

Noise Study
for the
Arlington and Van Buren Plaza
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Table of Contents

Section	Page
Executive Summary.....	1
Introduction	2
Noise Descriptors	2
Regulatory Setting.....	9
Thresholds of Significance.....	13
Methodology.....	15
Existing Conditions.....	22
Noise Analysis	25
Cumulative Noise	35

Attachments

- A Noise Monitoring Data Sheets
- B Construction Noise Worksheet
- C Construction Vibration Worksheet
- D Roadway Data Worksheets
- E Operational Noise Data

Figures

Figure	Page
1 Project Site Location	3
2 Proposed Site Plan	4
3 Common Noise Levels.....	7
4 Noise Attenuation by Barriers.....	8
5a Noise Monitoring Location (Site 1)	17
5b Noise Monitoring Location (Site 2)	18
5c Noise Monitoring Location (Site 3)	19
5d Noise Monitoring Location (Site 4)	20
5e Noise Monitoring Location (Site 5)	21
6 Operational Noise Level Contour Map.....	34

Tables

Table	Page
1 Noise Descriptors	5
2 City of Riverside Land Use Compatibility for Community Noise Exposure	10-11
3 City of Riverside Exterior Noise Standards.....	11
4 City of Riverside Interior Noise Standards	12
5 Ambient Noise Measurements	22
6 Existing Roadway Noise Levels.....	23-24
7 Typical Maximum Noise Levels for Project Construction Equipment	25
8 Construction Maximum Noise Estimates.....	27
9 On-Site Construction Vibration Impacts—Building Damage	28
10 Existing Plus Project Roadway Noise Levels.....	30-32
11 Modeled Operational Exterior Noise Levels	33
12 Future (2023) Roadway Noise Levels	36-38

EXECUTIVE SUMMARY

This Noise Study assesses and discusses the potential noise and vibration impacts that may occur with the Arlington and Van Buren Plaza Project (Project), located in the City of Riverside (City), California. The analysis describes the existing environment in the Project area; estimates future noise and vibration levels at surrounding land uses resulting from construction and operation of the Project; and identifies the potential for significant impacts. An evaluation of the Project's contribution to potential cumulative noise impacts is also provided. The study summarizes the potential for the Project to conflict with applicable noise and vibration regulations, standards, and thresholds. The findings of the analyses are as follows:

- Construction activities would not result in short-term and temporary noise impacts to nearby noise-sensitive receptors due to on-site construction equipment and activities. Compliance with the City's Municipal Code and utilization of best management practices would ensure implementation of noise-attenuation techniques and placement of the construction-staging area and earthmoving equipment away from noise-sensitive sites to reduce construction noise levels below the significance threshold.
- Construction of the Project would generate sporadic, temporary vibration effects adjacent to the Project area but would not be expected to exceed the significance thresholds.
- Noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed recommended measures for each individual project and compliance with locally adopted and enforced noise ordinances. Given that construction activities would be required to comply with the City's allowable hours and would be temporary, construction-related noise would not be significant.
- Noise associated with cumulative operational sources would not be significant.
- Due to the rapid attenuation characteristics of ground-borne vibration and the distance of the cumulative projects to the Project site, no potential exists for cumulative construction- or operational-related impacts with respect to ground-borne vibration.

INTRODUCTION

The purpose of this Noise Study is to assess and discuss the impact of potential noise impacts that may occur with the Arlington and Van Buren Plaza Project (Project), located in the City of Riverside (City), California. The noise report analyzes short-term noise and ground-borne vibration impacts associated with the Project. The report also discusses the applicable federal, State, and local noise and vibration regulations; the applicable noise and vibration thresholds; the methodology used to analyze potential noise and vibration impacts; and the modeled roadway noise.

Project Description

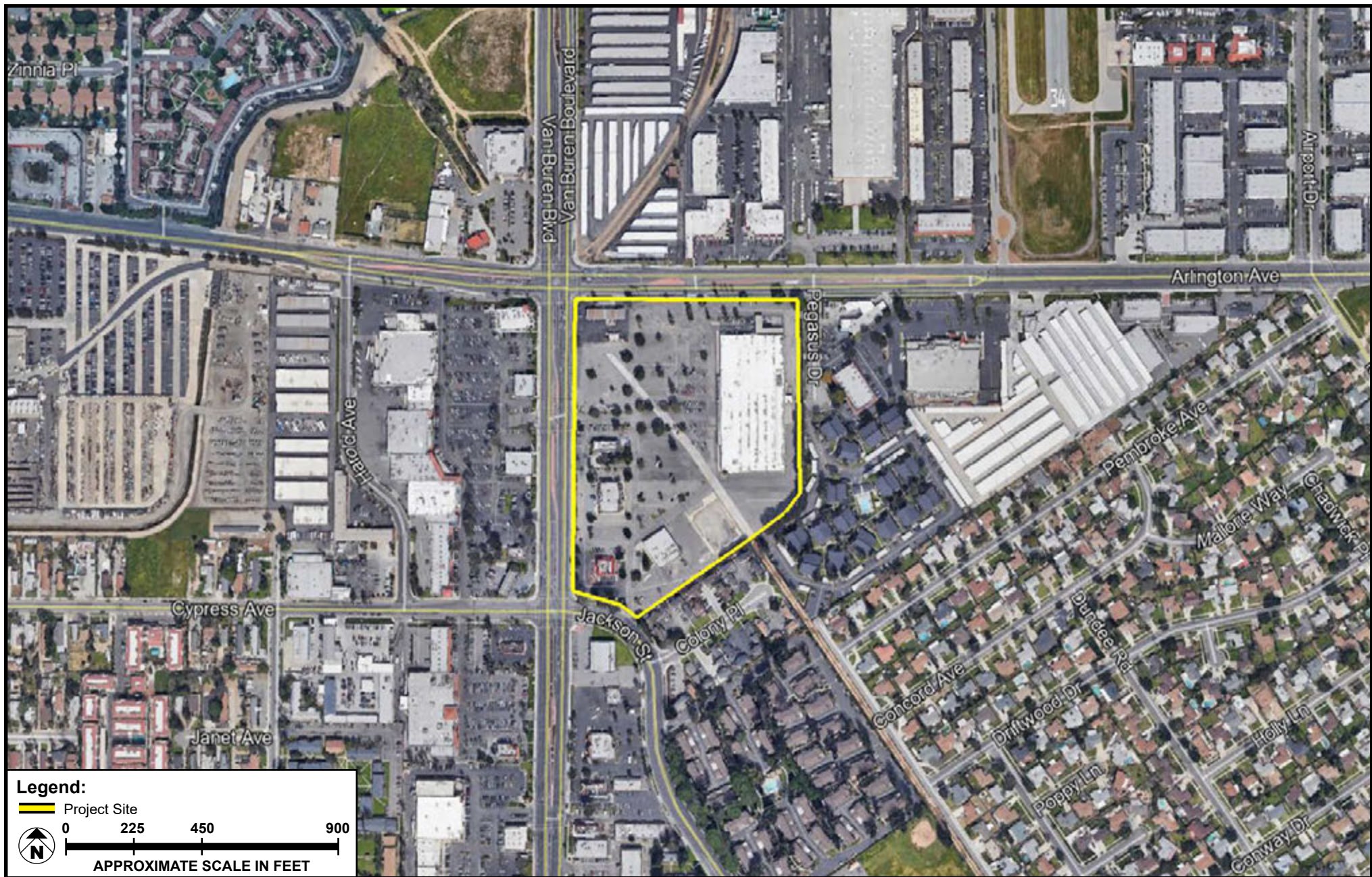
The Project site is located at 7200 Arlington Avenue (Project site), in the City of Riverside (City), south of Arlington Avenue, west of Pegasus Drive, east of Van Buren Boulevard, and north of Jackson Street, as shown in **Figure 1: Project Site Location**. The Project site is approximately 673,094 square feet (15.45 acres) in size and is currently developed with a 94,500 square-foot K-Mart building (Major "A"), a 3,400 square-foot Kentucky Fried Chicken fast-food restaurant (Pad 1), a 6,058 square-foot former Title Max Office (Pad 2), a 4,096 square-foot Carl's Jr. fast food restaurant (Pad 3), and a 8,924 square foot vacant building (Pad 4).

The proposed Project will consist of redevelopment of the existing 6,058-square-foot former-Title Max Office (Pad 2) with a 2,275-square-foot fast-food restaurant with a newly created drive through and 3,847 square feet of retail uses, as shown in **Figure 2: Proposed Site Plan**. Furthermore, two additional pads (Pad 5 and Pad 6) will be constructed as part of the Project, including an automated car wash with a maximum 110-foot wash tunnel and the option for either 6,000 square feet of fast casual/in-line food uses or a 2,200 square-foot fast-food restaurant with drive through. The proposed Project is expected to be completed and fully occupied in the Year 2023.

NOISE DESCRIPTORS

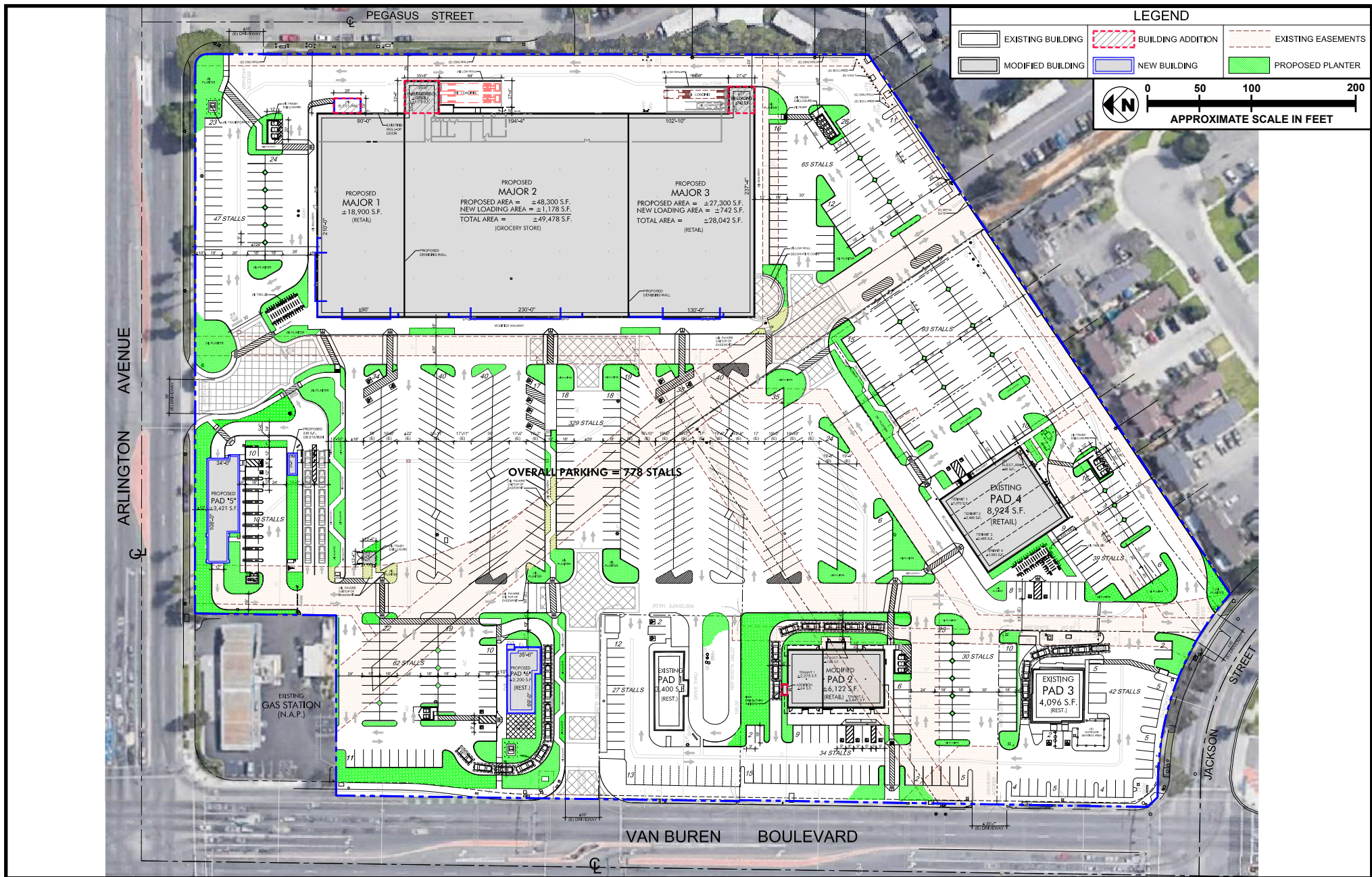
Fundamentals of Sound

Because the human ear does not respond uniformly to sounds at all frequencies, sound-pressure level alone is not a reliable indicator of loudness. For example, the human ear is less sensitive to low and high frequencies than to the medium frequencies that more closely correspond to human speech. In response to the sensitivity of the human ear to certain sound frequencies, the A-weighted noise level, referenced in units of dBA, was developed to better correspond with people's subjective judgment of sound levels. To support assessing a community reaction to noise, scales have been developed that average sound-pressure levels over time and quantify the result in terms of a single numerical descriptor. Several scales have been developed that address community noise levels. The equivalent sound level (Leq) is the average A-weighted sound level measured over a given time interval. Leq can be measured over any period but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods.



