24.6	-28.1	-25.5	-27.3	-31.9	-37.0	-46.1	-63.0	-84.4	
Vac 9	Leq,d	-7.9	-28.8	-22.2	-15.7	-17.7	-15.4	-14.9	-20.7	-22.2	-23.5	-26.4	-28.8	-27.6	-26.6	-26.5	-24.1	-23.6	-24.5	-28.0	-25.3	-27.2	-31.6	-36.6	-45.6	-62.2	-83.3	
Vac 10	Leq,d	-7.9	-28.7	-22.1	-15.7	-17.6	-15.3	-14.8	-20.6	-22.1	-23.5	-26.3	-28.8	-27.5	-26.6	-26.4	-24.1	-23.5	-24.4	-27.9	-25.2	-27.0	-31.3	-36.2	-45.0	-61.5	-82.3	
Vac 11	Leq,d	-7.8	-28.6	-22.1	-15.6	-17.5	-15.2	-14.8	-20.6	-22.1	-23.4	-26.2	-28.7	-27.5	-26.5	-26.4	-24.0	-23.4	-24.3	-27.8	-25.1	-26.8	-31.0	-35.7	-44.4	-60.6	-81.0	
Vac 12	Leq,d	-9.0	-29.9	-23.2	-16.7	-18.9	-16.6	-16.1	-21.4	-22.8	-24.2	-27.0	-29.5	-28.3	-27.4	-27.3	-25.0	-24.5	-25.5	-29.2	-26.7	-28.9	-34.0	-40.4	-50.7	-69.2	-93.0	
Vac 13	Leq,d	-8.9	-29.8	-23.2	-16.6	-18.8	-16.5	-16.0	-21.3	-22.8	-24.1	-27.0	-29.5	-28.2	-27.4	-27.3	-25.0	-24.4	-25.4	-29.1	-26.6	-28.8	-33.8	-40.0	-50.1	-68.5	-92.0	
Vac 14	Leq,d	-8.8	-29.8	-23.1	-16.6	-18.7	-16.4	-15.9	-21.2	-22.7	-24.0	-26.9	-29.4	-28.1	-27.3	-27.2	-24.9	-24.4	-25.4	-29.0	-26.5	-28.6	-33.6	-39.6	-49.6	-67.7	-90.9	
Vac 15	Leq,d	-8.8	-29.7	-23.0	-16.5	-18.6	-16.3	-15.8	-21.2	-22.7	-24.0	-26.9	-29.4	-28.1	-27.3	-27.2	-24.8	-24.3	-25.3	-28.9	-26.4	-28.5	-33.3	-39.2	-49.0	-66.9	-89.8	
Vac 16	Leq,d	-8.7	-29.6	-23.0	-16.5	-18.6	-16.2	-15.7	-21.1	-22.6	-23.9	-26.8	-29.3	-28.0	-27.2	-27.1	-24.8	-24.3	-25.2	-28.8	-26.3	-28.3	-33.1	-38.8	-48.5	-66.2	-88.7	

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac 17	Leq,d	-8.6	-29.6	-22.9	-16.4	-18.5	-16.1	-15.7	-21.0	-22.5	-23.9	-26.8	-29.2	-28.0	-27.2	-27.0	-24.7	-24.2	-25.1	-28.7	-26.2	-28.1	-32.9	-38.4	-47.9	-65.4	-87.6	
Vac 18	Leq,d	-8.1	-29.5	-22.9	-16.4	-18.4	-16.1	-15.6	-21.0	-22.5	-23.8	-26.7	-29.2	-27.9	-27.1	-24.3	-22.0	-21.4	-22.4	-26.0	-23.4	-25.3	-30.1	-35.8	-45.3	-62.6	-84.7	
Vac 19	Leq,d	-8.0	-29.5	-22.8	-16.3	-18.3	-16.0	-15.5	-20.9	-22.4	-23.7	-26.6	-29.1	-27.8	-27.1	-24.2	-21.9	-21.3	-22.3	-25.9	-23.2	-25.2	-29.8	-35.4	-44.7	-61.8	-83.5	
48	Leq,d	1.3											1.3															
47	Leq,d	6.3											6.3															
46	Leq,d	5.7											5.7															
49	Leq,d	2.4											2.4															
52	Leq,d	9.9											9.9															
51	Leq,d	11.5											11.5															
50	Leq,d	11.3											11.3															
45	Leq,d	2.2											2.2															
40	Leq,d	-0.9											-0.9															
39	Leq,d	1.4											1.4															
38	Leq,d	4.8											4.8															
41	Leq,d	1.5											1.5															
44	Leq,d	-0.3											-0.3															
43	Leq,d	1.6											1.6															
42	Leq,d	0.4											0.4															
63	Leq,d	7.7											7.7															
62	Leq,d	-4.0											-4.0															
61	Leq,d	3.9											3.9															
64	Leq,d	0.6											0.6															
67	Leq,d	-4.6											-4.6															
66	Leq,d	-7.7											-7.7															
65	Leq,d	-2.7											-2.7															
60	Leq,d	15.7											15.7															
55	Leq,d	8.8											8.8															
54	Leq,d	7.0											7.0															
53	Leq,d	-1.0											-1.0															
56	Leq,d	10.2											10.2															
59	Leq,d	11.9											11.9															
58	Leq,d	12.0											12.0															
57	Leq,d	9.6											9.6															
37	Leq,d	18.7											18.7															
17	Leq,d	7.3											7.3															
16	Leq,d	4.2											4.2															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
15	Leq,d	8.1											8.1															
18	Leq,d	16.5											16.5															
21	Leq,d	13.5											13.5															
20	Leq,d	35.6											35.6															
19	Leq,d	21.7											21.7															
14	Leq,d	12.8											12.8															
9	Leq,d	4.0											4.0															
8	Leq,d	0.1											0.1															
7	Leq,d	8.3											8.3															
10	Leq,d	1.0											1.0															
13	Leq,d	10.3											10.3															
12	Leq,d	21.9											21.9															
11	Leq,d	0.1											0.1															
32	Leq,d	23.3											23.3															
31	Leq,d	13.3											13.3															
30	Leq,d	11.9											11.9															
33	Leq,d	18.2											18.2															
36	Leq,d	12.7											12.7															
35	Leq,d	25.4											25.4															
34	Leq,d	18.4											18.4															
29	Leq,d	4.7											4.7															
24	Leq,d	12.6											12.6															
23	Leq,d	8.8											8.8															
22	Leq,d	12.6											12.6															
25	Leq,d	12.4											12.4															
28	Leq,d	-1.3											-1.3															
27	Leq,d	4.9											4.9															
26	Leq,d	11.9											11.9															
Receiver -441,67 Fl G Lr,lim dB(A) Leq,d 47.4 dB(A) Sigma(Leq,d) 0.0 dB(A)																												
Drive-Thru 1	Leq,d	24.0		17.3			22.0			8.5			9.3			9.4			10.6			0.5			-25.4			-92.7
Drive-Thru 2	Leq,d	16.8		11.6			14.0			2.7			4.2			1.2			2.5			-10.7			-51.4			
Drive-Thru 3	Leq,d	21.9		15.9			19.6			8.2			9.5			6.6			6.0			-3.7			-31.1			
Drive-Thru 4	Leq,d	25.5		18.8			23.5			11.3			12.6			9.5			8.8			-0.2			-25.6			-93.0
Drive-Thru 5	Leq,d	17.1		11.5			14.5			3.3			4.7			1.5			3.7			-7.4			-44.1			
Exit - Tunnel Enclosure	Leq,d	46.7		24.0			28.2			37.0			42.5			41.2			39.6			28.8			14.1			
Facade 01 - Tunnel Enclosure	Leq,d	19.7		14.9			5.3			14.3			14.7			3.4			-6.8			-24.9			-41.7			

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		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Facade 02 - Tunnel Enclosure	Leq,d	11.3		6.1			-3.5			6.0			6.5			-5.0			-14.9			-32.1			-47.0			
Facade 03 - Tunnel Enclosure	Leq,d	9.3		5.9			-5.8			3.0			3.2			-8.0			-15.8			-32.6			-49.4			
Facade 04 - Tunnel Enclosure	Leq,d	3.8		1.1			-10.2			-3.1			-3.4			-13.5			-22.6			-40.4			-59.3			
Gas Canopy	Leq,d	21.2		15.4			13.8			13.8			13.8			12.4			8.4			-2.8			-33.7			
Roof 01 - Tunnel Enclosure	Leq,d	13.4		9.1			-2.0			7.9			8.1			-4.5			-15.1			-33.5			-49.8			
Speaker Phone 1	Leq,d	-19.1											-19.1															
Speaker Phone 2	Leq,d	-15.5											-15.5															
Speaker Phone 3	Leq,d	-10.5											-10.5															
Speaker Phone 4	Leq,d	-8.3											-8.3															
Speaker Phone 5	Leq,d	-14.4											-14.4															
Transmissive area 02 - Tunnel Enclosure	Leq,d	36.6		17.8			20.2			25.8			30.3			31.6			31.3			19.8			1.1			
Vac 1	Leq,d	2.0	-19.7	-13.5	-7.5	-7.9	-5.9	-5.7	-13.0	-14.7	-16.1	-19.2	-21.8	-20.5	-20.1	-19.9	-17.3	-14.9	-14.5	-16.4	-11.6	-10.5	-10.8	-10.7	-12.1	-17.8	-23.5	-32.9
Vac 2	Leq,d	1.8	-20.3	-14.2	-8.1	-8.5	-6.5	-6.3	-13.1	-14.7	-16.2	-19.2	-21.8	-20.5	-20.6	-20.3	-16.8	-14.4	-14.2	-16.2	-11.4	-10.3	-10.7	-10.5	-11.8	-17.3	-22.9	-32.1
Vac 3	Leq,d	1.7	-20.6	-14.4	-8.4	-8.7	-6.7	-6.5	-13.1	-14.7	-16.2	-19.2	-21.8	-20.5	-20.8	-20.5	-16.9	-14.4	-14.1	-16.1	-11.3	-10.1	-10.4	-10.2	-11.4	-16.8	-22.2	-31.1
Vac 4	Leq,d	1.8	-20.6	-14.4	-8.4	-8.7	-6.7	-6.5	-13.0	-14.6	-16.0	-19.1	-21.6	-20.3	-20.7	-20.4	-16.9	-14.4	-14.1	-16.0	-11.1	-10.0	-10.2	-9.9	-11.1	-16.4	-21.6	-30.5
Vac 5	Leq,d	1.9	-20.6	-14.5	-8.4	-8.7	-6.7	-6.5	-12.9	-14.6	-16.0	-19.0	-21.6	-20.3	-20.7	-20.4	-16.7	-14.2	-13.9	-15.8	-10.9	-9.7	-9.9	-9.6	-10.7	-15.9	-21.0	-29.6
Vac 6	Leq,d	2.1	-20.5	-14.4	-8.4	-8.6	-6.6	-6.4	-12.8	-14.5	-15.9	-18.9	-21.5	-20.2	-20.6	-20.4	-16.6	-14.1	-13.8	-15.7	-10.8	-9.6	-9.7	-9.4	-10.4	-15.5	-20.6	-29.1
Vac 7	Leq,d	2.3	-20.5	-14.4	-8.4	-8.5	-6.6	-6.4	-12.7	-14.4	-15.8	-18.9	-21.4	-20.1	-20.6	-20.3	-15.4	-13.0	-12.9	-15.0	-10.3	-9.2	-9.5	-9.1	-10.2	-15.3	-20.2	-28.6
Vac 8	Leq,d	2.3	-20.4	-14.3	-8.3	-8.4	-6.5	-6.3	-12.6	-14.3	-15.7	-18.8	-21.3	-20.0	-20.5	-20.2	-16.0	-13.6	-13.3	-15.2	-10.4	-9.2	-9.4	-9.0	-10.0	-15.1	-20.0	-28.3
Vac 9	Leq,d	2.4	-20.4	-14.3	-8.3	-8.4	-6.4	-6.3	-12.6	-14.3	-15.7	-18.8	-21.3	-20.0	-20.4	-20.2	-16.0	-13.5	-13.2	-15.2	-10.3	-9.1	-9.3	-8.9	-9.9	-14.9	-19.8	-28.1
Vac 10	Leq,d	9.0	-15.5	-8.7	-2.1	-1.6	0.8	1.4	-5.2	-6.6	-7.8	-10.7	-13.1	-11.7	-11.6	-11.3	-8.5	-6.7	-7.0	-9.7	-4.9	-3.7	-3.9	-3.5	-4.6	-9.7	-14.6	-22.9
Vac 11	Leq,d	8.9	-15.6	-8.8	-2.2	-1.7	0.7	1.3	-5.2	-6.6	-7.8	-10.7	-13.1	-11.7	-11.7	-11.4	-8.6	-6.8	-7.1	-9.8	-5.0	-3.8	-4.0	-3.6	-4.7	-9.7	-14.7	-23.0
Vac 12	Leq,d	9.3	-20.7	-14.5	-8.4	-9.1	-7.0	-6.8	-13.7	-15.3	-16.7	-19.8	-22.3	-21.0	-9.4	-8.2	-4.9	-0.7	-0.4	-2.6	1.7	1.9	-0.1	-2.5	-7.6	-18.0	-28.4	-40.9
Vac 13	Leq,d	9.0	-20.9	-14.6	-8.5	-9.2	-7.1	-6.9	-13.6	-15.3	-16.7	-19.7	-22.2	-20.9	-9.5	-8.4	-5.1	-0.9	-0.6	-2.8	1.5	1.6	-0.4	-2.9	-8.0	-18.4	-28.3	-40.3
Vac 14	Leq,d	8.8	-20.9	-14.7	-8.6	-9.2	-7.2	-6.9	-13.6	-15.2	-16.6	-19.6	-22.2	-20.9	-9.7	-8.6	-5.3	-1.1	-0.8	-3.0	1.2	1.3	-0.7	-3.3	-8.5	-18.7	-28.1	-39.7
Vac 15	Leq,d	8.6	-20.9	-14.7	-8.6	-9.2	-7.1	-6.9	-13.5	-15.1	-16.5	-19.6	-22.1	-20.8	-21.2	-8.8	-5.4	-1.3	-1.0	-3.2	1.0	1.1	-1.0	-3.6	-8.8	-18.9	-27.8	-39.1
Vac 16	Leq,d	8.3	-20.9	-14.7	-8.5	-9.1	-7.1	-6.9	-13.4	-15.1	-16.5	-19.5	-22.0	-20.7	-21.1	-8.9	-5.6	-1.5	-1.2	-3.4	0.8	0.8	-1.3	-4.0	-9.2	-19.1	-27.6	-38.7
Vac 17	Leq,d	8.1	-20.9	-14.6	-8.5	-9.1	-7.1	-6.9	-13.4	-15.0	-16.4	-19.4	-22.0	-20.7	-21.1	-9.1	-5.8	-1.7	-1.4	-3.6	0.6	0.5	-1.6	-4.3	-9.6	-19.2	-27.4	-38.2
Vac 18	Leq,d	7.9	-20.9	-14.6	-8.5	-9.1	-7.1	-6.8	-13.3	-15.0	-16.4	-19.4	-21.9	-20.6	-21.1	-9.3	-5.9	-1.8	-1.6	-3.8	0.3	0.3	-1.9	-4.7	-9.9	-19.4	-27.3	-38.0
Vac 19	Leq,d	7.7	-20.9	-14.6	-8.5	-9.1	-7.1	-6.8	-13.3	-14.9	-16.4	-19.4	-21.9	-20.6	-21.1	-9.4	-6.1	-2.0	-1.8	-4.1	0.1	0.0	-2.3	-5.1	-10.3	-19.5	-27.2	-37.8
48	Leq,d	-0.5											-0.5															
47	Leq,d	3.8											3.8															
46	Leq,d	3.4											3.4															
49	Leq,d	-0.8											-0.8															
52	Leq,d	14.1											14.1															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
51	Leq,d	-0.5											-0.5															
50	Leq,d	0.3											0.3															
45	Leq,d	1.3											1.3															
40	Leq,d	0.6											0.6															
39	Leq,d	-4.1											-4.1															
38	Leq,d	-1.8											-1.8															
41	Leq,d	0.8											0.8															
44	Leq,d	-1.5											-1.5															
43	Leq,d	0.2											0.2															
42	Leq,d	0.5											0.5															
63	Leq,d	1.6											1.6															
62	Leq,d	-6.2											-6.2															
61	Leq,d	-0.6											-0.6															
64	Leq,d	-2.1											-2.1															
67	Leq,d	-5.3											-5.3															
66	Leq,d	-7.6											-7.6															
65	Leq,d	-2.4											-2.4															
60	Leq,d	11.4											11.4															
55	Leq,d	-2.3											-2.3															
54	Leq,d	1.7											1.7															
53	Leq,d	-3.9											-3.9															
56	Leq,d	-3.6											-3.6															
59	Leq,d	3.9											3.9															
58	Leq,d	1.6											1.6															
57	Leq,d	3.2											3.2															
37	Leq,d	9.3											9.3															
17	Leq,d	21.0											21.0															
16	Leq,d	15.0											15.0															
15	Leq,d	4.5											4.5															
18	Leq,d	23.1											23.1															
21	Leq,d	22.7											22.7															
20	Leq,d	18.7											18.7															
19	Leq,d	17.5											17.5															
14	Leq,d	-0.3											-0.3															
9	Leq,d	18.3											18.3															
8	Leq,d	18.4											18.4															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
7	Leq,d	22.2											22.2															
10	Leq,d	15.4											15.4															
13	Leq,d	11.0											11.0															
12	Leq,d	15.5											15.5															
11	Leq,d	16.3											16.3															
32	Leq,d	16.0											16.0															
31	Leq,d	13.7											13.7															
30	Leq,d	20.5											20.5															
33	Leq,d	6.6											6.6															
36	Leq,d	12.1											12.1															
35	Leq,d	2.9											2.9															
34	Leq,d	6.8											6.8															
29	Leq,d	16.9											16.9															
24	Leq,d	7.0											7.0															
23	Leq,d	13.3											13.3															
22	Leq,d	12.1											12.1															
25	Leq,d	4.3											4.3															
28	Leq,d	13.3											13.3															
27	Leq,d	20.3											20.3															
26	Leq,d	20.0											20.0															
Receiver -486,69 Fl G Lr,lim dB(A) Leq,d 54.4 dB(A) Sigma(Leq,d) 0.1 dB(A)																												
Drive-Thru 1	Leq,d	30.0		19.4			26.3			15.4			18.3			22.3			22.8			14.1			-10.7			-73.6
Drive-Thru 2	Leq,d	23.6		14.3			19.6			9.6			11.8			15.1			17.2			4.6			-35.8			
Drive-Thru 3	Leq,d	28.8		18.3			25.8			15.0			17.2			20.2			20.5			11.4			-15.2			-85.1
Drive-Thru 4	Leq,d	33.8		22.7			30.6			19.9			22.3			25.2			26.4			17.1			-9.9			-78.8
Drive-Thru 5	Leq,d	25.2		16.1			21.7			11.6			13.8			16.4			17.8			6.4			-30.1			
Exit - Tunnel Enclosure	Leq,d	34.8		12.8			15.3			23.7			29.1			29.6			29.5			19.5			3.5			
Facade 01 - Tunnel Enclosure	Leq,d	23.7		13.9			5.9			18.2			21.0			11.5			2.2			-15.1			-33.1			
Facade 02 - Tunnel Enclosure	Leq,d	2.8		-2.0			-12.9			-2.7			-1.9			-12.5			-22.5			-39.8			-56.6			
Facade 03 - Tunnel Enclosure	Leq,d	10.6		6.2			-4.9			5.0			5.4			-5.7			-15.9			-33.1			-50.3			
Facade 04 - Tunnel Enclosure	Leq,d	16.0		6.2			-1.9			10.4			13.2			3.8			-5.5			-23.0			-42.0			
Gas Canopy	Leq,d	32.9		18.7			20.2			22.5			26.6			28.7			25.6			15.2			-15.0			
Roof 01 - Tunnel Enclosure	Leq,d	21.2		11.8			3.3			15.8			18.3			8.5			-1.7			-19.7			-38.5			
Speaker Phone 1	Leq,d	-17.9											-17.9															
Speaker Phone 2	Leq,d	-10.4											-10.4															
Speaker Phone 3	Leq,d	-5.2											-5.2															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Speaker Phone 4	Leq,d	4.6											4.6															