SOURCE: Google Earth - 2021

FIGURE 1



SOURCE: McKently Malak Architects - October 2020

FIGURE 2

Table 1: Noise Descriptors identifies various noise descriptors developed to measure sound levels over different periods of time.

Table 1
Noise Descriptors

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measure sound to a reference pressure.
A-weighted decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Hertz (Hz)	The frequency of the pressure vibration, which is measured in cycles per second.
Kilo hertz (kHz)	One thousand cycles per second.
Equivalent sound level (Leq)	The sound level containing the same total energy as a time varying signal over a given time period. The Leq is the value that expresses the time averaged total energy of a fluctuating sound level. Leq can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods.
Community noise equivalent level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments add 5 dBA for the evening, 7:00 PM to 10:00 PM, and add 10 dBA for the night, 10:00 PM to 7:00 AM. The 5- and 10-dB penalties are applied to account for increased noise sensitivity during the evening and nighttime hours. The logarithmic effect of adding these penalties to the 1-hour Leq measurements typically results in a CNEL measurement that is within approximately 3 dBA of the peak-hour Leq. ^a
Nighttime (Lnight)	Lnight is the average noise exposure during the hourly periods from 10:00 PM to 7:00 AM.
Sound pressure level	The sound pressure is the force of sound on a surface area perpendicular to the direction of the sound. The sound pressure level is expressed in dB.
Ambient noise	The level of noise that is all encompassing within a given environment, being usually a composite of sounds from many and varied sources near to and far from the observer. No specific source is identified in the ambient environment.

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

A doubling of sound energy results in a 3 dBA increase in sound, which means that a doubling of sound wave energy (e.g., doubling the volume of traffic on a roadway) would result in a barely perceptible change in sound level. In general, changes in a noise level of less than 3 dBA are not noticed by the human ear.¹ Changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. An increase of greater than 5 dBA is readily noticeable, while the human ear perceives a 10 dBA increase in sound level to be a doubling of sound volume.

Noise sources can generally be categorized in two types: (1) point sources, such as stationary equipment; and (2) line sources, such as a roadway. Sound generated by a point source typically diminishes (attenuates) at a rate of 6 dBA for each doubling of distance from the source to the receptor at acoustically hard sites, and at a rate of 7.5 dBA at acoustically soft sites.² A hard or reflective site consists of asphalt, concrete, or very hard-packed soil, which does not provide any excess ground-effect attenuation. An acoustically soft or absorptive site is characteristic of normal earth and most ground with vegetation. As an example, a 60-dBA noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dBA at 100 feet from the source and 48 dBA at 200 feet from the source. Noise from the same point source at an acoustically soft site would be 52.5 dBA at 100 feet and 45 dBA at 200 feet from the source. Sound generated by a line source typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling of distance from the source to the receptor for hard and soft sites, respectively.³ Noise levels generated by a variety of activities are shown in **Figure 3: Common Noise Levels**. Man-made or natural barriers can also attenuate sound levels, as illustrated in **Figure 4: Noise Attenuation by Barriers**.

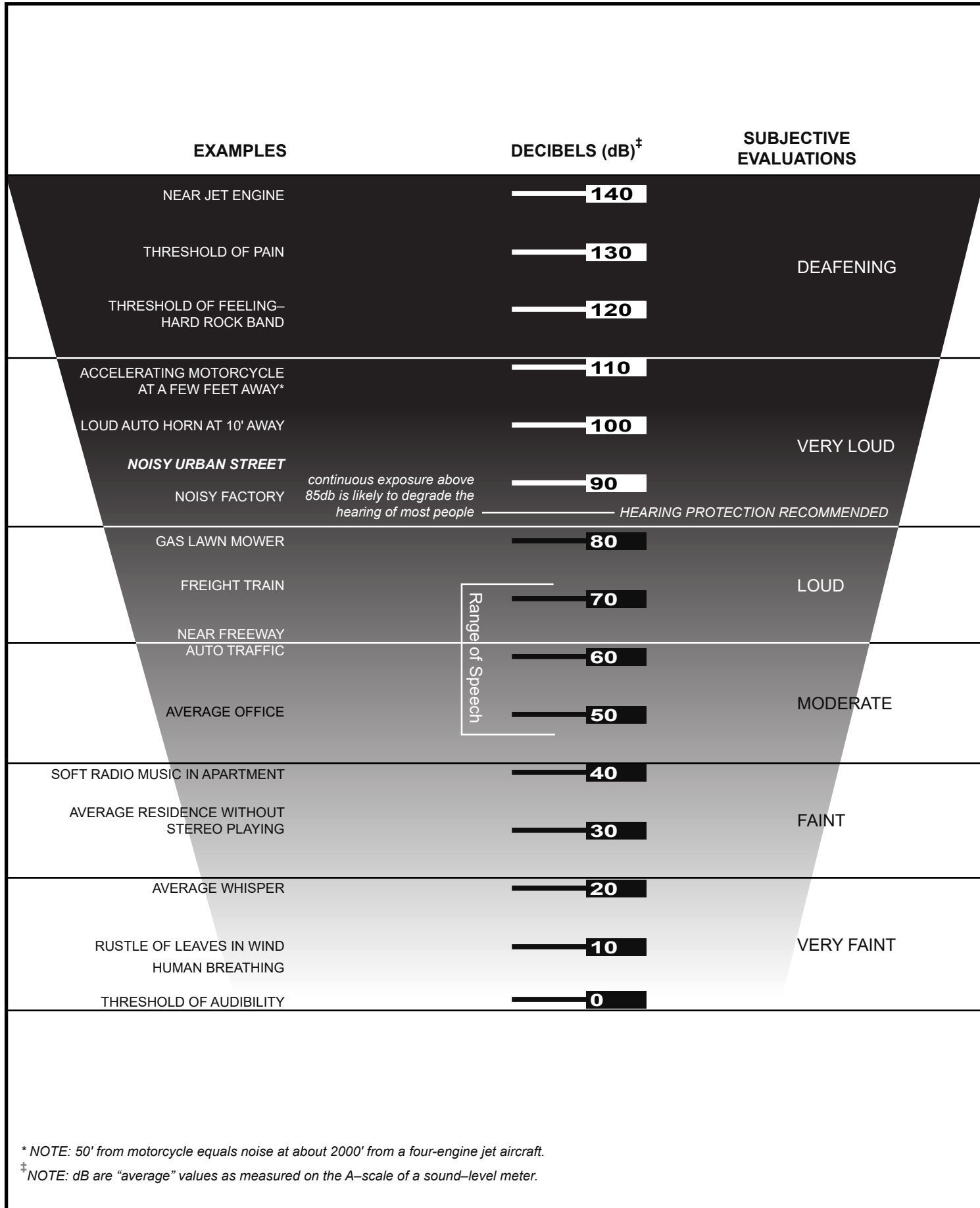
Fundamentals of Vibration

Vibration is commonly defined as an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV) or root-mean-square (RMS) velocity is typically used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal, while RMS is defined as the square root of the average of the squared amplitude of the signal. PPV is typically used for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response to ground-borne vibration. The RMS vibration velocity level can be presented in inches per second (ips) or in VdB (a decibel unit referenced to 1 microinch per second). Commonly, ground-borne vibration generated by man-made activities (i.e., road traffic, construction) attenuates rapidly with distance from the source of the vibration.

1 US Department of Transportation, Federal Highway Administration (USDOT FHWA), *Fundamentals and Abatement of Highway Traffic Noise* (Springfield, VA: Author, September 1980), 81.

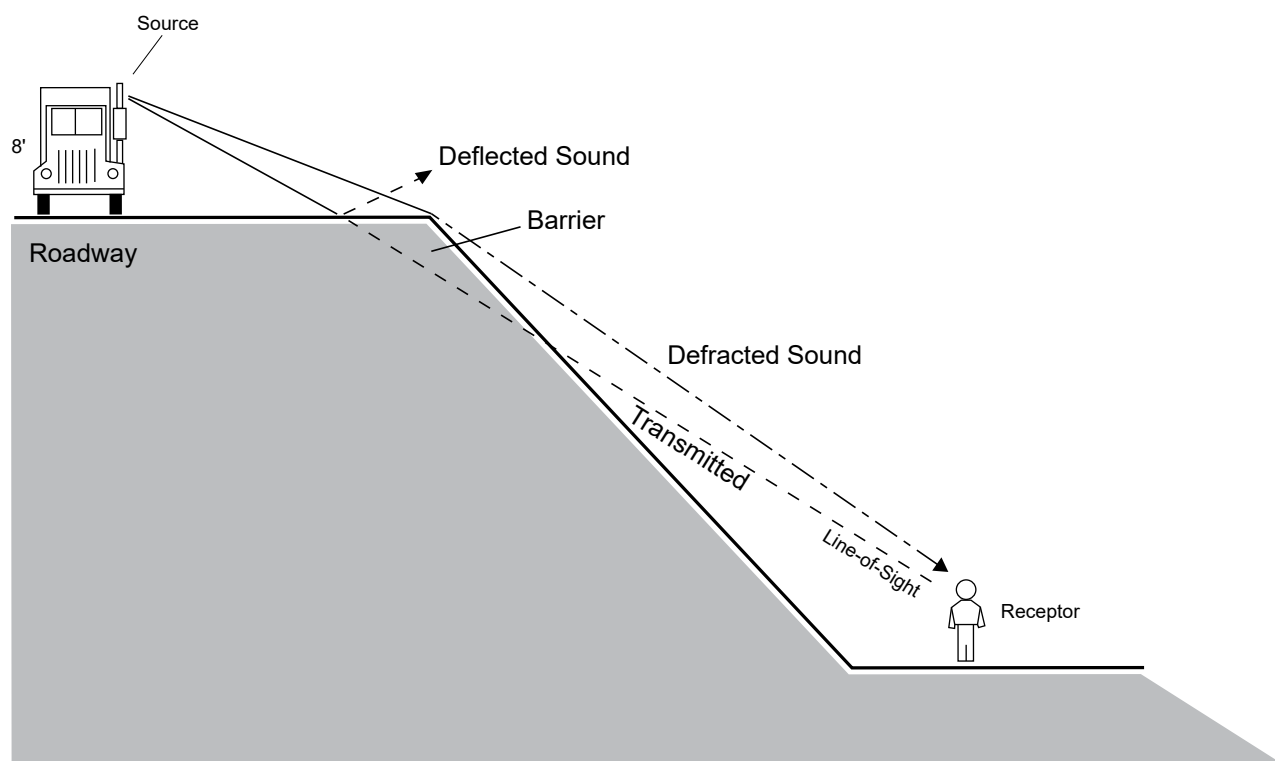
2 USDOT FHWA, *Fundamentals and Abatement*, 97.