Speaker Phone 5	Leq,d	-12.7											-12.7															
Transmissive area 02 - Tunnel Enclosure	Leq,d	54.1		23.4			29.5			41.5			49.2			49.5			48.1			36.3			17.1			
Vac 1	Leq,d	15.7	-15.3	-8.1	-0.9	0.1	3.1	4.3	-0.5	-1.2	-1.7	-3.9	-5.5	-3.4	-2.5	-1.6	1.7	3.0	3.2	1.1	5.7	6.5	5.8	5.6	3.9	-1.9	-7.6	-16.8
Vac 2	Leq,d	3.3	-19.2	-12.9	-6.8	-6.7	-4.7	-4.4	-10.3	-11.9	-13.3	-16.3	-18.8	-17.5	-17.2	-17.0	-14.4	-13.7	-14.1	-16.1	-11.1	-9.7	-9.8	-9.4	-10.4	-15.5	-20.5	-28.9
Vac 3	Leq,d	3.0	-19.5	-13.2	-7.1	-7.1	-5.1	-4.8	-10.6	-12.2	-13.6	-16.6	-19.1	-17.8	-17.6	-17.3	-14.8	-14.1	-14.5	-16.4	-11.3	-10.0	-10.0	-9.6	-10.7	-15.8	-20.9	-29.4
Vac 4	Leq,d	2.9	-19.7	-13.4	-7.2	-7.2	-5.1	-4.9	-10.6	-12.3	-13.6	-16.6	-19.1	-17.8	-17.6	-17.4	-14.8	-14.1	-14.5	-16.6	-11.6	-10.2	-10.4	-10.0	-11.1	-16.4	-21.5	-30.2
Vac 5	Leq,d	2.6	-20.0	-13.6	-7.5	-7.5	-5.4	-5.2	-10.9	-12.5	-13.9	-16.9	-19.4	-18.1	-17.9	-17.6	-15.1	-14.4	-14.8	-16.9	-11.8	-10.5	-10.6	-10.3	-11.5	-16.8	-22.1	-31.0
Vac 6	Leq,d	2.5	-20.2	-13.8	-7.7	-7.7	-5.6	-5.3	-11.1	-12.7	-14.1	-17.0	-19.5	-18.2	-18.1	-17.8	-14.4	-13.7	-14.1	-16.5	-11.7	-10.6	-10.9	-10.7	-11.9	-17.4	-22.8	-31.8
Vac 7	Leq,d	2.2	-20.4	-14.1	-7.9	-7.9	-5.8	-5.5	-11.3	-12.9	-14.2	-17.2	-19.7	-18.4	-18.2	-17.9	-14.5	-13.8	-14.3	-16.8	-12.0	-11.0	-11.3	-11.1	-12.4	-18.0	-23.6	-32.9
Vac 8	Leq,d	1.9	-20.6	-14.3	-8.1	-8.1	-6.0	-5.7	-11.4	-13.0	-14.4	-17.3	-19.8	-18.5	-18.4	-18.1	-15.6	-14.8	-15.2	-17.7	-12.7	-11.5	-11.7	-11.6	-13.0	-18.6	-24.4	-33.9
Vac 9	Leq,d	1.6	-20.8	-14.5	-8.3	-8.3	-6.2	-5.9	-11.6	-13.2	-14.6	-17.5	-20.0	-18.7	-18.5	-18.3	-15.7	-15.0	-15.4	-18.0	-13.0	-11.8	-12.1	-12.0	-13.5	-19.3	-25.3	-35.0
Vac 10	Leq,d	1.4	-21.0	-14.6	-8.4	-8.4	-6.3	-6.0	-11.8	-13.4	-14.7	-17.7	-20.2	-18.8	-18.7	-18.4	-15.9	-15.1	-15.5	-18.2	-13.4	-12.2	-12.5	-12.5	-14.1	-20.0	-26.2	-36.2
Vac 11	Leq,d	1.2	-21.2	-14.9	-8.6	-8.7	-6.6	-6.2	-12.0	-13.6	-14.9	-17.9	-20.3	-19.0	-18.8	-18.6	-16.0	-15.3	-15.7	-18.4	-13.8	-12.6	-13.0	-13.1	-14.8	-20.9	-27.3	-37.6
Vac 12	Leq,d	12.7	-17.9	-10.7	-3.5	-2.6	0.4	1.6	-3.2	-3.8	-4.3	-6.5	-8.1	-6.0	-5.2	-4.2	-1.0	0.7	0.9	-1.4	3.0	3.6	2.5	1.7	-0.7	-7.6	-14.8	-26.0
Vac 13	Leq,d	12.7	-18.0	-10.7	-3.6	-2.7	0.3	1.5	-3.3	-3.9	-4.4	-6.5	-8.2	-6.1	-5.3	-4.3	-0.8	0.6	0.8	-1.4	3.0	3.5	2.4	1.7	-0.8	-7.7	-15.0	-26.2
Vac 14	Leq,d	4.6	-19.7	-13.0	-6.5	-6.2	-3.9	-3.5	-8.9	-10.4	-11.7	-14.6	-17.0	-15.6	-15.5	-15.2	-9.3	-8.1	-8.1	-10.8	-7.1	-7.6	-10.1	-12.3	-15.0	-21.4	-28.0	-38.5
Vac 15	Leq,d	4.5	-19.8	-13.1	-6.6	-6.4	-4.1	-3.6	-9.1	-10.6	-11.9	-14.7	-17.2	-15.8	-15.7	-15.4	-9.3	-8.1	-8.1	-10.8	-7.1	-7.6	-10.1	-12.5	-15.2	-21.7	-28.3	-38.9
Vac 16	Leq,d	4.4	-20.0	-13.2	-6.7	-6.5	-4.2	-3.7	-9.2	-10.7	-11.9	-14.8	-17.2	-15.9	-15.8	-15.5	-9.3	-8.1	-8.1	-10.8	-7.0	-7.6	-10.1	-12.5	-15.4	-22.0	-28.7	-39.5
Vac 17	Leq,d	4.4	-20.1	-13.4	-6.8	-6.6	-4.3	-3.8	-9.3	-10.8	-12.0	-14.9	-17.3	-16.0	-15.8	-15.5	-9.2	-8.0	-8.0	-10.7	-7.0	-7.5	-10.0	-12.5	-15.7	-22.4	-29.2	-40.1
Vac 18	Leq,d	4.3	-20.2	-13.5	-7.0	-6.8	-4.5	-4.0	-9.4	-10.9	-12.1	-15.0	-17.4	-16.1	-15.9	-15.6	-9.2	-8.0	-8.0	-10.6	-6.9	-7.4	-10.0	-12.6	-16.0	-22.8	-29.8	-40.9
Vac 19	Leq,d	4.2	-20.5	-13.7	-7.2	-7.0	-4.7	-4.2	-9.6	-11.0	-12.3	-15.1	-17.6	-16.2	-16.1	-15.8	-9.2	-7.8	-7.9	-10.6	-6.8	-7.3	-10.0	-12.6	-16.4	-23.4	-30.6	-41.8
48	Leq,d	3.0											3.0															
47	Leq,d	16.5											16.5															
46	Leq,d	14.9											14.9															
49	Leq,d	11.8											11.8															
52	Leq,d	21.9											21.9															
51	Leq,d	4.0											4.0															
50	Leq,d	4.9											4.9															
45	Leq,d	5.7											5.7															
40	Leq,d	13.4											13.4															
39	Leq,d	-3.2											-3.2															
38	Leq,d	-1.2											-1.2															
41	Leq,d	10.8											10.8															
44	Leq,d	11.3											11.3															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
43	Leq,d	13.1											13.1															
42	Leq,d	13.4											13.4															
63	Leq,d	6.5											6.5															
62	Leq,d	2.5											2.5															
61	Leq,d	4.4											4.4															
64	Leq,d	10.5											10.5															
67	Leq,d	-1.1											-1.1															
66	Leq,d	5.0											5.0															
65	Leq,d	11.0											11.0															
60	Leq,d	18.5											18.5															
55	Leq,d	2.6											2.6															
54	Leq,d	1.9											1.9															
53	Leq,d	-3.0											-3.0															
56	Leq,d	-0.2											-0.2															
59	Leq,d	8.5											8.5															
58	Leq,d	6.0											6.0															
57	Leq,d	6.6											6.6															
37	Leq,d	13.4											13.4															
17	Leq,d	27.4											27.4															
16	Leq,d	20.9											20.9															
15	Leq,d	0.9											0.9															
18	Leq,d	32.4											32.4															
21	Leq,d	27.1											27.1															
20	Leq,d	24.1											24.1															
19	Leq,d	18.8											18.8															
14	Leq,d	-1.6											-1.6															
9	Leq,d	22.1											22.1															
8	Leq,d	21.7											21.7															
7	Leq,d	25.0											25.0															
10	Leq,d	18.5											18.5															
13	Leq,d	10.3											10.3															
12	Leq,d	16.3											16.3															
11	Leq,d	19.3											19.3															
32	Leq,d	19.1											19.1															
31	Leq,d	21.8											21.8															
30	Leq,d	29.5											29.5															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
33	Leq,d	11.2											11.2															
36	Leq,d	14.1											14.1															
35	Leq,d	3.8											3.8															
34	Leq,d	8.5											8.5															
29	Leq,d	18.3											18.3															
24	Leq,d	8.4											8.4															
23	Leq,d	18.1											18.1															
22	Leq,d	11.5											11.5															
25	Leq,d	6.7											6.7															
28	Leq,d	22.1											22.1															
27	Leq,d	26.5											26.5															
26	Leq,d	27.1											27.1															
Receiver -549,69 Fl G Lr,lim dB(A) Leq,d 53.9 dB(A) Sigma(Leq,d) 0.0 dB(A)																												
Drive-Thru 1	Leq,d	26.4		19.0			23.9			11.8			13.2			12.9			16.8			6.2			-20.6			-78.3
Drive-Thru 2	Leq,d	20.9		14.2			18.2			8.0			9.7			9.2			6.9			-7.3			-48.3			
Drive-Thru 3	Leq,d	27.4		18.4			23.9			12.2			13.7			11.6			22.4			11.1			-23.4			-92.2
Drive-Thru 4	Leq,d	32.5		24.1			30.3			18.0			19.4			18.9			23.1			12.9			-17.8			-91.0
Drive-Thru 5	Leq,d	24.1		17.4			21.8			11.1			12.8			10.4			10.2			-2.9			-41.8			
Exit - Tunnel Enclosure	Leq,d	33.1		13.5			16.1			22.0			27.4			28.6			27.0			14.5			-6.8			
Facade 01 - Tunnel Enclosure	Leq,d	20.5		12.5			4.2			11.9			17.9			11.0			2.2			-15.0			-35.4			
Facade 02 - Tunnel Enclosure	Leq,d	1.2		-2.7			-13.4			-5.1			-4.2			-14.4			-25.2			-44.4			-66.3			
Facade 03 - Tunnel Enclosure	Leq,d	9.8		6.1			-4.5			3.3			4.3			-6.1			-17.1			-36.2			-58.0			
Facade 04 - Tunnel Enclosure	Leq,d	13.4		5.3			-3.1			5.4			10.7			3.8			-4.8			-21.9			-42.6			
Gas Canopy	Leq,d	26.5		18.1			18.1			19.1			19.6			19.4			17.7			6.7			-28.5			
Roof 01 - Tunnel Enclosure	Leq,d	16.5		6.7			-1.9			10.8			13.8			4.8			-4.2			-21.5			-42.0			
Speaker Phone 1	Leq,d	-17.4											-17.4															
Speaker Phone 2	Leq,d	-4.5											-4.5															
Speaker Phone 3	Leq,d	-5.7											-5.7															
Speaker Phone 4	Leq,d	-1.5											-1.5															
Speaker Phone 5	Leq,d	-12.0											-12.0															
Transmissive area 02 - Tunnel Enclosure	Leq,d	53.6		22.8			28.7			35.5			45.4			49.7			49.6			38.5			18.0			
Vac 1	Leq,d	17.6	-15.2	-7.9	-0.7	0.1	3.2	4.5	-5.8	-6.4	-6.8	-6.6	-8.1	-5.8	-1.4	-0.1	3.3	5.1	5.6	3.8	8.6	9.6	8.9	8.4	6.0	-1.2	-9.0	-21.3
Vac 2	Leq,d	17.2	-15.5	-8.2	-1.0	-0.2	2.9	4.2	-6.2	-6.8	-7.2	-7.0	-8.5	-6.2	-1.7	-0.5	3.0	4.7	5.3	3.4	8.3	9.2	8.5	7.9	5.3	-2.1	-10.2	-22.9
Vac 3	Leq,d	16.8	-15.7	-8.4	-1.2	-0.5	2.6	3.9	-6.5	-7.1	-7.5	-7.2	-8.8	-6.5	-1.9	-0.7	2.8	4.5	5.0	3.2	8.0	8.9	8.1	7.4	4.7	-2.8	-11.2	-24.2
Vac 4	Leq,d	7.1	-18.5	-11.4	-4.4	-4.0	-1.2	-0.3	-8.2	-9.4	-10.5	-12.2	-14.5	-13.0	-10.1	-9.6	-6.8	-5.9	-6.2	-8.9	-5.0	-5.0	-6.7	-8.3	-11.9	-20.5	-29.9	-44.1