3 USDOT FHWA, *Fundamentals and Abatement*, 97.

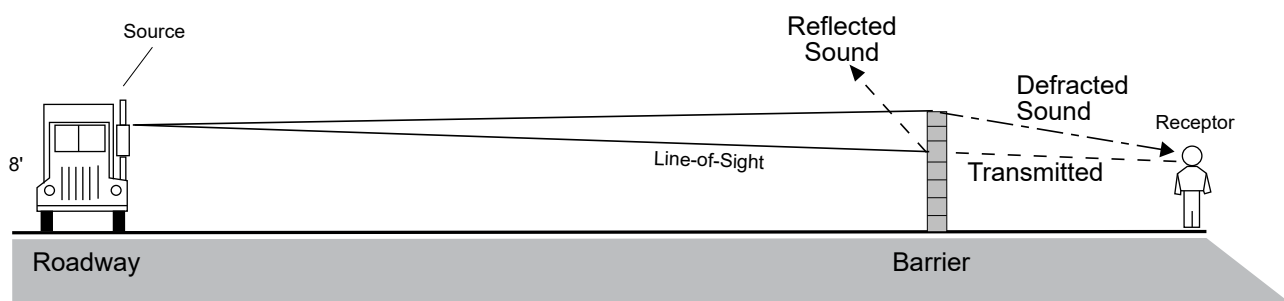


SOURCE: Meridian Consultants, LLC - 2021

FIGURE 3



"Barrier Effect" Resulting from Differences in Elevation.



"Barrier Effect" Resulting from Typical Soundwall.

SOURCE: Meridian Consultants, LLC - 2021

FIGURE 4

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

REGULATORY SETTING

General Plan Noise Element

The City of Riverside has adopted a General Plan Noise Element to control and abate environmental noise, and to protect the citizens of the City from excessive exposure to noise. The Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies several policies to minimize the impacts of excessive noise levels throughout the community (City of Riverside 2018).

Objective N-1	Minimize noise levels from point sources throughout the community and, whenever possible, mitigate the effects of noise to provide a safe and healthful environment.
Policy N-1.1	Continue to enforce noise abatement and control measures particularly within residential neighborhoods.
Policy N-1.2	Require the inclusion of noise-reducing design features in development consistent with standards in Noise/Land Use Compatibility Criteria (Figure N-10), Title 24 California Code of Regulations and Title 7 of the Municipal Code.
Policy N-1.3	Enforce the City of Riverside Noise Control Code to ensure that stationary noise and noise emanating from construction activities, private developments/residences and special events are minimized.
Policy N-1.4	Incorporate noise considerations into the site plan review process, particularly with regard to parking and loading areas, ingress/egress points and refuse collection areas.

Policy N-1.5	Avoid locating noise-sensitive land uses in existing and anticipated noise-impacted areas.
Policy N-1.8	Continue to consider noise concerns in evaluating all proposed development decisions and roadway projects.
Policy N-4.1	Ensure that noise impacts generated by vehicular sources are minimized through the use of noise reduction features (e.g., earthen berms, landscaped walls, lowered streets, improved technology).

The Noise Element establishes compatibility standards for land uses in the City, as outlined in **Table 2: City of Riverside Land Use Compatibility for Community Noise Exposure**. The Noise Element sets normally acceptable, conditionally acceptable, and generally unacceptable ambient noise levels for proposed developments based on land use.

Table 2
City of Riverside Land Use Compatibility for Community Noise Exposure

Land Use Category	Day-Night Average Exterior Sound Level (CNEL dB)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Conditionally Unacceptable
Single-Family Residential	<60	60-65	65-70	>70
Infill Residential	<65	65-75	75-80	>80
Commercial (Motels, Hotels, Lodging)	<60	60-70	70-80	>80
Schools, Libraries, Churches, Hospitals, Nursing Homes	<60	60-70	70-80	>80
Amphitheaters, Concert Hall, Auditorium, Meeting Hall	N/A	<65	N/A	>65
Sports Arenas, Outdoor Spectator Sports	N/A	<70	N/A	>70
Playgrounds, Neighborhood Parks	<70	N/A	70-75	>75
Golf Courses, Riding Stables, Water Rec, Cemeteries	<70	N/A	70-80	>80
Office Buildings, Business, Commercial, Professional	<65	65-75	<75	N/A
Industrial, Manufacturing, Utilities, Agriculture	<70	70-80	<80	N/A
Freeway Adjacent Commercial, Office, and Industrial Uses	<65	65-80	<80	N/A

Source: City of Riverside 2018, Figure N-10

Note:

Land Use Category	Day-Night Average Exterior Sound Level (CNEL dB)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Conditionally Unacceptable
A =	Normally acceptable. Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.			
C =	Conditionally acceptable. New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.			
N =	Normally unacceptable. New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.			
U =	Conditionally unacceptable: New construction or development should generally not be undertaken, unless it can be demonstrated that noise reduction requirements can be employed to reduce noise impacts to an acceptable level. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.			

Municipal Code

Riverside Municipal Code Section 7.35.010(B)(5) regulates the allowable hours of construction activity to 7:00 AM to 7:00 PM on weekdays and 8:00 AM to 5:00 PM on Saturdays, with no construction activities allowed on Sunday or Federal holidays. In addition, the Municipal Code limits noise levels from construction activities to the maximum permitted exterior noise level for the affected land use. In addition, the Municipal Code limits noise levels from construction activities to the maximum permitted exterior noise level for the affected land use. Section 7.25.010 of the Riverside Municipal Code (RMC) establishes exterior noise standards for various land use categories, as shown below in **Table 3: City of Riverside Exterior Noise Standards**. Noise from any land use cannot exceed the receiving land use exterior noise standards, as measured at the property line.

Table 3
City of Riverside Exterior Noise Standards

Zone	Time	Acceptable Noise Level (dBA)
Residential	Day (7:00 AM to 10:00 AM)	55
	Night (10:00 PM to 7:00 AM)	45
Office/Commercial	Anytime	65
Industrial	Anytime	70
Community Support	Anytime	60
Public Recreation Facility	Anytime	65
Non-Urban	Anytime	70

Source: RMC Section 7.25.010 – Exterior sound level limits, Table 7.25.010A

In addition, RMC Section 7.25.010(A) indicates that it is unlawful for any person to cause or allow the creation of any noise that exceeds the following levels:

1. Exterior noise standard, up to five (5) decibels, for a cumulative period of more than 30 minutes in any hour. Exterior noise standard, plus five (5) decibels for a cumulative period of more than 15 minutes in any hour
2. Exterior noise standard, plus 10 decibels for a cumulative period of more than five (5) minutes in any hour
3. Exterior noise standard, plus 15 decibels for a cumulative period of more than one (1) minute in any hour
4. Exterior noise standard, plus 20 decibels or the maximum measured ambient noise level, for any period

If the measured ambient noise level exceeds that permissible within any of the first four noise limit categories, the allowable noise exposure standard shall be increased in 5 decibel increments in each category as appropriate to encompass the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

Section 7.30.105 of the RMC establishes interior noise standards for various land use categories, as shown below in **Table 4: City of Riverside Interior Noise Standards**.

Table 4
City of Riverside Interior Noise Standards

Interior Noise Standard		
Land Use Category	Time Period	Noise Level (dBA)
Residential	Night (10:00 PM to 7:00 AM)	35
	Day (7:00 AM to 10:00 PM)	45
School	7:00 AM to 10:00 PM (while school is in session)	45
Hospital	Any time	45

Source: RMC Section 7.30.015 – Interior sound level limits, Table 7.30.015

In addition, RMC Section 7.30.015 states that it is unlawful for any person to cause or allow the creation of any noise that exceeds the following levels:

1. Interior noise standard, up to five (5) decibels, for a cumulative period of more than five (5) minutes in any hour;
2. Interior noise standard, plus five (5) decibels, for a cumulative period of more than one (1) minute in any hour;

3. Interior noise standard, plus ten (10) decibels or the maximum measured ambient noise level, for any period of time.

If the measured interior ambient noise level exceeds that permissible within the first two (2) noise limit categories, the allowable noise exposure standard shall be increased in five (5) decibel increments in each category as appropriate to reflect the interior ambient noise level. In the event the interior ambient noise level exceeds the third noise limit category, the maximum allowable interior noise level under said category shall be increased to reflect the maximum interior ambient noise level.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, a project would have a potentially significant impact related to noise and groundborne vibration if it would result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- Generation of excessive groundborne vibration or groundborne noise levels?
- For a project located within the vicinity of a private airstrip or an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise?

The Project site is located to the south of the Riverside Municipal Airport. However, the Riverside County ALUCP provides future noise contour maps resulting from the airport.⁴ As shown, the Project site would be within the 55 dBA CNEL noise contour resulting from operations of the airport. Noise levels generated from the airport would be within the office/commercial exterior noise standard of 65 dBA and would not result in impacts and no further analyses of these topics are necessary.

The City of Riverside does not have an established standard that ties a specific increase in ambient noise to a significance determination. Although the City relies on the noise compatibility matrix in the Noise Element (refer to **Table 2** above) to determine if a future development project will be subject to significant noise impacts, whether self-created or from the existing environment, this threshold related to ambient noise levels is not addressed by that approach.

The term “substantial” is not defined in most environmental compliance guidelines. Noise analysis methodology is accurate only to the nearest whole decibel and most people only notice a change in the

4 Riverside County ALUCP – *West County Airports Background Data (March 2005) Exhibit RI-6 Ultimate Noise Impacts*, accessed January 2021, <http://www.rcaluc.org/Portals/13/PDFGeneral/plan/newplan/41-%20Vol.%202%20Riverside%20Municipal.pdf>.

noise environment when the difference in noise levels are around 3 dBA CNEL. An increase or decrease in noise level of at least 5 dBA is required before any noticeable change in community response would be expected. Therefore, a clearly perceptible increase of 5 dB in noise exposure of sensitive receptors could be considered significant.

Construction Noise

Pursuant to RMC Section 7.35.020(G), noise sources associated with permitted construction, repair, remodeling, or grading of any real property are exempt from the interior and exterior noise standards set forth by the RMC. Construction activity cannot occur between 7:00 PM and 7:00 AM on weekdays, between 5:00 PM and 8:00 AM on Saturdays, or at any time on Sunday or a federal holiday.

Operation Noise

Operational noise impacts are evaluated for Project-related off-site roadway traffic noise impacts and on-site stationary source noise from on-site activities and equipment. Because of the logarithmic nature of the noise scale, it requires a dramatic increase in traffic to create even a perceptible change in noise levels. A 1 dBA increase requires a 25 percent increase in traffic volume. A 3 dBA increase occurs when traffic volumes double. In those areas where traffic volumes are already high enough to create a noise concern, few projects would individually cause traffic volumes to double. Off-site traffic noise impacts tend to be cumulative rather than an individual impact. As such, an increase in noise level of 3 dBA Leq to or within the “normally unacceptable” or “clearly unacceptable” land use compatibility categories is considered significant.

Ground-Borne Vibration

The City has not adopted a significance threshold to assess vibration impacts during construction. Thus, the Caltrans *Transportation and Construction Vibration Guidance Manual*⁵ is used as a screening tool to assess the potential for adverse vibration effects related to structural damage.

- **Potential Building Damage.** Project construction activities cause ground-borne vibration levels to exceed 0.2 ips PPV at the nearest off-site residential buildings.

5 Caltrans, *Transportation and Construction Vibration Guidance Manual* (September 2013), <https://cityofdavis.org/home/showdocument?id=4521>, Accessed January 2021,

METHODOLOGY

Ambient Noise Measurements

Noise-level monitoring was conducted by Meridian Consultants on January 5, 2021, at five locations within the Project area vicinity, as shown in **Figure 5: Noise Monitoring Locations**. Noise-level monitoring was conducted for 15-minute intervals at each location using a Larson Davis Model 831 sound-level meter. This meter satisfies the American National Standards Institute (ANSI) standard for general environmental noise measurement instrumentation. The ANSI specifies several types of sound-level meters according to their precision. Types 1, 2, and 3 are referred to as “precision,” “general-purpose,” and “survey” meters, respectively. Most measurements carefully taken with a Type 1 sound-level meter will have a margin of error not exceeding 1 dB.

The Larson Davis Model 831 is a Type 1 precision sound-level meter. This meter meets all requirements of ANSI S1.4-1983 and ANSI1.43-1997 Type 1 standards, as well as International Electrotechnical Commission (IEC) IEC61672-1 Ed. 1.0, IEC60651 Ed 1.2, and IEC60804 Type 1, Group X standards.