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac 5	Leq,d	4.3	-19.3	-12.3	-5.5	-5.4	-2.9	-2.3	-9.9	-11.5	-13.0	-15.3	-17.9	-16.7	-14.4	-14.2	-11.7	-10.9	-11.4	-14.2	-10.4	-10.6	-12.3	-13.8	-17.4	-25.9	-35.4	-49.5
Vac 6	Leq,d	3.0	-19.8	-13.0	-6.3	-6.3	-4.0	-3.5	-10.9	-12.6	-14.2	-16.6	-19.2	-18.0	-16.2	-15.9	-13.5	-12.7	-13.2	-16.1	-12.3	-12.5	-14.3	-15.8	-19.4	-27.9	-37.5	-51.9
Vac 7	Leq,d	2.1	-20.4	-13.5	-6.9	-7.1	-4.9	-4.5	-11.7	-13.5	-15.0	-17.5	-20.1	-18.8	-17.3	-17.1	-14.6	-13.8	-14.3	-17.2	-13.5	-13.7	-15.6	-17.1	-20.7	-29.4	-39.1	-53.8
Vac 8	Leq,d	1.6	-20.7	-13.9	-7.3	-7.6	-5.4	-5.0	-12.1	-13.8	-15.3	-18.0	-20.5	-19.3	-17.9	-17.7	-15.2	-14.5	-15.0	-17.9	-14.2	-14.5	-16.5	-18.0	-21.7	-30.5	-40.5	-55.5
Vac 9	Leq,d	1.2	-21.0	-14.2	-7.6	-8.0	-5.8	-5.4	-12.4	-14.1	-15.6	-18.3	-20.9	-19.7	-18.5	-18.2	-15.8	-15.0	-15.6	-18.5	-14.8	-15.1	-17.3	-18.8	-22.6	-31.5	-41.8	-57.1
Vac 10	Leq,d	1.0	-21.1	-14.3	-7.8	-8.2	-5.9	-5.6	-12.5	-14.2	-15.7	-18.4	-21.0	-19.7	-18.5	-18.3	-15.8	-15.1	-15.6	-18.5	-14.9	-15.2	-17.4	-19.2	-23.2	-32.3	-42.8	-58.5
Vac 11	Leq,d	0.9	-21.1	-14.4	-7.8	-8.3	-6.1	-5.7	-12.7	-14.4	-15.9	-18.6	-21.1	-19.9	-18.6	-18.4	-15.9	-15.2	-15.7	-18.7	-15.1	-15.4	-17.7	-19.7	-23.8	-33.2	-44.0	-60.1
Vac 12	Leq,d	16.2	-16.0	-8.7	-1.5	-0.9	2.2	3.5	-7.0	-7.6	-8.0	-7.7	-9.3	-7.0	-2.4	-1.1	2.3	4.1	4.6	2.7	7.4	8.3	7.4	6.6	3.7	-4.1	-13.0	-26.5
Vac 13	Leq,d	15.9	-16.2	-8.9	-1.7	-1.1	2.0	3.3	-7.3	-7.9	-8.3	-8.0	-9.5	-7.3	-2.6	-1.4	2.1	3.8	4.3	2.4	7.2	8.0	7.1	6.2	3.2	-4.8	-13.9	-27.7
Vac 14	Leq,d	15.6	-16.3	-9.0	-1.8	-1.3	1.8	3.0	-7.5	-8.2	-8.6	-8.2	-9.8	-7.5	-2.8	-1.6	1.9	3.6	4.1	2.2	6.9	7.7	6.7	5.7	2.6	-5.5	-14.8	-29.0
Vac 15	Leq,d	15.4	-16.5	-9.2	-2.0	-1.5	1.5	2.8	-7.8	-8.4	-8.8	-8.5	-10.0	-7.7	-3.0	-1.8	1.7	3.4	3.9	2.0	6.7	7.4	6.4	5.3	2.1	-6.2	-15.7	-30.2
Vac 16	Leq,d	15.1	-16.6	-9.3	-2.1	-1.8	1.3	2.6	-8.0	-8.7	-9.1	-8.7	-10.2	-8.0	-3.2	-2.0	1.5	3.2	3.6	1.7	6.4	7.1	6.0	4.9	1.6	-6.9	-16.7	-31.4
Vac 17	Leq,d	14.8	-16.8	-9.5	-2.3	-2.0	1.1	2.4	-8.3	-8.9	-9.3	-8.9	-10.5	-8.2	-3.4	-2.2	1.2	3.0	3.4	1.5	6.1	6.8	5.7	4.5	1.0	-7.6	-17.6	-32.7
Vac 18	Leq,d	14.5	-17.0	-9.7	-2.5	-2.2	0.9	2.2	-8.5	-9.2	-9.6	-9.2	-10.7	-8.5	-3.6	-2.4	1.0	2.7	3.2	1.2	5.9	6.5	5.3	4.1	0.5	-8.4	-18.6	-34.0
Vac 19	Leq,d	14.1	-17.2	-9.9	-2.7	-2.4	0.6	1.9	-8.8	-9.4	-9.9	-9.4	-11.0	-8.7	-3.9	-2.7	0.8	2.5	2.9	1.0	5.6	6.2	4.9	3.6	-0.2	-9.2	-19.8	-35.6
48	Leq,d	0.6											0.6															
47	Leq,d	9.6											9.6															
46	Leq,d	7.9											7.9															
49	Leq,d	5.6											5.6															
52	Leq,d	22.5											22.5															
51	Leq,d	10.1											10.1															
50	Leq,d	10.7											10.7															
45	Leq,d	2.9											2.9															
40	Leq,d	5.4											5.4															
39	Leq,d	-4.5											-4.5															
38	Leq,d	-0.7											-0.7															
41	Leq,d	4.6											4.6															
44	Leq,d	5.3											5.3															
43	Leq,d	6.1											6.1															
42	Leq,d	6.9											6.8															
63	Leq,d	9.0											9.0															
62	Leq,d	-0.6											-0.6															
61	Leq,d	3.4											3.4															
64	Leq,d	5.2											5.2															
67	Leq,d	-1.0											-1.0															
66	Leq,d	0.0											0.0															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
65	Leq,d	6.1											6.1															
60	Leq,d	15.6											15.6															
55	Leq,d	8.6											8.6															
54	Leq,d	1.3											1.3															
53	Leq,d	-3.3											-3.3															
56	Leq,d	1.8											1.8															
59	Leq,d	13.8											13.8															
58	Leq,d	13.1											13.1															
57	Leq,d	10.5											10.5															
37	Leq,d	18.3											18.3															
17	Leq,d	18.0											18.0															
16	Leq,d	11.5											11.5															
15	Leq,d	2.9											2.9															
18	Leq,d	32.9											32.9															
21	Leq,d	22.6											22.6															
20	Leq,d	25.1											25.1															
19	Leq,d	22.2											22.2															
14	Leq,d	-2.2											-2.2															
9	Leq,d	18.0											18.0															
8	Leq,d	18.8											18.8															
7	Leq,d	21.7											21.7															
10	Leq,d	15.2											15.2															
13	Leq,d	9.2											9.2															
12	Leq,d	14.2											14.2															
11	Leq,d	16.5											16.5															
32	Leq,d	24.9											24.9															
31	Leq,d	19.4											19.4															
30	Leq,d	21.4											21.4															
33	Leq,d	16.0											16.0															
36	Leq,d	18.5											18.5															
35	Leq,d	4.1											4.1															
34	Leq,d	9.5											9.5															
29	Leq,d	13.7											13.7															
24	Leq,d	8.1											8.1															
23	Leq,d	14.7											14.7															
22	Leq,d	8.0											8.0															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
25	Leq,d	9.1											9.1															
28	Leq,d	21.0											21.0															
27	Leq,d	23.4											23.4															
26	Leq,d	28.9											28.9															
Receiver -620,293 Fl G Lr,lim dB(A) Leq,d 54.4 dB(A) Sigma(Leq,d) 2.3 dB(A)																												
Drive-Thru 1	Leq,d	47.5		34.2			43.2			30.4			33.5			39.3			41.8			37.5			25.5			-3.2
Drive-Thru 2	Leq,d	37.4		26.2			33.4			18.3			20.9			27.9			32.2			25.6			5.9			-45.2
Drive-Thru 3	Leq,d	50.8		36.9			46.8			34.5			38.0			42.4			44.4			40.7			31.1			8.9
Drive-Thru 4	Leq,d	40.1		29.3			36.1			21.4			23.3			31.8			34.6			28.1			9.6			-36.7
Drive-Thru 5	Leq,d	38.4		26.5			34.7			19.7			22.7			29.8			32.7			25.6			4.3			-50.5
Exit - Tunnel Enclosure	Leq,d	23.1		3.3			4.3			11.8			17.4			18.5			17.5			2.3			-30.1			
Facade 01 - Tunnel Enclosure	Leq,d	-2.4		-5.7			-18.1			-8.8			-8.4			-19.3			-29.9			-51.5			-84.9			
Facade 02 - Tunnel Enclosure	Leq,d	-9.4		-12.7			-25.1			-15.9			-15.3			-25.8			-36.4			-58.2			-91.1			
Facade 03 - Tunnel Enclosure	Leq,d	7.8		2.6			-8.4			2.1			3.4			-7.6			-13.9			-39.0			-77.9			
Facade 04 - Tunnel Enclosure	Leq,d	-0.4		-5.6			-16.5			-6.0			-4.8			-15.7			-22.2			-47.3			-86.7			
Gas Canopy	Leq,d	48.0		31.0			35.0			32.8			38.2			44.1			42.7			37.7			24.2			
Roof 01 - Tunnel Enclosure	Leq,d	6.4		-0.9			-10.6			1.3			2.9			-7.9			-17.7			-41.8			-78.3			
Speaker Phone 1	Leq,d	0.1											0.1															
Speaker Phone 2	Leq,d	5.3											5.3															
Speaker Phone 3	Leq,d	24.8											24.8															
Speaker Phone 4	Leq,d	2.7											2.7															
Speaker Phone 5	Leq,d	18.5											18.5															
Transmissive area 02 - Tunnel Enclosure	Leq,d	36.1		12.1			14.9			24.7			30.6			29.6			32.0			12.8			-26.9			
Vac 1	Leq,d	-1.2	-24.7	-17.8	-11.0	-12.4	-9.8	-9.1	-15.0	-16.3	-17.4	-20.0	-22.4	-21.0	-19.9	-19.6	-17.2	-16.5	-11.1	-14.6	-12.2	-14.9	-20.6	-27.3	-36.8	-52.9	-72.7	
Vac 2	Leq,d	-0.7	-24.8	-17.9	-11.1	-12.5	-9.9	-9.2	-15.0	-16.3	-17.4	-20.1	-22.4	-21.0	-19.9	-19.6	-17.2	-16.5	-9.2	-12.7	-10.5	-13.4	-19.6	-27.0	-37.0	-53.3	-73.3	
Vac 3	Leq,d	-0.1	-24.9	-18.0	-11.2	-12.6	-10.0	-9.3	-15.1	-14.0	-15.1	-17.8	-20.1	-18.6	-17.7	-17.4	-15.0	-14.3	-8.8	-12.3	-10.0	-12.8	-18.7	-25.6	-35.5	-52.0	-72.4	
Vac 4	Leq,d	-0.2	-25.0	-18.1	-11.3	-12.7	-10.1	-9.4	-15.1	-14.0	-15.1	-17.8	-20.1	-18.6	-17.7	-17.4	-15.0	-14.3	-8.8	-12.3	-10.1	-12.8	-18.7	-25.8	-35.7	-52.4	-73.0	
Vac 5	Leq,d	-0.2	-25.1	-18.1	-11.3	-12.8	-10.2	-9.5	-15.2	-14.1	-15.2	-17.8	-20.1	-18.6	-17.7	-17.4	-15.0	-14.3	-8.8	-12.4	-10.1	-12.9	-18.8	-25.9	-36.0	-52.8	-73.7	
Vac 6	Leq,d	-0.3	-25.1	-18.2	-11.4	-12.9	-10.3	-9.5	-15.2	-14.1	-15.2	-17.8	-20.1	-18.6	-17.7	-17.4	-14.9	-14.2	-8.9	-12.4	-10.1	-13.0	-18.9	-26.0	-36.2	-53.2	-74.2	
Vac 7	Leq,d	-0.3	-25.2	-18.2	-11.4	-12.9	-10.3	-9.6	-15.3	-14.1	-15.2	-17.8	-20.1	-18.6	-17.7	-17.4	-14.9	-14.2	-8.9	-12.4	-10.2	-13.0	-19.0	-26.2	-36.5	-53.6	-74.9	
Vac 8	Leq,d	-0.3	-25.2	-18.3	-11.5	-13.0	-10.4	-9.6	-15.3	-14.1	-15.2	-17.8	-20.1	-18.6	-17.6	-17.3	-14.9	-14.2	-8.9	-12.5	-10.2	-13.1	-19.1	-26.3	-36.7	-54.0	-75.4	
Vac 9	Leq,d	-0.3	-25.3	-18.3	-11.5	-13.0	-10.4	-9.7	-15.3	-14.2	-15.2	-17.8	-20.1	-18.6	-17.6	-17.3	-14.8	-14.1	-8.9	-12.5	-10.2	-13.1	-19.1	-26.4	-36.9	-54.4	-76.1	
Vac 10	Leq,d	-0.4	-25.3	-18.3	-11.5	-13.1	-10.4	-9.7	-15.4	-14.2	-15.2	-17.8	-20.1	-18.6	-17.6	-17.3	-14.8	-14.1	-8.9	-12.5	-10.3	-13.2	-19.2	-26.6	-37.2	-54.8	-76.7	
Vac 11	Leq,d	1.4	-25.3	-18.3	-11.5	-13.1	-10.5	-9.7	-15.4	-14.2	-15.2	-17.8	-20.1	-18.5	-17.5	-17.2	-14.7	-7.3	-7.5	-10.4	-7.3	-8.8	-13.3	-19.6	-30.6	-50.0	-74.3	
Vac 12	Leq,d	-0.8	-24.4	-17.4	-10.7	-11.9	-9.4	-8.7	-14.6	-15.9	-17.1	-19.7	-22.1	-20.7	-19.7	-19.4	-16.9	-16.2	-10.6	-14.1	-11.6	-14.1	-19.6	-26.0	-35.0	-50.2	-68.8	-95.0