The sound-level meter was located approximately 5 feet above ground and was covered with a Larson Davis windscreen. The sound-level meter was field calibrated with an external calibrator prior to operation.

Construction Scenario

Project construction would begin in September 2021 and is expected to last until August 2022. Construction would occur over five phases: (1) demolition; (2) grading; (3) building construction; (4) architectural coating; and (5) paving.

Each phase of construction would result in varying levels of intensity and a number of construction personnel. The construction workforce would consist of approximately 10 worker trips per day and 388 total hauling trips during demolition; 10 worker trips per day and 94 total hauling trips during grading; 6 worker trips per day and 3 vendor trips per day during building construction; 1 worker trip per day during architectural coating; and 18 worker trips per day during paving.

Ground-Borne Vibration

Ground-borne vibration impacts were evaluated by identifying potential vibration sources, estimating the distance between vibration sources and surrounding structure locations and surrounding structure locations and vibration sensitive receptors, and making a significance determination based on the significance thresholds.

Noise Modeling

SoundPLAN (version 8.2) was utilized to model the future construction and operational noise levels to the proposed Project site. The software uses various inputs to analyze the topography, vegetation, vehicle traffic, existing and proposed noise sources, and existing and proposed barriers to depict noise contours at varying distances. The software utilizes algorithms (based on the inverse square law) 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.

Car Wash Noise Modeling

The proposed Project includes operation of an in-bay automated car wash and 10 vacuum stalls. Operations of the car wash and the vacuum stalls would constitute the loudest noise level generation associated with the Project.

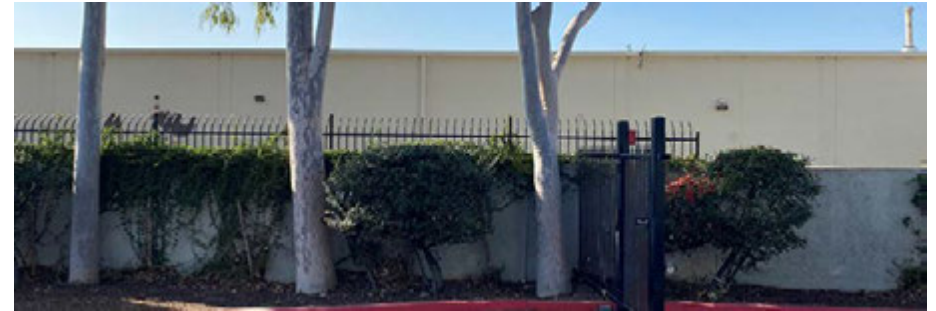
To quantify events related to cars entering and exiting the car wash line at Pad 5 and the drive-through line at Pad 6, a line source was modeled with a LwA of 47.0 dB/m, m², as referenced in the SoundPLAN noise library for cars travelling on asphalt less than 20 miles per hour (mph).

To quantify events related to the vacuum stalls, point sources was modeled with a LwA of 82.8 dB, as referenced in the SoundPLAN noise library for vacuum cleaners (coin vacuum cleaner).

Automated car wash equipment and facilities have several potential noise generating sources associated with their general operation; including pumps, compressors, high-pressure applicators and spray nozzles, scrubbers, and dryers. The car wash mechanical equipment (pumps, compressors, etc.) can generate a substantial amount of noise, however, the majority of the mechanical equipment is proposed to be enclosed within a mechanical equipment room, inside the 110-foot car wash tunnel.



North



West



South



East



SOURCE: Google Earth - 2021

FIGURE 5a



North



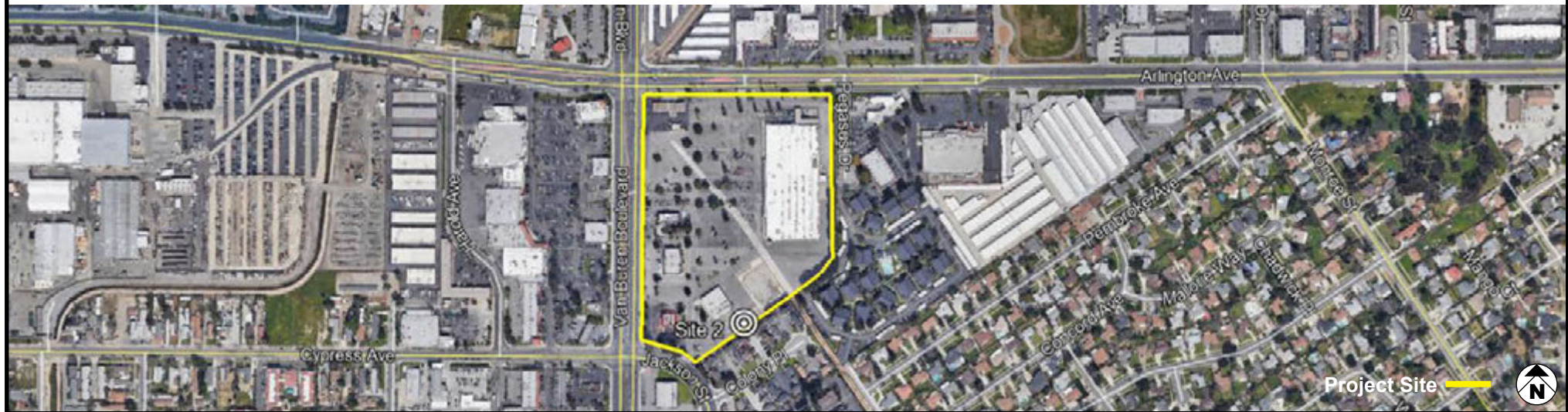
West



South



East



SOURCE: Google Earth - 2021

FIGURE 5b



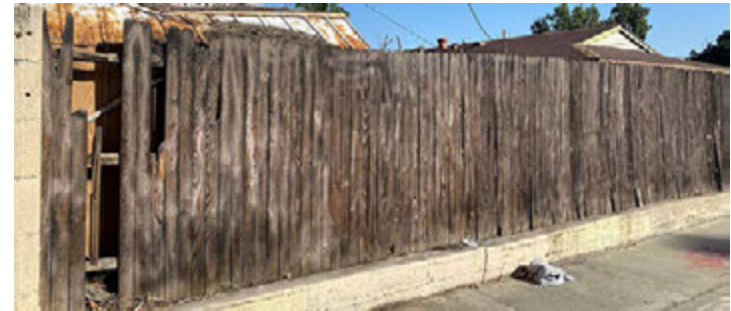
North



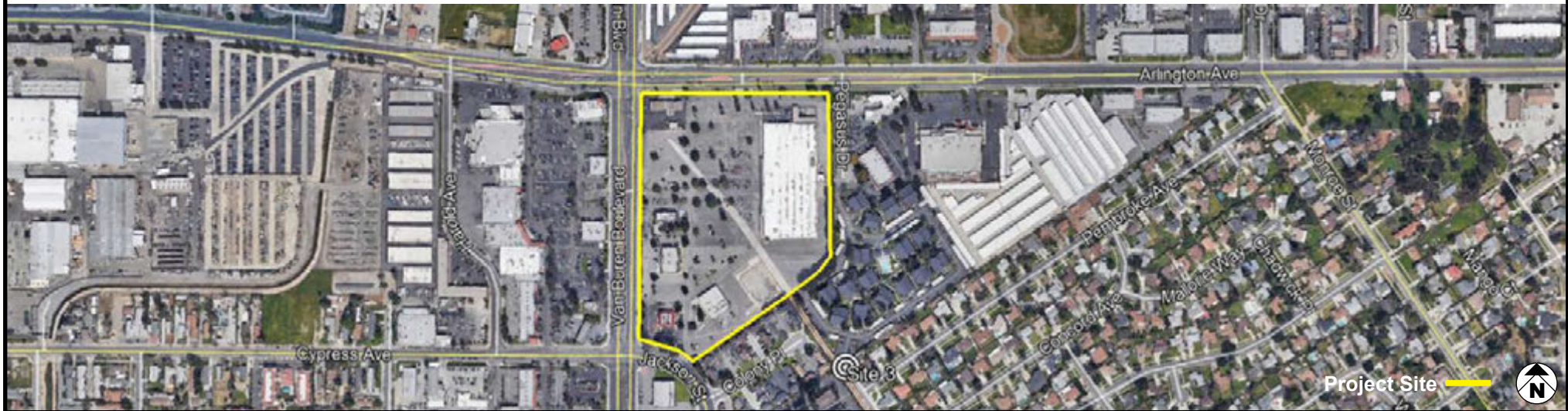
West



South



East



SOURCE: Google Earth - 2021

FIGURE 5c



North



West



South



East



SOURCE: Google Earth - 2021

FIGURE 5d



North



West



South



East



SOURCE: Google Earth - 2021

FIGURE 5e

EXISTING CONDITIONS

Ambient Noise Levels

Short-term sound monitoring was conducted at five (5) locations to measure the ambient sound environment in the Project vicinity. Measurements were taken over 15-minute intervals at each location between the hours of 1:19 PM and 2:46 PM on January 5, 2021, as indicated in **Table 5: Ambient Noise Measurements**. **Figure 5** depicts locations where ambient noise measurements were conducted. As shown in **Table 5**, ambient noise levels ranged from a low of 49.2 dBA south of the Project site along Monticello Avenue (Site 3) to a high of 69.3 dBA north of Project site along Van Buren Boulevard (Site 4).

Table 5
Ambient Noise Measurements

Location Number/Description	Nearest Use	Time Period	Noise Source	dBA Leq
1 East of Project site along Pegasus Drive	Residential	1:19 PM–1:34 PM	Vehicle traffic along Arlington Avenue	58.3
2 South area of Project site	Project site/ Residential	1:43 PM–1:58 PM	Vehicle traffic along Van Buren Boulevard	65.1
3 South of Project site along Monticello Avenue	Residential	2:04 PM–2:19 PM	Light vehicle traffic along surface streets	49.2
4 North of Project site along Van Buren Boulevard	Residential	2:55 PM–3:10 PM	Vehicle traffic along Van Buren Boulevard	69.3
5 Southwest of Project site near Montgomery Street	Residential	2:31 PM–2:46 PM	Vehicle traffic along Van Buren Boulevard	56.3

Source: Refer to **Attachment A** for noise monitoring data sheets.

Notes: dBA = A-weighted decibels; Leq = average equivalent sound level.

Existing Off-Site Roadway Noise Levels

The existing traffic noise on local roadways in the surrounding areas was calculated to quantify the morning (AM) and evening (PM) peak hour noise levels using information provided in the project's Traffic Impact Study.⁶ The traffic study analyzed six (6) intersections. These intersections and connecting roadway segments were selected for the generation of existing off-site traffic noise.

Table 6: Existing Roadway Noise Levels provides the calculated AM and PM peak hour noise for the analyzed local roadway segments based on existing traffic volumes. As shown, AM peak hour noise levels ranged from a low of 46.0 dBA along Project Driveway No. 2 east of Van Buren Boulevard (Intersection 4)

⁶ Linscott Law & Greenspan, *Traffic Circulation Analysis Report* for the K-Mart Redevelopment Project, December 2020.

to a high of 72.7 dBA along Van Buren Boulevard north of Arlington Avenue (Intersection 1). Additionally, PM peak hour noise levels ranged from a low of 41.0 dBA along Project Driveway No. 1 south of Arlington Avenue (Intersection 3) to a high of 72.2 dBA along Van Buren Boulevard north of Arlington Avenue (Intersection 1).

Table 6
Existing Roadway Noise Levels

Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Average Daily Trips (ADT)	Existing Roadway Noise Level (CNEL)
Van Buren Boulevard					
1	North of Arlington Avenue	Commercial	AM	28,448	72.7
			PM	31,984	72.2
	South of Arlington Avenue	Commercial	AM	19,840	68.0
			PM	24,144	68.8
4	North of Project Driveway No. 2	Commercial	AM	19,968	68.0
			PM	24,168	68.8
	South of Project Driveway No. 2	Commercial	AM	19,904	68.0
			PM	23,832	68.8
5	North of Project Driveway No. 3	Commercial	AM	19,792	68.0
			PM	23,824	68.8
	South of Project Driveway No. 3	Commercial	AM	19,640	67.9
			PM	23,720	68.7
Arlington Avenue					
1	East of Van Buren Boulevard	Commercial	AM	16,192	66.5
			PM	18,184	67.0
	West of Van Buren Boulevard	Commercial	AM	16,096	66.4
			PM	18,856	67.1
2	East of Pegasus Drive	Residential	AM	15,952	68.0
			PM	17,720	68.5
	West of Pegasus Drive	Commercial	AM	16,136	68.1
			PM	18,032	68.6
3	East of Project Driveway No. 1	Commercial	AM	16,008	66.4
			PM	18,152	67.0
	West of Project Driveway No. 1	Commercial	AM	16,160	66.5
			PM	18,368	67.0
Pegasus Drive					
2	North of Arlington Avenue	Commercial	AM	592	51.4
			PM	1,104	54.2
	South of Arlington Avenue	Residential	AM	552	51.1
			PM	776	52.6

Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Average Daily Trips (ADT)	Existing Roadway Noise Level (CNEL)
Project Driveway No. 1					
3	North of Arlington Avenue	Commercial	AM	392	48.8
			PM	456	49.5
	South of Arlington Avenue	Commercial	AM	160	44.9
			PM	64	41.0
Project Driveway No. 2					
4	East of Van Buren Boulevard	Commercial	AM	168	46.0
			PM	504	50.8
	West of Van Buren Boulevard	Commercial	AM	1,496	55.5
			PM	2,312	57.4
Project Driveway No. 3					
5	East of Van Buren Boulevard	Commercial	AM	360	49.3
			PM	248	47.7
	West of Van Buren Boulevard	Commercial	AM	N/A	N/A
			PM	N/A	N/A
Project Driveway No. 4					
6	North of Jackson Street	Commercial	AM	536	50.2
			PM	1,144	53.5
	South of Jackson Street	Commercial	AM	N/A	N/A
			PM	N/A	N/A
Jackson Street					
6	East of Project Driveway No. 4	Residential	AM	4,960	60.7
			PM	6,472	61.9
	West of Project Driveway No. 4	Commercial	AM	5,048	60.8
			PM	6,496	61.9

Source: Refer to **Attachment D** for roadway noise calculation worksheets.

Note: N/A = No Data as roadway segment does not exist.

Vibration Conditions

Based on field observations, the primary source of existing ground-borne vibration in the vicinity of the Project site is vehicle traffic on local roadways. According to the Federal Transit Administration,⁷ typical road traffic-induced vibration levels are unlikely to be perceptible by people. Trucks and buses typically generate ground-borne vibration velocity levels of approximately 63 VdB (at a 50-foot distance), and these

⁷ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, FTA report no. 0123 (September 2018), https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, Accessed January 2021.

levels could reach 72 VdB when trucks and buses pass over bumps in the road. A vibration level of 72 VdB is above the 60 VdB level of perceptibility.

NOISE ANALYSIS

Construction

On-Site Construction Noise

Construction activities that would occur during the construction phases (demolition, grading, building construction, architectural coating, and paving) would generate both steady-state and episodic noise that would be heard both on and off the Project site. Each phase involves the use of different types of construction equipment and, therefore, has its own distinct noise characteristics. The Project would be constructed using typical construction techniques; no blasting, impact pile driving, or jackhammers would be required.

Typical maximum noise levels and duty cycles of representative types of equipment that would potentially be used during construction for this Project are presented in **Table 7: Typical Maximum Noise Levels for Project Construction Equipment**. Construction-equipment noise would not be constant because of the variations of power, cycles, and equipment locations. For maximum noise events, this analysis considers equipment operating at the edge of the property line of the Project site.

Table 7
Typical Maximum Noise Levels for Project Construction Equipment

Equipment Description	Typical Duty Cycle (%)	Spec Lmax (dBA)	Actual Lmax (dBA)
Air Compressor	40	80.0	77.7
Backhoe	40	80.0	77.6
Crane	16	85.0	80.6
Concrete Saw	20	90.0	89.6
Dozer	40	85.0	81.7
Drum Mixer	50	80.0	80.0
Forklift	40	85.0	N/A
Paver	50	85.0	77.2
Roller	20	85.0	80.0

Source: FHWA Roadway Construction Noise Model (RCNM) version 1.1
Note: N/A = not available.

The potential noise impact generated during construction depends on the phase of construction and the percentage of time the equipment operates over the workday. However, construction noise estimates

used for the analysis are representative of worst-case conditions because it is unlikely that all the equipment contained on site would operate simultaneously.

As previously noted, the Project would be constructed using typical construction techniques; no blasting, impact pile driving, or jackhammers would be required. As would be the case for construction of most land use development projects, construction of the proposed Project would require the use of heavy-duty equipment with the potential to generate audible noise above the ambient background noise level. The noise levels at the adjacent nearby sensitive receptors from construction activity are shown in **Table 8: Construction Maximum Noise Estimates**. As shown, construction noise levels would result in a maximum increase of 7.4 dBA above the significance threshold to uses adjacent to the Project site without implementation of regulatory compliance measures.

Adherence to Objective N-1, Policy N-1.3, the Project would ensure stationary noise emanating from construction activities are minimized. This includes implementation of common construction best management practices such as the use of optimal muffler systems for all equipment would reduce construction noise levels by approximately 10 dB or more.⁸ Additionally, limiting the number of noise-generating heavy-duty off-road construction equipment (e.g., backhoes, dozers, excavators, loaders, rollers, etc.) simultaneously used on the Project site within 25 feet of off-site noise sensitive receptors surrounding the site to no more than one or two pieces of heavy-duty off-road equipment would further reduce construction noise levels by approximately 14 dBA. Additionally, limiting the number of noise-generating heavy-duty construction equipment to two (2) pieces operating simultaneously would reduce construction noise levels by approximately 5 dB. With implementation of these common practices, construction noise levels would be reduced by a minimum of 29 dB.

The Project would comply with the RCM as it relates to construction equipment by limiting activities from occurring between 7:00 PM and 7:00 AM on weekdays, between 5:00 PM and 8:00 AM on Saturdays, or at any time on Sunday or a federal holiday. For purposes of this analysis, a project-attributed increase of existing outdoor ambient sound level by 5 dBA or more would be considered a significant impact. Compliance with the above measures would ensure maximum construction noise levels resulting in an increase of 7.4 dB above the significance threshold would be reduced by a minimum of 29 dB to below threshold levels; thus construction noise levels would not be considered significant.

8 FHWA, *Special Report—Measurement, Prediction, and Mitigation*, updated June 2017, https://www.fhwa.dot.gov/Environment/noise/construction_noise/special_report/hcn04.cfm, Accessed January 2021.

Table 8
Construction Maximum Noise Estimates

Noise Monitoring Site	Nearest Off-Site Building Structures	Distance from Project Site (feet)	Max Leq	Ambient Noise Leq (dBA)	Significance Threshold (dBA)	Maximum Noise Increase over Significance Threshold without Regulatory Compliance Measures (dBA)
Site 1	Residential uses along Pegasus Drive	460	65.7	58.3	63.3	+2.4
Site 2	Residential uses along Colony Place	300	69.4	58.3	63.3	+6.1
Site 3	Residential uses along Monticello Avenue	740	61.6	49.2	54.2	+7.4
Site 4	Residential uses along Van Buren Boulevard	1,180	57.5	69.3	74.3	0.0
Site 5	Residential uses along Montgomery Street	930	59.6	56.3	61.3	0.0

Source: FHWA, RCNM, version. 1.1.
Refer to **Attachment B** for Construction Noise Worksheets

Off-Site Construction Noise

Construction of the Project would require worker, haul, and vendor truck trips to and from the site to work on the site, export soil, and delivery supplies to the site. Trucks traveling to and from the Project site would be required to travel along a haul route approved by the City. Approximately 388 total hauling trips would take place during the demolition phase, totaling to approximately 9 haul truck trips per work day. Haul truck traffic would take the most direct route to the freeway ramp, which includes the freeway ramp.

Noise associated with construction truck trips were estimated using the Caltrans FHWA Traffic Noise Model based on the maximum number of worker and truck trips in a day. Project haul truck trips which includes medium- and heavy-duty trucks would generate noise levels of approximately 49.5 to 53.3 dBA, respectively, measured at a distance of 25 feet from the adjacent sensitive receptor. As shown in **Table 5**, existing noise levels at the Project site ranged from 49.2 dBA to 69.3 dBA. The noise level increases from truck trips would be below the significance threshold of 5 dBA.

Construction Vibration

Table 9: Construction Vibration Levels Estimates—Building Damage presents construction vibration impacts associated with on-site construction in terms of building damage. It is important to note pile driving would not be required during construction.

Table 9
On-Site Construction Vibration Impacts—Building Damage

Nearest Off-Site Building Structures		Estimated Vibration Velocity Levels at the Nearest Off-Site Structures from the Project Construction Equipment						Significance Threshold (PPV ips)
		Vibratory Roller	Large Bulldozer	Caisson Drilling	Loaded Trucks	Jackhammer	Small bulldozer	
Site								
FTA Reference Vibration Levels at 25 feet								
		0.210	0.089	0.089	0.076	0.035	0.003	
1	Residential uses along Pegasus Drive (460 feet)	0.003	0.001	0.001	0.001	0.000	0.000	0.2
2	Residential uses along Colony Place (300 feet)	0.005	0.001	0.002	0.002	0.001	0.000	0.2
3	Residential uses along Monticello Avenue (740 feet)	0.001	0.001	0.001	0.000	0.000	0.000	0.2
4	Residential uses along Van Buren Boulevard (1,180 feet)	0.001	0.000	0.000	0.000	0.000	0.000	0.2
5	Residential uses along Montgomery Street (930 feet)	0.001	0.000	0.000	0.000	0.000	0.000	0.2

Source: US Department of Transportation, Federal Transportation Authority, Transit Noise and Vibration Impact Assessment

Note: Refer to **Attachment C** for construction vibration worksheets.

As shown in **Table 9**, the forecasted vibration levels due to on-site construction activities would not exceed the building damage significance threshold at the nearby sensitive receptors for vibratory rollers, large bulldozers, caisson drilling, loaded trucks, jackhammers, and small bulldozers. As such, construction vibration impacts would not be considered significant.

Operation

Roadway Noise

Table 10: Existing Plus Project Roadway Noise Levels illustrates the change in AM and PM peak hour noise levels from existing traffic volumes and from traffic generated by the Project. The difference in traffic noise between existing conditions and existing plus Project conditions represents the increase in noise attributable to Project-related traffic. As shown in **Table 10**, the maximum noise level increases would be 9.6 dBA and 16.6 dBA along Project Driveway No. 1 south of Arlington Avenue (Intersection 3) during both the AM and PM peak hour, respectively. Additionally, increases over 3 dBA would not cause exterior noise levels to be within the “normally unacceptable” or “clearly unacceptable” range for residential and commercial uses. Exterior noise levels would be within the normally acceptable levels for commercial uses of less than 60 dBA (refer to **Table 2**) and below the acceptable exterior noise standards for office/commercial uses of 65 dBA. Thus, vehicular related noise impacts under the Existing Plus Project scenario would be less than significant.