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Vac 13	Leq,d	-0.8	-24.4	-17.5	-10.7	-12.0	-9.4	-8.8	-14.7	-16.0	-17.1	-19.8	-22.1	-20.7	-19.6	-19.4	-16.9	-16.2	-10.7	-14.1	-11.6	-14.1	-19.7	-26.1	-35.2	-50.6	-69.4	-95.8
Vac 14	Leq,d	-0.8	-24.5	-17.5	-10.7	-12.1	-9.5	-8.8	-14.7	-16.0	-17.1	-19.8	-22.1	-20.7	-19.6	-19.3	-16.9	-16.2	-10.7	-14.1	-11.7	-14.2	-19.7	-26.3	-35.5	-51.0	-70.0	-96.8
Vac 15	Leq,d	-0.4	-24.5	-17.6	-10.8	-12.1	-9.5	-8.8	-14.7	-16.0	-17.2	-19.8	-22.1	-20.7	-19.6	-19.3	-16.9	-16.2	-9.1	-12.6	-10.3	-13.1	-19.1	-26.2	-35.7	-51.4	-70.6	-97.7
Vac 16	Leq,d	-0.4	-24.5	-17.6	-10.8	-12.1	-9.6	-8.9	-14.8	-16.0	-17.2	-19.8	-22.1	-20.6	-19.5	-19.3	-16.8	-16.1	-9.1	-12.6	-10.4	-13.2	-19.2	-26.3	-35.9	-51.8	-71.2	-98.6
Vac 17	Leq,d	-0.4	-24.5	-17.6	-10.8	-12.2	-9.6	-8.9	-14.8	-16.1	-17.2	-19.7	-22.1	-20.6	-19.5	-19.2	-16.7	-16.0	-9.1	-12.7	-10.4	-13.2	-19.3	-26.4	-36.1	-52.2	-71.9	-99.5
Vac 18	Leq,d	-0.1	-24.5	-17.6	-10.8	-12.2	-9.6	-8.9	-14.8	-16.1	-17.2	-19.7	-22.0	-20.6	-19.4	-17.2	-14.7	-14.0	-8.7	-12.3	-10.0	-12.7	-18.6	-25.5	-35.4	-51.9	-72.1	
Vac 19	Leq,d	2.7	-24.5	-17.5	-10.7	-12.1	-9.5	-8.8	-14.8	-16.0	-17.1	-19.6	-21.9	-20.5	-19.2	-17.1	-14.6	-6.6	-5.1	-8.1	-5.1	-6.8	-11.3	-17.2	-27.5	-45.7	-68.6	-99.4
48	Leq,d	20.7											20.7															
47	Leq,d	23.2											23.2															
46	Leq,d	21.8											21.8															
49	Leq,d	16.2											16.2															
52	Leq,d	16.9											16.9															
51	Leq,d	12.2											12.2															
50	Leq,d	11.5											11.5															
45	Leq,d	17.4											17.4															
40	Leq,d	7.4											7.4															
39	Leq,d	-6.2											-6.2															
38	Leq,d	1.2											1.2															
41	Leq,d	29.5											29.5															
44	Leq,d	20.4											20.4															
43	Leq,d	8.8											8.8															
42	Leq,d	19.4											19.4															
63	Leq,d	16.0											16.0															
62	Leq,d	9.4											9.4															
61	Leq,d	18.1											18.1															
64	Leq,d	13.7											13.7															
67	Leq,d	24.4											24.4															
66	Leq,d	5.4											5.4															
65	Leq,d	11.4											11.4															
60	Leq,d	23.2											23.2															
55	Leq,d	10.6											10.6															
54	Leq,d	-1.6											-1.6															
53	Leq,d	11.1											11.1															
56	Leq,d	4.5											4.5															
59	Leq,d	16.8											16.8															
58	Leq,d	16.1											16.1															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
57	Leq,d	13.8											13.8															
37	Leq,d	17.0											17.0															
17	Leq,d	21.8											21.8															
16	Leq,d	16.4											16.4															
15	Leq,d	4.2											4.2															
18	Leq,d	32.4											32.4															
21	Leq,d	13.7											13.7															
20	Leq,d	20.3											20.3															
19	Leq,d	17.9											17.9															
14	Leq,d	-1.0											-1.0															
9	Leq,d	10.7											10.7															
8	Leq,d	13.4											13.4															
7	Leq,d	15.5											15.5															
10	Leq,d	9.8											9.8															
13	Leq,d	10.7											10.7															
12	Leq,d	8.9											8.9															
11	Leq,d	10.2											10.2															
32	Leq,d	26.5											26.5															
31	Leq,d	29.3											29.3															
30	Leq,d	28.0											28.0															
33	Leq,d	14.0											14.0															
36	Leq,d	13.1											13.1															
35	Leq,d	-0.3											-0.3															
34	Leq,d	11.2											11.2															
29	Leq,d	17.8											17.8															
24	Leq,d	5.6											5.6															
23	Leq,d	3.1											3.1															
22	Leq,d	9.9											9.9															
25	Leq,d	8.0											8.0															
28	Leq,d	6.8											6.8															
27	Leq,d	20.0											20.0															
26	Leq,d	21.1											21.1															
Receiver -621,230 Fl G Lr,lim dB(A) Leq,d 53.8 dB(A) Sigma(Leq,d) 2.1 dB(A)																												
Drive-Thru 1	Leq,d	50.4		36.2			46.5			34.3			37.8			42.0			43.9			40.3			30.9			9.3
Drive-Thru 2	Leq,d	33.5		23.4			29.9			15.4			17.6			23.7			27.9			20.1			-4.8			-70.9
Drive-Thru 3	Leq,d	46.4		33.5			42.1			29.1			32.0			38.1			40.7			36.2			23.6			-7.2