Table 10
Existing Plus Project Roadway Noise Levels

Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Average Daily Trips (ADTs)		Roadway Noise Levels (dBA)		Difference (dBA)	Threshold Exceeded?
				Existing	Existing plus Project	Existing	Existing plus Project		
Van Buren Boulevard									
1	North of Arlington Avenue	Commercial	AM	28,448	28,856	72.7	72.7	0.0	No
			PM	31,984	32,784	72.2	72.3	+0.1	No
	South of Arlington Avenue	Commercial	AM	19,840	20,552	68.0	68.1	+0.1	No
			PM	24,144	25,600	68.8	69.1	+0.3	No
4	North of Project Driveway No. 2	Commercial	AM	19,968	20,808	68.0	68.2	+0.2	No
			PM	24,168	25,872	68.8	69.1	+0.3	No
	South of Project Driveway No. 2	Commercial	AM	19,904	20,400	68.0	68.1	+0.1	No
			PM	23,832	24,600	68.8	68.9	+0.1	No
5	North of Project Driveway No. 3	Commercial	AM	19,792	20,280	68.0	68.1	+0.1	No
			PM	23,824	24,600	68.8	68.9	+0.1	No
	South of Project Driveway No. 3	Commercial	AM	19,640	20,232	67.9	68.1	+0.2	No
			PM	23,720	24,640	68.7	68.9	+0.2	No
Arlington Avenue									
1	East of Van Buren Boulevard	Commercial	AM	16,192	16,656	66.5	66.6	+0.1	No
			PM	18,184	19,120	67.0	67.2	+0.2	No
	West of Van Buren Boulevard	Commercial	AM	16,096	16,752	66.4	66.6	+0.2	No
			PM	18,856	20,176	67.1	67.4	+0.3	No
2	East of Pegasus Drive	Residential	AM	15,952	16,640	68.0	68.2	+0.2	No
			PM	17,720	19,056	68.5	68.8	+0.3	No
	West of Pegasus Drive	Commercial	AM	16,136	16,688	68.1	68.2	+0.1	No
			PM	18,032	19,096	68.6	68.8	+0.2	No

Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Average Daily Trips (ADTs)		Roadway Noise Levels (dBA)		Difference (dBA)	Threshold Exceeded?
				Existing	Existing plus Project	Existing	Existing plus Project		
3	East of Project Driveway No. 1	Commercial	AM	16,008	16,544	66.4	66.6	+0.2	No
			PM	18,152	19,200	67.0	67.2	+0.2	No
	West of Project Driveway No. 1	Commercial	AM	16,160	16,616	66.5	66.6	+0.1	No
			PM	18,368	19,272	67.0	67.2	+0.2	No
Pegasus Drive									
2	North of Arlington Avenue	Commercial	AM	592	592	51.4	51.4	0.0	No
			PM	1,104	1,104	54.2	54.2	0.0	No
	South of Arlington Avenue	Residential	AM	552	688	51.1	52.1	+1.0	No
			PM	776	1,048	52.6	53.9	+1.3	No
Project Driveway No. 1									
3	North of Arlington Avenue	Commercial	AM	392	392	48.8	48.8	+0.1	No
			PM	456	456	49.5	49.5	+0.1	No
	South of Arlington Avenue	Commercial	AM	160	1,440	44.9	54.5	+9.6	No
			PM	64	2,976	41.0	57.6	+16.6	No
Project Driveway No. 2									
4	East of Van Buren Boulevard	Commercial	AM	168	1,392	46.0	55.2	+9.2	No
			PM	504	3,120	50.8	58.7	+7.9	No
	West of Van Buren Boulevard	Commercial	AM	1,496	1,496	55.5	55.5	0.0	No
			PM	2,312	2,312	57.4	57.4	0.0	No
Project Driveway No. 3									
5	East of Van Buren Boulevard	Commercial	AM	360	640	49.3	51.8	+2.5	No
			PM	248	888	47.7	53.3	+5.6	No
	West of Van Buren Boulevard	Commercial	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A

Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Average Daily Trips (ADTs)		Roadway Noise Levels (dBA)		Difference (dBA)	Threshold Exceeded?
				Existing	Existing plus Project	Existing	Existing plus Project		
Project Driveway No. 4									
6	North of Jackson Street	Commercial	AM	536	1,008	50.2	52.9	+2.7	No
			PM	1,144	2,328	53.5	56.6	+3.1	No
	South of Jackson Street	Commercial	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A
Jackson Street									
6	East of Project Driveway No. 4	Residential	AM	4,960	5,096	60.7	60.8	+0.1	No
			PM	6,472	6,744	61.9	62.1	0.0	No
	West of Project Driveway No. 4	Commercial	AM	5,048	5,384	60.8	61.1	+0.1	No
			PM	6,496	7,408	61.9	62.5	+0.2	No

Source: Refer to **Attachment D** for roadway noise calculation worksheets.

Note: N/A = No Data as roadway segment does not exist.

Car Wash Noise

This assessment analyzes the potential operational impacts from the car wash and drive throughs of the proposed Project site to the surrounding environment. As shown in **Table 11: Modeled Operational Exterior Noise Levels**, noise levels ranged from a low of no changes at the residential neighborhood to the north along Van Buren Boulevard (Site 4) to a high of 30.6 dBA at the residential uses adjacent to the south of the Project site. No increases from ambient conditions would result from these uses. Additionally, noise levels would not result in noticeable changes of above 3 dBA at noise sensitive uses and impacts would not be significant.

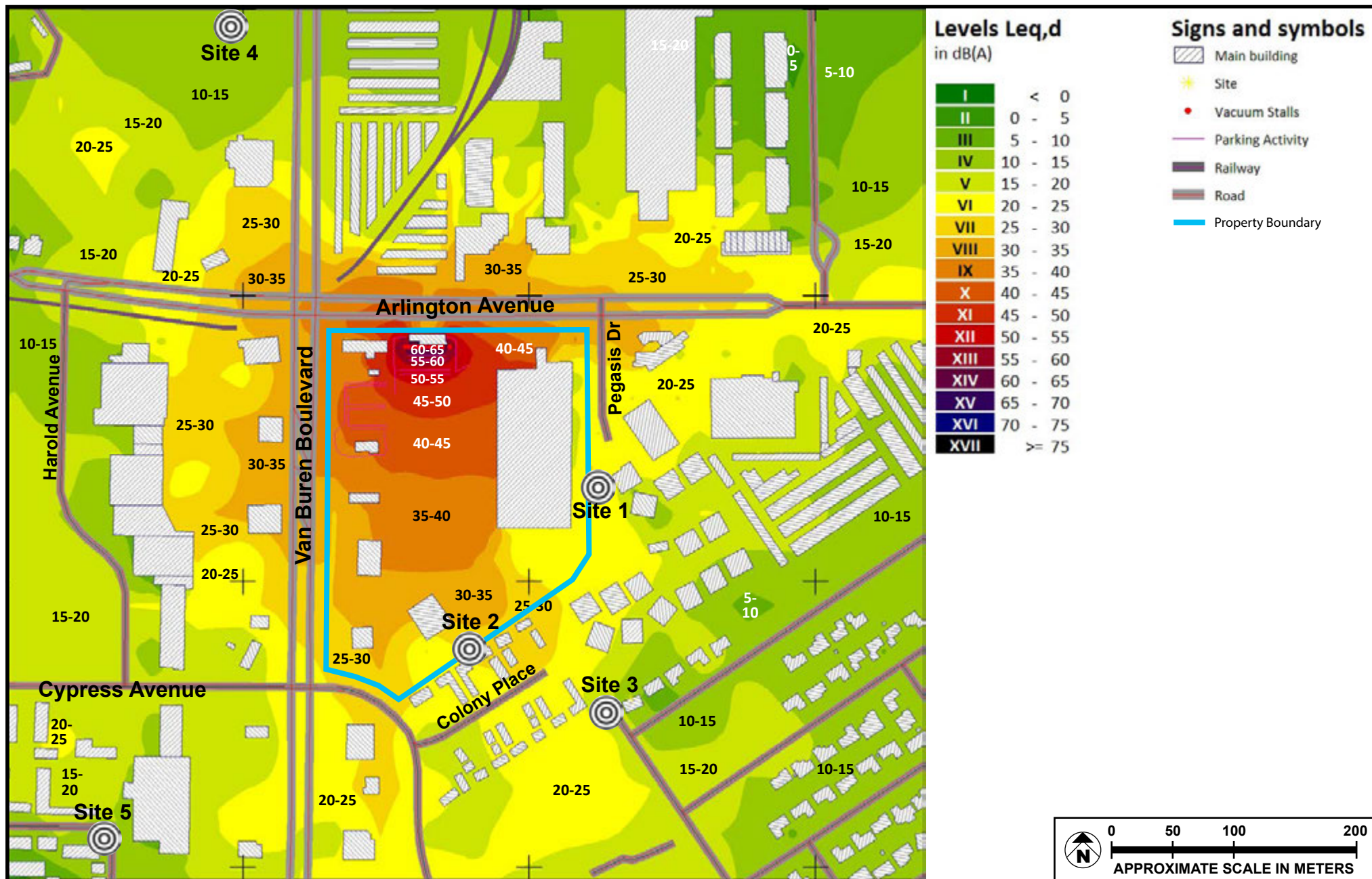
The daytime results during daily operations of the predictive modeling process are shown graphically in **Figure 6: Operational Noise Level Contour Map**.

Table 11
Modeled Operational Exterior Noise Levels

Site	Ambient Noise, dBA Leq	Modeled Noise Level, dBA Leq	Logarithmic Increase above Ambient	Significant Impact?
Site 1	58.3	27.6	0.0	No
Site 2	65.1	30.6	0.0	No
Site 3	49.2	15.5	0.0	No
Site 4	69.3	--	0.0	No
Site 5	56.3	15.5	0.0	No

Source: SoundPLAN

Refer to **Attachment E** for SoundPLAN output sheets.



SOURCE: Google Earth - 2021

FIGURE 6

CUMULATIVE NOISE

Construction

For purposes of this analysis, development of the related projects will be considered to contribute to cumulative noise impacts. Noise, by definition, is a localized phenomenon and drastically reduces as distance from the source increases. As a result, only related projects and growth in the general area of the Project site (within 500 feet) would contribute to cumulative noise impacts. Cumulative construction-noise impacts have the potential to occur when multiple construction projects in the local area generate noise within the same time frame and contribute to the local ambient noise environment. It is expected that, as with the Project, the related projects would implement noise reduction techniques such as mufflers, shields, sound barriers, which would minimize any noise-related nuisances during construction. In addition, distance attenuation and intervening structures would further reduce construction noise levels and not result in noticeable increases. Therefore, the combined construction-noise impacts of related projects within 500 feet and the Project's contribution would not cause a significant cumulative impact.

Operation

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

Table 12: Future (2023) Roadway Noise Levels illustrates the change in noise levels from cumulative conditions without the Project-related vehicular traffic to cumulative conditions with the Project. The cumulative scenario represents the Project's incremental contribution to cumulative traffic within the City. As shown in **Table 12**, the maximum noise level increase along analyzed roadways would be 5.8 dBA along Project Driveway No. 2 east of Van Buren Boulevard (Intersection 4) during the AM peak hour and 4.8 dBA along Project Drive No. 1 south of Arlington Avenue during the PM peak hour (Intersection 3). Additionally, increases over 3 dBA would not cause exterior noise levels to be within the "normally unacceptable" or "clearly unacceptable" range for residential and commercial uses. Exterior noise levels would be within the normally acceptable levels for commercial uses of less than 60 dBA (refer to **Table 2**) and below the acceptable exterior noise standards for office/commercial uses of 65 dBA. Thus, vehicular related noise impacts under the Existing Plus Project scenario would be less than significant.

Table 12
Future (2023) Roadway Noise Levels

Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Average Daily Trips (ADTs)		Roadway Noise Levels (dBA)		Difference (dBA)	Threshold Exceeded?
				Future (2023)	Future (2023) plus Project	Future (2023)	Future (2023) plus Project		
Van Buren Boulevard									
1	North of Arlington Avenue	Commercial	AM	34,216	34,624	74.7	74.8	+0.1	No
			PM	37,544	38,344	75.1	75.2	+0.1	No
	South of Arlington Avenue	Commercial	AM	23,792	24,504	70.2	70.3	+0.1	No
			PM	24,288	29,552	70.3	71.1	+0.8	No
4	North of Project Driveway No. 2	Commercial	AM	23,992	24,840	69.4	69.6	+0.2	No
			PM	28,200	29,904	70.1	70.4	+0.3	No
	South of Project Driveway No. 2	Commercial	AM	23,496	24,536	69.7	69.8	+0.1	No
			PM	23,432	28,672	69.6	70.5	+0.9	No
5	North of Project Driveway No. 3	Commercial	AM	23,792	24,416	70.2	70.3	+0.1	No
			PM	27,448	28,656	70.8	71.0	+0.2	No
	South of Project Driveway No. 3	Commercial	AM	23,632	24,352	70.2	70.3	+0.1	No
			PM	22,912	28,696	70.0	71.0	+0.1	No
Arlington Avenue									
1	East of Van Buren Boulevard	Commercial	AM	19,208	19,672	68.2	68.3	+0.1	No
			PM	21,096	22,032	68.6	68.8	+0.2	No
	West of Van Buren Boulevard	Commercial	AM	18,992	19,648	67.9	68.0	+0.1	No
			PM	21,808	23,128	68.5	68.7	+0.2	No
2	East of Pegasus Drive	Residential	AM	18,328	19,016	69.5	69.7	+0.2	No
			PM	20,016	21,352	69.9	70.2	+0.3	No
	West of Pegasus Drive	Commercial	AM	18,504	19,056	69.6	69.7	+0.1	No
			PM	20,352	21,416	70.0	70.2	+0.2	No

Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Average Daily Trips (ADTs)		Roadway Noise Levels (dBA)		Difference (dBA)	Threshold Exceeded?
				Future (2023)	Future (2023) plus Project	Future (2023)	Future (2023) plus Project		
3	East of Project Driveway No. 1	Commercial	AM	18,360	18,912	67.1	67.3	+0.2	No
			PM	20,456	21,520	67.6	67.8	+0.2	No
	West of Project Driveway No. 1	Commercial	AM	18,512	18,984	67.4	67.5	+0.1	No
			PM	20,680	21,600	67.8	68.0	+0.2	No
Pegasus Drive									
2	North of Arlington Avenue	Commercial	AM	616	616	51.6	51.6	0.0	No
			PM	1,176	1,176	54.4	54.4	0.0	No
	South of Arlington Avenue	Residential	AM	600	736	51.5	52.4	+0.9	No
			PM	824	1,096	52.9	54.1	+1.2	No
Project Driveway No. 1									
3	North of Arlington Avenue	Commercial	AM	416	416	49.1	49.1	0.0	No
			PM	488	488	49.8	49.8	0.0	No
	South of Arlington Avenue	Commercial	AM	408	1,432	49.0	54.4	+5.4	No
			PM	984	2,968	52.8	57.6	+4.8	No
Project Driveway No. 2									
4	East of Van Buren Boulevard	Commercial	AM	360	1,368	48.5	54.3	+5.8	No
			PM	1,320	3,160	54.1	57.9	+3.8	No
	West of Van Buren Boulevard	Commercial	AM	1,912	2,328	55.7	56.6	+0.9	No
			PM	3,000	3,000	57.7	57.7	0.0	No
Project Driveway No. 3									
5	East of Van Buren Boulevard	Commercial	AM	464	672	49.6	51.2	+1.6	No
			PM	496	904	49.8	52.5	+2.7	No
	West of Van Buren Boulevard	Commercial	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A

Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Average Daily Trips (ADTs)		Roadway Noise Levels (dBA)		Difference (dBA)	Threshold Exceeded?
				Future (2023)	Future (2023) plus Project	Future (2023)	Future (2023) plus Project		
Project Driveway No. 4									
6	North of Jackson Street	Commercial	AM	688	1,056	51.3	53.1	+1.8	No
			PM	1,608	2,392	55.0	56.7	+1.7	No
	South of Jackson Street	Commercial	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A
Jackson Street									
6	East of Project Driveway No. 4	Residential	AM	5,280	5,416	62.3	62.4	+0.1	No
			PM	6,864	7,136	63.4	63.6	+0.2	No
	West of Project Driveway No. 4	Commercial	AM	5,456	5,688	62.4	62.6	+0.2	No
			PM	7,288	7,800	63.7	63.9	+0.2	No

Source: Refer to **Attachment D** for roadway noise calculation worksheets.

Note: N/A = No Data as roadway segment does not exist.

ATTACHMENT A

Noise Monitoring Data Sheets

Monitoring Location: Site 1

Monitoring Date: 1/5/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
13:19:19	54.7	63.4	47.5
13:20:00	50.0	59.3	45.8
13:21:00	66.5	75.4	48.7
13:22:00	52.6	64.8	46.3
13:23:00	50.8	57.0	47.2
13:24:00	53.2	55.2	50.8
13:25:00	57.0	70.9	48.7
13:26:00	60.6	67.1	53.0
13:27:00	56.7	67.2	52.6
13:28:00	55.6	63.6	50.5
13:29:00	54.3	61.6	47.7
13:30:00	58.5	65.5	51.3
13:31:00	58.6	67.1	52.2
13:32:00	57.6	63.7	50.8
13:33:00	57.4	69.7	50.9
13:34:00	47.7	51.2	43.7

15-minute LAeq

58.3

Monitoring Location: Site 2

Monitoring Date: 1/5/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
13:43:54	68.3	70.5	63.0
13:44:00	67.0	70.7	61.0
13:45:00	64.9	72.1	55.9
13:46:00	66.0	72.4	55.0
13:47:00	66.0	75.4	56.0
13:48:00	62.9	68.1	58.9
13:49:00	63.4	70.8	54.8
13:50:00	60.8	66.2	55.9
13:51:00	66.0	73.0	59.9
13:52:00	64.4	69.9	55.1
13:53:00	65.2	70.7	56.3
13:54:00	65.3	71.1	57.1
13:55:00	65.4	75.8	59.2
13:56:00	63.7	71.8	56.7
13:57:00	64.4	68.8	58.6
13:58:00	61.8	68.4	52.0

15-minute LAeq

65.1

Monitoring Location: Site 3

Monitoring Date: 1/5/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
14:04:53	51.8	52.7	49.1
14:05:00	56.3	63.8	43.4
14:06:00	44.4	47.4	41.8
14:07:00	46.3	49.9	41.2
14:08:00	44.2	47.5	40.0
14:09:00	44.7	53.4	41.4
14:10:00	43.5	48.5	41.2
14:11:00	42.4	45.6	40.3
14:12:00	42.0	45.4	40.2
14:13:00	50.2	59.8	42.8
14:14:00	46.1	49.4	43.1
14:15:00	54.2	62.4	43.2
14:16:00	43.2	45.9	40.8
14:17:00	41.3	43.6	39.6
14:18:00	41.6	44.2	39.6
14:19:00	50.2	62.9	40.7

15-minute LAeq

49.2

Monitoring Location: Site 4

Monitoring Date: 1/5/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
14:55:15	69.4	71.9	63.1
14:56:00	66.1	73.6	60.8
14:57:00	69.2	73.9	63.2
14:58:00	62.2	69.7	57.2
14:59:00	71.3	77.8	60.4
15:00:00	76.2	90.5	59.8
15:01:00	69.4	72.7	64.7
15:02:00	68.4	75.7	61.6
15:03:00	66.6	71.9	56.8
15:04:00	68.3	77.1	60.0
15:05:00	67.9	73.4	60.2
15:06:00	63.1	67.8	58.7
15:07:00	70.2	74.4	62.1
15:08:00	66.1	72.6	58.6
15:09:00	66.9	72.9	57.0
15:10:00	65.8	67.8	64.4

15-minute LAeq

69.3

Monitoring Location: Site 5

Monitoring Date: 1/5/2021

Monitoring Period

Time	LAeq	LASmax	LASmin
14:31:43	53.2	54.7	52.0
14:32:00	53.9	60.4	47.0
14:33:00	50.6	57.0	47.3
14:34:00	48.3	54.9	46.1
14:35:00	50.9	60.7	46.4
14:36:00	49.7	59.5	46.3
14:37:00	48.1	50.5	46.4
14:38:00	55.7	65.3	47.7
14:39:00	54.2	63.8	47.7
14:40:00	50.0	53.3	48.5
14:41:00	51.9	60.6	48.1
14:42:00	56.5	63.4	48.1
14:43:00	51.5	56.5	48.0
14:44:00	56.1	65.2	50.6
14:45:00	65.8	74.2	52.5
14:46:00	54.5	58.8	50.1

15-minute LAeq

56.3

ATTACHMENT B

Construction Noise Worksheet

B.1

Demolition

Roadway Construction Noise Model (RCNM), Version 1.1

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Case Descı Demolition

---- Receptor #1 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 1	Residentia	58.3	58.3	58.3

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	460	0
Dozer	No	40		81.7	460	0
Backhoe	No	40		77.6	460	0
Backhoe	No	40		77.6	460	0

Results

[illegible]

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 2	Residentia	65.1	65.1	65.1

Equipment

Description	Impact	Spec	Actual	Receptor	Estimated
		Lmax	Lmax	Distance	Shielding
	Device	Usage(%)	(dBA)	(dBA)	(feet)
Concrete Saw	No	20	89.6	300	0
Dozer	No	40	81.7	300	0
Backhoe	No	40	77.6	300	0
Backhoe	No	40	77.6	300	0

Results

[illegible]

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 3	Residentia	49.2	49.2	49.2

Equipment

Description	Impact		Spec	Actual	Receptor	Estimated
	Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	740	0
Dozer	No	40		81.7	740	0
Backhoe	No	40		77.6	740	0
Backhoe	No	40		77.6	740	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day		Evening		Night		Day		Evening		Night	
			Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq

Concrete Saw	66.2	59.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	58.3	54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	54.2	50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	54.2	50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.2	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 4	Residentia	69.3	69.3	69.3

Description	Impact	Device	Usage(%)	Equipment			Estimated
				Spec	Actual	Receptor	
				Lmax	Lmax	Distance	Shielding
				(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw	No		20		89.6	1180	0
Dozer	No		40		81.7	1180	0
Backhoe	No		40		77.6	1180	0
Backhoe	No		40		77.6	1180	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day	Leq	Evening	Leq	Night	Leq	Day	Leq	Evening	Leq	Night	Leq
			Lmax		Lmax		Lmax		Lmax		Lmax		Lmax	
Concrete Saw	62.1	55.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	54.2	50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	50.1	46.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	50.1	46.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	62.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 5	Residentia	56.3	56.3	56.3

Description	Impact	Device	Usage(%)	Equipment			Estimated
				Spec	Actual	Receptor	
				Lmax	Lmax	Distance	Shielding
				(dBA)	(dBA)	(feet)	(dBA)
Concrete Saw	No		20		89.6	930	0
Dozer	No		40		81.7	930	0
Backhoe	No		40		77.6	930	0
Backhoe	No		40		77.6	930	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day	Leq	Evening	Leq	Night	Leq	Day	Leq	Evening	Leq	Night	Leq
			Lmax		Lmax		Lmax		Lmax		Lmax		Lmax	
Concrete Saw	64.2	57.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	56.3	52.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	52.2	48.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	52.2	48.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.2	59.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

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Case Desc: Grading

---- Receptor #1 ----

Baselines (dBA)				
Descriptio	Land Use	Daytime	Evening	Night
Site 1	Residentia	58.3	58.3	58.3

Equipment						
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	460	0
Dozer	No	40		81.7	460	0
Backhoe	No	40		77.6	460	0
Backhoe	No	40		77.6	460	0

Results														
Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
Equipment	*Lmax	Leq	Day	Lmax	Leq	Evening	Lmax	Leq	Night	Lmax	Leq	Evening	Lmax	Leq
			Lmax			Lmax			Lmax			Lmax		
Concrete Saw	70.3		63.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.4		58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3		54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3		54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.3		65.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)				
Descriptio	Land Use	Daytime	Evening	Night
Site 2	Residentia	65.1	65.1	65.1

Equipment						
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	300	0
Dozer	No	40		81.7	300	0
Backhoe	No	40		77.6	300	0
Backhoe	No	40		77.6	300	0

Results														
Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
Equipment	*Lmax	Leq	Day	Lmax	Leq	Evening	Lmax	Leq	Night	Lmax	Leq	Evening	Lmax	Leq
			Lmax			Lmax			Lmax			Lmax		
Concrete Saw	74		67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	66.1		62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62		58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	62		58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74		69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)				
Descriptio	Land Use	Daytime	Evening	Night
Site 3	Residentia	49.2	49.2	49.2

Equipment						
Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Concrete Saw	No	20		89.6	740	0
Dozer	No	40		81.7	740	0
Backhoe	No	40		77.6	740	0
Backhoe	No	40		77.6	740	0