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Drive-Thru 4	Leq,d	41.0		29.7			37.1			23.3			25.4			32.7			35.1			28.5			9.1			-39.9
Drive-Thru 5	Leq,d	30.1		22.1			28.0			16.5			19.1			17.7			16.6			7.0			-14.9			-91.1
Exit - Tunnel Enclosure	Leq,d	28.7		9.7			11.4			17.5			22.9			24.5			22.4			7.4			-22.8			
Facade 01 - Tunnel Enclosure	Leq,d	3.3		0.2			-11.5			-3.4			-3.1			-13.7			-24.9			-46.2			-76.6			
Facade 02 - Tunnel Enclosure	Leq,d	-3.3		-6.8			-18.3			-10.0			-8.9			-18.3			-29.6			-51.1			-81.8			
Facade 03 - Tunnel Enclosure	Leq,d	14.6		7.6			-2.0			5.2			11.9			5.5			-3.9			-23.6			-52.8			
Facade 04 - Tunnel Enclosure	Leq,d	6.3		-0.6			-10.1			-2.3			3.4			-3.2			-11.0			-31.0			-60.8			
Gas Canopy	Leq,d	40.5		26.2			28.7			27.5			30.2			36.4			35.3			28.4			8.9			
Roof 01 - Tunnel Enclosure	Leq,d	10.3		0.8			-8.1			4.6			7.5			-1.1			-10.4			-30.2			-59.6			
Speaker Phone 1	Leq,d	-4.0											-4.0															
Speaker Phone 2	Leq,d	1.5											1.5															
Speaker Phone 3	Leq,d	16.5											16.5															
Speaker Phone 4	Leq,d	10.2											10.2															
Speaker Phone 5	Leq,d	7.1											7.1															
Transmissive area 02 - Tunnel Enclosure	Leq,d	47.0		17.2			21.8			27.8			38.0			42.8			43.5			29.6			-0.1			
Vac 1	Leq,d	10.3	-19.8	-12.5	-5.4	-5.9	-2.8	-1.5	-12.5	-13.1	-13.6	-13.0	-14.5	-12.3	-7.2	-6.1	-1.5	0.2	0.4	-1.9	2.1	1.9	-0.6	-3.7	-10.0	-22.6	-38.0	-60.2
Vac 2	Leq,d	9.9	-20.0	-12.7	-5.5	-6.0	-3.0	-1.7	-12.6	-13.3	-13.7	-13.1	-14.7	-12.5	-7.4	-6.2	-1.9	-0.2	0.0	-2.4	1.7	1.5	-1.0	-4.2	-10.6	-23.3	-38.9	-61.5
Vac 3	Leq,d	11.1	-20.1	-12.8	-5.6	-6.2	-3.1	-1.8	-12.8	-13.4	-11.5	-10.9	-12.4	-10.2	-5.1	-3.9	-0.6	1.1	1.3	-1.0	3.1	3.0	0.6	-2.6	-9.1	-22.1	-38.1	-61.2
Vac 4	Leq,d	10.9	-20.2	-12.9	-5.7	-6.3	-3.3	-2.0	-12.9	-13.6	-11.6	-11.0	-12.6	-10.4	-5.2	-4.1	-0.7	0.9	1.1	-1.2	2.9	2.8	0.3	-3.0	-9.6	-22.8	-39.0	-62.5
Vac 5	Leq,d	10.7	-20.3	-13.0	-5.8	-6.5	-3.4	-2.2	-13.1	-13.7	-11.8	-11.2	-12.7	-10.5	-5.4	-4.2	-0.9	0.7	1.0	-1.3	2.7	2.5	0.0	-3.4	-10.1	-23.5	-40.0	-63.8
Vac 6	Leq,d	10.6	-20.4	-13.1	-6.0	-6.6	-3.6	-2.3	-13.2	-13.9	-11.9	-11.3	-12.9	-10.7	-5.5	-4.2	-0.8	0.8	0.9	-1.4	2.6	2.3	-0.3	-3.7	-10.5	-24.1	-40.9	-65.0
Vac 7	Leq,d	10.9	-20.6	-13.3	-6.1	-6.8	-3.7	-2.5	-13.4	-14.0	-12.0	-11.4	-13.0	-10.8	-5.7	-3.6	-0.3	1.3	1.5	-0.9	3.0	2.6	-0.2	-3.8	-10.9	-24.7	-41.8	-66.3
Vac 8	Leq,d	10.8	-20.7	-13.4	-6.2	-6.9	-3.9	-2.6	-13.5	-14.1	-12.2	-11.6	-13.1	-10.9	-5.8	-3.6	-0.3	1.3	1.4	-1.0	2.9	2.5	-0.4	-4.2	-11.4	-25.4	-42.7	-67.6
Vac 9	Leq,d	11.0	-20.8	-13.5	-6.3	-7.1	-4.0	-2.8	-13.6	-14.3	-12.3	-11.7	-13.3	-11.1	-5.9	-3.3	0.1	1.6	1.8	-0.7	3.1	2.6	-0.4	-4.4	-11.8	-26.0	-43.7	-68.9
Vac 10	Leq,d	10.8	-20.9	-13.6	-6.4	-7.2	-4.2	-2.9	-13.8	-14.4	-12.4	-11.8	-13.4	-11.2	-6.1	-3.4	-0.1	1.5	1.6	-0.9	3.0	2.4	-0.7	-4.7	-12.3	-26.7	-44.6	-70.2
Vac 11	Leq,d	10.2	-21.0	-13.7	-6.5	-7.4	-4.3	-3.1	-13.9	-14.6	-12.6	-12.0	-13.6	-11.4	-6.2	-5.1	-0.8	0.8	0.9	-1.5	2.3	1.8	-1.3	-5.3	-12.9	-27.5	-45.7	-71.6
Vac 12	Leq,d	10.4	-19.4	-12.1	-4.9	-5.3	-2.2	-0.9	-11.9	-12.5	-13.0	-12.4	-14.0	-11.7	-6.7	-5.5	-2.1	-0.4	-0.1	-2.3	1.9	2.0	-0.1	-2.7	-8.3	-20.2	-34.6	-55.6
Vac 13	Leq,d	10.1	-19.5	-12.2	-5.0	-5.5	-2.4	-1.1	-12.0	-12.7	-13.1	-12.6	-14.1	-11.9	-6.8	-5.7	-2.3	-0.6	-0.3	-2.5	1.7	1.8	-0.4	-3.1	-8.8	-20.9	-35.5	-56.8
Vac 14	Leq,d	10.8	-19.6	-12.3	-5.2	-5.6	-2.5	-1.3	-12.2	-12.9	-13.3	-12.7	-14.3	-12.1	-7.0	-4.4	-1.0	0.6	0.8	-1.5	2.6	2.4	0.0	-3.0	-9.1	-21.5	-36.5	-58.2
Vac 15	Leq,d	10.6	-19.8	-12.5	-5.3	-5.8	-2.7	-1.4	-12.4	-13.0	-13.5	-12.9	-14.5	-12.2	-7.1	-4.5	-1.2	0.4	0.7	-1.7	2.4	2.2	-0.3	-3.4	-9.6	-22.2	-37.5	-59.5
Vac 16	Leq,d	10.4	-19.9	-12.6	-5.4	-6.0	-2.9	-1.6	-12.5	-13.2	-13.6	-13.1	-14.6	-12.4	-7.3	-4.7	-1.3	0.4	0.6	-1.8	2.3	2.0	-0.5	-3.8	-10.2	-22.9	-38.5	-60.9
Vac 17	Leq,d	10.4	-20.0	-12.7	-5.5	-6.1	-3.0	-1.8	-12.7	-13.4	-13.8	-13.2	-14.8	-12.6	-7.5	-4.8	-1.5	0.7	0.9	-1.5	2.4	2.1	-0.6	-4.1	-10.7	-23.6	-39.5	-62.3
Vac 18	Leq,d	10.0	-20.1	-12.9	-5.7	-6.3	-3.2	-1.9	-12.9	-13.5	-14.0	-13.4	-14.9	-12.7	-7.6	-4.9	-1.6	0.0	0.2	-2.2	1.8	1.5	-1.1	-4.6	-11.2	-24.3	-40.4	-63.5
Vac 19	Leq,d	9.8	-20.3	-13.0	-5.8	-6.5	-3.4	-2.1	-13.0	-13.7	-14.1	-13.6	-15.1	-12.9	-7.8	-5.1	-1.7	-0.1	0.0	-2.4	1.6	1.3	-1.5	-5.0	-11.8	-25.1	-41.5	-65.1
48	Leq,d	16.9											16.9															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
47	Leq,d	19.5											19.5															
46	Leq,d	19.1											19.1															
49	Leq,d	12.5											12.5															
52	Leq,d	17.1											17.1															
51	Leq,d	5.5											5.5															
50	Leq,d	7.4											7.4															
45	Leq,d	17.6											17.6															
40	Leq,d	9.3											9.3															
39	Leq,d	-6.4											-6.4															
38	Leq,d	1.0											1.0															
41	Leq,d	20.1											20.1															
44	Leq,d	9.0											9.0															
43	Leq,d	17.9											17.9															
42	Leq,d	16.7											16.7															
63	Leq,d	9.0											9.0															
62	Leq,d	8.2											8.2															
61	Leq,d	11.8											11.8															
64	Leq,d	15.0											15.0															
67	Leq,d	17.6											17.6															
66	Leq,d	9.4											9.4															
65	Leq,d	15.8											15.8															
60	Leq,d	20.0											20.0															
55	Leq,d	9.5											9.5															
54	Leq,d	-0.5											-0.5															
53	Leq,d	15.4											15.4															
56	Leq,d	5.2											5.2															
59	Leq,d	15.8											15.8															
58	Leq,d	15.0											15.0															
57	Leq,d	12.2											12.2															
37	Leq,d	15.1											15.1															
17	Leq,d	26.5											26.5															
16	Leq,d	24.2											24.2															
15	Leq,d	3.7											3.7															
18	Leq,d	32.5											32.5															
21	Leq,d	17.2											17.2															
20	Leq,d	21.4											21.4															

Shops @ JV - Noise
Contribution spectra - Situation 1: Outdoor SP

Source	Time slice	Sum	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz
		dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
19	Leq,d	16.8											16.8															
14	Leq,d	-3.8											-3.8															
9	Leq,d	14.4											14.4															
8	Leq,d	15.2											15.2															
7	Leq,d	19.0											19.0															
10	Leq,d	11.6											11.6															
13	Leq,d	9.9											9.9															
12	Leq,d	6.2											6.2															
11	Leq,d	11.8											11.8															
32	Leq,d	23.9											23.9															
31	Leq,d	26.7											26.7															
30	Leq,d	37.7											37.7															
33	Leq,d	11.0											11.0															
36	Leq,d	11.6											11.6															
35	Leq,d	0.5											0.5															
34	Leq,d	12.6											12.7															
29	Leq,d	16.2											16.2															
24	Leq,d	4.5											4.5															
23	Leq,d	3.4											3.4															
22	Leq,d	10.4											10.4															
25	Leq,d	5.9											5.9															
28	Leq,d	15.9											15.9															
27	Leq,d	19.9											19.9															
26	Leq,d	26.2											26.2															

Appendix D:

Traffic Noise Modeling Output

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT:	Shops at Jurupa Valley	JOB #:	0689-20-01
ROADWAY:	Pyrite Eboff Ramp to Mission Blvd	DATE:	29-Jun-20
LOCATION:	Existing - NOISE CONTOURS	ENGINEER	R. PEARSON

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	8,223	
SPEED =	40	
PK HR % =	10	
NEAR LANE/FAR LANE DI!	0	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	822	

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5.0
WALL DISTANCE FROM RECEIVEF		50
PAD ELEVATION =		0.5
ROADWAY VIEW:	LF ANGLE=	-90
	RT ANGLE=	90
	DF ANGLE=	180

SITE CONDITIONS

AUTOMOBILES =	10	
MEDIUM TRUCKS =	10	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	10	

WALL INFORMATION

HTH WALL	6.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCK	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	54.51	- -
MEDIUM TRUCKS	4.0	52.51	- -
HEAVY TRUCKS	8.0	50.06	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	64.6	62.7	61.0	54.9	63.5	64.1
MEDIUM TRUCKS	56.5	55.0	48.6	47.1	55.6	55.8
HEAVY TRUCKS	57.6	56.2	47.1	48.4	56.7	56.9
NOISE LEVELS (dBA)	65.9	64.2	61.4	56.3	64.9	65.4

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	50.0	48.1	46.4	40.3	48.9	49.5
MEDIUM TRUCKS	43.7	42.2	35.8	34.3	42.8	43.0
HEAVY TRUCKS	57.6	56.2	47.1	48.4	56.7	56.9
NOISE LEVELS (dBA)	58.3	56.5	53.7	48.7	57.3	57.8

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	17	55	173	547
LDN	15	49	154	488

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT:	Shops at Jurupa Valley	JOB #:	0689-20-01
ROADWAY:	Mission Blv -Pyrite to Camino Real	DATE:	29-Jun-20
LOCATION:	E+P- NOISE CONTOURS	ENGINEER	R. PEARSON

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	16,432	
SPEED =	40	
PK HR % =	10	
NEAR LANE/FAR LANE DI!	0	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	1,643	

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5.0
WALL DISTANCE FROM RECEIVEF		50
PAD ELEVATION =		0.5
ROADWAY VIEW:	LF ANGLE=	-90
	RT ANGLE=	90
	DF ANGLE=	180

SITE CONDITIONS

AUTOMOBILES =	10	
MEDIUM TRUCKS =	10	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	10	

WALL INFORMATION

HTH WALL	6.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCK	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	54.51	- -
MEDIUM TRUCKS	4.0	52.51	- -
HEAVY TRUCKS	8.0	50.06	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.6	65.7	64.0	57.9	66.5	67.1
MEDIUM TRUCKS	59.5	58.0	51.6	50.1	58.6	58.8
HEAVY TRUCKS	60.6	59.2	50.2	51.4	59.8	59.9
NOISE LEVELS (dBA)	68.9	67.2	64.4	59.3	67.9	68.4

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	53.0	51.1	49.4	43.3	51.9	52.5
MEDIUM TRUCKS	46.7	45.2	38.8	37.3	45.8	46.0
HEAVY TRUCKS	60.6	59.2	50.2	51.4	59.8	59.9
NOISE LEVELS (dBA)	61.3	59.5	56.8	51.7	60.3	60.8

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	35	109	345	1092
LDN	31	97	308	975

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT:	Shops at Jurupa Valley	JOB #:	0689-20-01
ROADWAY:	Mission Blv -Pyrite to Camino Real	DATE:	29-Jun-20
LOCATION:	Existing - NOISE CONTOURS	ENGINEER	R. PEARSON

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	12,237	
SPEED =	40	
PK HR % =	10	
NEAR LANE/FAR LANE DI!	0	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	1,224	

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5.0
WALL DISTANCE FROM RECEIVEF		50
PAD ELEVATION =		0.5
ROADWAY VIEW:	LF ANGLE=	-90
	RT ANGLE=	90
	DF ANGLE=	180

SITE CONDITIONS

AUTOMOBILES =	10	
MEDIUM TRUCKS =	10	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	10	

WALL INFORMATION

HTH WALL	6.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCK	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	54.51	- -
MEDIUM TRUCKS	4.0	52.51	- -
HEAVY TRUCKS	8.0	50.06	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	66.4	64.5	62.7	56.6	65.3	65.9
MEDIUM TRUCKS	58.2	56.7	50.4	48.8	57.3	57.5
HEAVY TRUCKS	59.3	57.9	48.9	50.1	58.5	58.6
NOISE LEVELS (dBA)	67.7	65.9	63.1	58.1	66.6	67.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	51.8	49.9	48.1	42.0	50.7	51.3
MEDIUM TRUCKS	45.4	43.9	37.6	36.0	44.5	44.7
HEAVY TRUCKS	59.3	57.9	48.9	50.1	58.5	58.6
NOISE LEVELS (dBA)	60.0	58.3	55.5	50.4	59.0	59.5

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	26	81	257	813
LDN	23	73	230	726

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT:	Shops at Jurupa Valley	JOB #:	0689-20-01
ROADWAY:	Mission Blv -Pyrite to Camino Real	DATE:	29-Jun-20
LOCATION:	E+P- NOISE CONTOURS	ENGINEER	R. PEARSON

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	15,520	
SPEED =	40	
PK HR % =	10	
NEAR LANE/FAR LANE DI!	0	
ROAD ELEVATION =	0.0	
GRADE =	1.0	%
PK HR VOL =	1,552	

RECEIVER INPUT DATA

RECEIVER DISTANCE =		50
DIST C/L TO WALL =		0
RECEIVER HEIGHT =		5.0
WALL DISTANCE FROM RECEIVEF		50
PAD ELEVATION =		0.5
ROADWAY VIEW:	LF ANGLE=	-90
	RT ANGLE=	90
	DF ANGLE=	180

SITE CONDITIONS

AUTOMOBILES =	10	
MEDIUM TRUCKS =	10	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	10	

WALL INFORMATION

HTH WALL	6.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCK	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	54.51	- -
MEDIUM TRUCKS	4.0	52.51	- -
HEAVY TRUCKS	8.0	50.06	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	67.4	65.5	63.7	57.7	66.3	66.9
MEDIUM TRUCKS	59.3	57.8	51.4	49.8	58.3	58.5
HEAVY TRUCKS	60.4	58.9	49.9	51.2	59.5	59.6
NOISE LEVELS (dBA)	68.7	66.9	64.1	59.1	67.7	68.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	52.8	50.9	49.1	43.1	51.7	52.3
MEDIUM TRUCKS	46.5	45.0	38.6	37.0	45.5	45.7
HEAVY TRUCKS	60.4	58.9	49.9	51.2	59.5	59.6
NOISE LEVELS (dBA)	61.1	59.3	56.5	51.5	60.0	60.5

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	33	103	326	1032
LDN	29	92	291	921

Appendix E:

Construction Noise Modeling Output

Activity	L_{eq} at 725 feet dBA	L_{Max} at 725 feet dBA
Grading	61	65
Building Construction	58	62
Paving	58	62

Equipment Summary	Reference (dBA) 50 ft Lmax
Rock Drills	96
Jack Hammers	82
Pneumatic Tools	85
Source: MD Acoustics, Jun 2020.	
Dozers	85
Scrappers	87
Haul Trucks	88
Cranes	82
Portable Generators	80
Rollers	80
Tractors	80
Front-End Loaders	86
Hydraulic Excavators	86
Graders	85
Air Compressors	86
Trucks	86

Grading

No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Calculated (dBA) Leq	Energy
		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
1	Grader	85	1	40	725	0.5	0	56.0	52.0	157993.779
2	Dozer	85	1	40	725	0.5	0	56.0	52.0	157993.779
3	Tractor/Backhoe	80	2	40	725	0.5	0	54.0	50.0	99924.0393
4	Excavators	86	2	40	725	0.5	0	60.0	56.0	397804.765
5	Scrapers	87	2	40	725	0.5	0	61.0	57.0	500806.528
							Lmax*	**65**	**Leq**	**61**
							Lw	**97**	**Lw**	**93**

Source: MD Acoustics, Jun 2020.

1- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**61**	**60**	**59**	**58**	**57**	**56**	**55**	**54**	**53**	**52**	**51**	**50**	**49**	**48**	**47**	**46**
60	18.3	0.5	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44
70	21.3	0.5	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43
80	24.4	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
90	27.4	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
100	30.5	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
110	33.5	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
120	36.6	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
130	39.6	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
140	42.7	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
150	45.7	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
160	48.8	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
170	51.8	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
180	54.9	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
190	57.9	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
200	61.0	0.5	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31
210	64.0	0.5	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31
220	67.1	0.5	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
230	70.1	0.5	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
240	73.1	0.5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29
250	76.2	0.5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29
260	79.2	0.5	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
270	82.3	0.5	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
280	85.3	0.5	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
290	88.4	0.5	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
300	91.4	0.5	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
310	94.5	0.5	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
320	97.5	0.5	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
330	100.6	0.5	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
340	103.6	0.5	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
350	106.7	0.5	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
360	109.7	0.5	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
370	112.8	0.5	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24

Building Construction

		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Calculated (dBA) Leq	Energy
1	Cranes	82	2	40	725	0.5	0	56.0	52.0	158368.93
2	Forklift/Tractor	80	4	40	725	0.5	0	57.0	53.0	199848.079
3	Generator	80	2	40	725	0.5	0	54.0	50.0	99924.0393
4	Tractor/Backhoe	80	4	40	725	0.5	0	57.0	53.0	199848.079
							Lmax*	**62**	**Leq**	**58**
							Lw	**94**	**Lw**	**90**

Source: MD Acoustics, Jun 2020.

1- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**58**	**57**	**56**	**55**	**54**	**53**	**52**	**51**	**50**	**49**	**48**	**47**	**46**	**45**	**44**	**43**
60	18.3	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
70	21.3	0.5	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
80	24.4	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
90	27.4	0.5	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37
100	30.5	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
110	33.5	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
120	36.6	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
130	39.6	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
140	42.7	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
150	45.7	0.5	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31
160	48.8	0.5	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31
170	51.8	0.5	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
180	54.9	0.5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29
190	57.9	0.5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29
200	61.0	0.5	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
210	64.0	0.5	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
220	67.1	0.5	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
230	70.1	0.5	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
240	73.1	0.5	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
250	76.2	0.5	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
260	79.2	0.5	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
270	82.3	0.5	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
280	85.3	0.5	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
290	88.4	0.5	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
300	91.4	0.5	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
310	94.5	0.5	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23
320	97.5	0.5	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23
330	100.6	0.5	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23
340	103.6	0.5	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22
350	106.7	0.5	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22
360	109.7	0.5	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22
370	112.8	0.5	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Paving

		Noise Level Calculation Prior to Implementation of Noise Attenuation Requirements								
No.	Equipment Description	Reference (dBA) 50 ft Lmax	Quantity	Usage Factor[1]	Distance to Receptor (ft)	Ground Effect	Shielding (dBA)	Calculated (dBA) Lmax	Calculated (dBA) Leq	Energy
1	Pavers	86	2	40	725	0.5	0	60.0	56.0	397804.765
2	Rollers	80	2	40	725	0.5	0	54.0	50.0	99924.0393
3	Paving Equipment	80	2	40	725	0.5	0	54.0	50.0	99924.0393
							Lmax*	**62**	**Leq**	**58**
							Lw	**93**	**Lw**	**89**

Source: MD Acoustics, Jun 2020.

1- Percentage of time that a piece of equipment is operating at full power.

dBA – A-weighted Decibels

Lmax- Maximum Level

Leq- Equivalent Level

Feet	Meters	Ground Effect	No Shielding Leq dBA	1 dBA Shielding Leq dBA	2 dBA Shielding Leq dBA	3 dBA Shielding Leq dBA	4 dBA Shielding Leq dBA	5 dBA Shielding Leq dBA	6 dBA Shielding Leq dBA	7 dBA Shielding Leq dBA	8 dBA Shielding Leq dBA	9 dBA Shielding Leq dBA	10 dBA Shielding Leq dBA	11 dBA Shielding LeqdBA	12 dBA Shielding Leq dBA	13 dBA Shielding Leq dBA	14 dBA Shielding Leq dBA	15 dBA Shielding Leq dBA
50	**15.2**	**0.5**	**58**	**57**	**56**	**55**	**54**	**53**	**52**	**51**	**50**	**49**	**48**	**47**	**46**	**45**	**44**	**43**
60	18.3	0.5	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
70	21.3	0.5	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39
80	24.4	0.5	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38
90	27.4	0.5	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
100	30.5	0.5	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35
110	33.5	0.5	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34
120	36.6	0.5	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
130	39.6	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
140	42.7	0.5	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
150	45.7	0.5	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31
160	48.8	0.5	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
170	51.8	0.5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29
180	54.9	0.5	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29
190	57.9	0.5	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
200	61.0	0.5	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
210	64.0	0.5	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
220	67.1	0.5	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
230	70.1	0.5	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
240	73.1	0.5	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26
250	76.2	0.5	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
260	79.2	0.5	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
270	82.3	0.5	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
280	85.3	0.5	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
290	88.4	0.5	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24
300	91.4	0.5	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23
310	94.5	0.5	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23
320	97.5	0.5	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23
330	100.6	0.5	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22
340	103.6	0.5	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22
350	106.7	0.5	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22
360	109.7	0.5	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21
370	112.8	0.5	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

VIBRATION LEVEL IMPACT

Project:	Shops At Jurupa	Date: 6/22/20
Source:	Large Bulldozer	
Scenario:	Unmitigated	
Location:	Project Site	
Address:		

PPV = PPVref(25/D)^n (in/sec)

DATA INPUT

Equipment = Type	2	Large Bulldozer	INPUT SECTION IN BLUE
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	33.00	Distance from Equipment to Receiver (ft)	
n =	1.10	Vibration attenuation rate through the ground	

Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.

DATA OUT RESULTS

PPV =	**0.066**	IN/SEC	OUTPUT IN RED