Results														
Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
Equipment	*Lmax	Leq	Day	Lmax	Leq	Evening	Lmax	Leq	Night	Lmax	Leq	Evening	Lmax	Leq
			Lmax			Lmax			Lmax			Lmax		

Concrete Saw	66.2	59.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	58.3	54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	54.2	50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	54.2	50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.2	61.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 4	Residentia	69.3	69.3	69.3

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	1180	0
Dozer	No	40		81.7	1180	0
Backhoe	No	40		77.6	1180	0
Backhoe	No	40		77.6	1180	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Concrete Saw	62.1	55.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	54.2	50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	50.1	46.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	50.1	46.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	62.1	57.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 5	Residentia	56.3	56.3	56.3

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	930	0
Dozer	No	40		81.7	930	0
Backhoe	No	40		77.6	930	0
Backhoe	No	40		77.6	930	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Concrete Saw	64.2	57.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	56.3	52.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	52.2	48.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	52.2	48.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	64.2	59.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

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Case Desc: Building Construction

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 1	Residential	58.3	58.3	58.3

		Equipment				
		Impact	Spec	Actual	Receptor	Estimated
Description	Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No		16	80.6	460	0
Forklift	No		40	85	460	0
Forklift	No		40	85	460	0
Backhoe	No		40	77.6	460	0
Backhoe	No		40	77.6	460	0

		Results								Noise Limit Exceedance (dBA)					
		Calculated (dBA)		Noise Limits (dBA)						Day		Evening		Night	
Equipment		*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Crane		61.3	53.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		65.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		65.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		58.3	54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		58.3	54.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		65.7	65.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 2	Residential	65.1	65.1	65.1

		Equipment				
		Impact	Spec	Actual	Receptor	Estimated
Description	Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No		16	80.6	300	0
Forklift	No		40	85	300	0
Forklift	No		40	85	300	0
Backhoe	No		40	77.6	300	0
Backhoe	No		40	77.6	300	0

		Results								Noise Limit Exceedance (dBA)					
		Calculated (dBA)		Noise Limits (dBA)						Day		Evening		Night	
Equipment		*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Crane		65	57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		69.4	65.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		62	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		69.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 3	Residential	49.2	49.2	49.2

		Equipment				
		Impact	Spec	Actual	Receptor	Estimated
Description	Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Crane	No		16	80.6	740	0
Forklift	No		40	85	740	0
Forklift	No		40	85	740	0
Backhoe	No		40	77.6	740	0
Backhoe	No		40	77.6	740	0

		Results													
		Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		57.1		49.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		61.6		57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		61.6		57.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		54.2		50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		54.2		50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		61.6		61.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Descriptio	Land Use	Daytime	Evening	Night
Site 4	Residentia	69.3	69.3	69.3

		Equipment				
		Impact	Spec	Actual	Receptor	Estimated
		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)
Crane	No		16		80.6	1180
Forklift	No		40		85	1180
Forklift	No		40		85	1180
Backhoe	No		40		77.6	1180
Backhoe	No		40		77.6	1180

		Results													
		Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		53.1		45.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		57.5		53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		57.5		53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		50.1		46.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		50.1		46.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		57.5		57.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Descriptio	Land Use	Daytime	Evening	Night
Site 5	Residentia	56.3	56.3	56.3

		Equipment				
		Impact	Spec	Actual	Receptor	Estimated
		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)
Crane	No		16		80.6	930
Forklift	No		40		85	930
Forklift	No		40		85	930
Backhoe	No		40		77.6	930
Backhoe	No		40		77.6	930

		Results													
		Calculated (dBA)				Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
				Day		Evening		Night		Day		Evening		Night	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane		55.2		47.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		59.6		55.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift		59.6		55.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		52.2		48.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		52.2		48.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total		59.6		59.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report dat #####

Case Descr Paving

---- Receptor #1 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 1	Residentia	58.3	58.3	58.3

Equipment

Description	Impact	Spec	Actual	Receptor	Estimated
	Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)
Drum Mixer	No	50	80	460	0
Paver	No	50	77.2	460	0
Roller	No	20	80	460	0
Backhoe	No	40	77.6	460	0

Results

[illegible]

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Decibels (dBA)		
		Daytime	Evening	Night
Site 2	Residential	65.1	65.1	65.1

Equipment

Description	Impact Device	Spec	Actual	Receptor	Estimated
		Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)
Drum Mixer	No	50	80	300	0
Paver	No	50	77.2	300	0
Roller	No	20	80	300	0
Backhoe	No	40	77.6	300	0

Results

[illegible]

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 3	Residentia	49.2	49.2	49.2

Equipment

Description	Impact Device	Spec	Actual	Receptor	Estimated
		Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)
Drum Mixer	No	50	80	740	0
Paver	No	50	77.2	740	0
Roller	No	20	80	740	0
Backhoe	No	40	77.6	740	0

Results

[illegible]

Drum Mixer	56.6	53.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	53.8	50.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	56.6	49.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	54.2	50.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	56.6	57.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 4	Residentia	69.3	69.3	69.3

Description	Impact	Device	Usage(%)	Equipment			Estimated
				Spec	Actual	Receptor	
				Lmax	Lmax	Distance	Shielding
				(dBA)	(dBA)	(feet)	(dBA)
Drum Mixer	No		50		80	1180	0
Paver	No		50		77.2	1180	0
Roller	No		20		80	1180	0
Backhoe	No		40		77.6	1180	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day	Leq	Evening	Leq	Night	Leq	Day	Leq	Evening	Leq	Night	Leq
Drum Mixer	52.5	49.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	49.8	46.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	52.5	45.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	50.1	46.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	52.5	53.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 5	Residentia	56.3	56.3	56.3

Description	Impact	Device	Usage(%)	Equipment			Estimated
				Spec	Actual	Receptor	
				Lmax	Lmax	Distance	Shielding
				(dBA)	(dBA)	(feet)	(dBA)
Drum Mixer	No		50		80	930	0
Paver	No		50		77.2	930	0
Roller	No		20		80	930	0
Backhoe	No		40		77.6	930	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	*Lmax	Leq	Day	Leq	Evening	Leq	Night	Leq	Day	Leq	Evening	Leq	Night	Leq
Drum Mixer	54.6	51.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	51.8	48.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	54.6	47.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	52.2	48.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	54.6	55.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report dat #####

Case Desc: Architectural Coating

---- Receptor #1 ----

		Baselines (dBA)			
Description	Land Use	Daytime	Evening	Night	
Site 1	Residential	58.3	58.3	58.3	
		Equipment			
		Spec	Actual	Receptor	
		Lmax	Lmax	Distance	
		(dBA)	(dBA)	(feet)	
		Usage(%)	Estimated	Shielding	
			(dBA)	(dBA)	
Compressor (air)	No	40	77.7	460	0

Results

	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night		
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Compressor (air)	58.4	54.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Total	58.4	54.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	*Calculated Lmax is the Loudest value.														

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 2	Residential	65.1	65.1	65.1
		Equipment		
		Spec	Actual	Receptor
		Lmax	Lmax	Distance
		(dBA)	(dBA)	(feet)
		Usage(%)	Estimated	Shielding
			(dBA)	(dBA)
Compressor (air)	No	40	77.7	300
				0

Results

	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night		
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	
Compressor (air)	62.1	58.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Total	62.1	58.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
*Calculated Lmax is the Loudest value.															

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Site 3	Residential	49.2	49.2	49.2
		Equipment		
		Spec	Actual	Receptor
		Lmax	Lmax	Distance
		(dBA)	(dBA)	(feet)
		Usage(%)	Estimated	Shielding
			(dBA)	(dBA)
Compressor (air)	No	40	77.7	740
				0

Results

	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	54.3	50.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	54.3	50.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	*Calculated Lmax is the Loudest value.													

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)				
Description	Land Use	Daytime	Evening	Night		
Site 4	Residential	69.3	69.3	69.3		
		Equipment				
		Spec	Actual	Receptor	Estimated	
		Lmax	Lmax	Distance	Shielding	
		(dBA)	(dBA)	(feet)	(dBA)	
Description	Impact Device	Usage(%)				
Compressor (air)	No	40		77.7	1180	0

	Results													
	Calculated (dBA)			Noise Limits (dBA)						Noise Limit Exceedance (dBA)				
			Day			Evening		Night		Day		Evening		Night
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	50.2	46.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	50.2	46.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
*Calculated Lmax is the Loudest value.														

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

Baselines (dBA)

Descriptio	Land Use	Daytime	Evening	Night
Site 5	Residentia	56.3	56.3	56.3

Equipment

		Spec	Actual	Receptor	Estimated
	Impact	Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40	77.7	930	0

Results

[illegible]

*Calculated Lmax is the Loudest value.

ATTACHMENT C

Construction Vibration Worksheet

Arlington Van
Construction Vibration Model
Site 1

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance ^a	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	460	0.001	0.000	49
Jackhammer		1	0.035	460	0.000	0.000	41
Large bulldozer		1	0.089	460	0.001	0.000	49
Loaded trucks		1	0.076	460	0.001	0.000	48
Pile Drive (impact)		1	0.644	460	0.008	0.002	66
Vibratory Roller		1	0.210	460	0.003	0.001	56
Small bulldozer		1	0.003	460	0.000	0.000	20

* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, pg. 12-12.

-Fragile Buildings- 0.20 in/sec

Arlington Van
Construction Vibration Model
Site 2

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance ^a	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	300	0.002	0.001	55
Jackhammer		1	0.035	300	0.001	0.000	46
Large bulldozer		1	0.089	300	0.002	0.001	55
Loaded trucks		1	0.076	300	0.002	0.000	53
Pile Drive (impact)		1	0.644	300	0.015	0.004	72
Vibratory Roller		1	0.210	300	0.005	0.001	62
Small bulldozer		1	0.003	300	0.000	0.000	25

* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, pg. 12-12.

-Fragile Buildings- 0.20 in/sec

Arlington Van
Construction Vibration Model
Site 3

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance ^a	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	740	0.001	0.000	43
Jackhammer		1	0.035	740	0.000	0.000	35
Large bulldozer		1	0.089	740	0.001	0.000	43
Loaded trucks		1	0.076	740	0.000	0.000	41
Pile Drive (impact)		1	0.644	740	0.004	0.001	60
Vibratory Roller		1	0.210	740	0.001	0.000	50
Small bulldozer		1	0.003	740	0.000	0.000	13

* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, pg. 12-12.

-Fragile Buildings- 0.20 in/sec

Arlington Van
Construction Vibration Model
Site 4

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance ^a	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	1180	0.000	0.000	37
Jackhammer		1	0.035	1180	0.000	0.000	29
Large bulldozer		1	0.089	1180	0.000	0.000	37
Loaded trucks		1	0.076	1180	0.000	0.000	35
Pile Drive (impact)		1	0.644	1180	0.002	0.000	54
Vibratory Roller		1	0.210	1180	0.001	0.000	44
Small bulldozer		1	0.003	1180	0.000	0.000	7

* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, pg. 12-12.

-Fragile Buildings- 0.20 in/sec

Arlington Van
Construction Vibration Model
Site 5

Equipment		Pieces of Equipment	PPV at 25 feet (in/sec)	Distance from Equipment	PPV at adjusted distance	RMS velocity amplitude in in/sec at adjusted distance ^a	RMS Vibration level in VdB at adjusted distance
Caisson drilling		1	0.089	930	0.000	0.000	40
Jackhammer		1	0.035	930	0.000	0.000	32
Large bulldozer		1	0.089	930	0.000	0.000	40
Loaded trucks		1	0.076	930	0.000	0.000	38
Pile Drive (impact)		1	0.644	930	0.003	0.001	57
Vibratory Roller		1	0.210	930	0.001	0.000	47
Small bulldozer		1	0.003	930	0.000	0.000	10

* Suggested Vibration Thresholds per the Federal Transit Administration, United States Department of Transportation, Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06), May 2006, pg. 12-12.

-Fragile Buildings- 0.20 in/sec

ATTACHMENT D

Roadway Data Worksheets

D.1

Existing Project

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes								Ref. Energy Levels Dist				Le			Ln											
ROADWAY NAME			Median	ADT	Design Speed	Dist. from Center tc	Alpha	Barrier Attn.	Vehicle Mix Medium Trucks	Heavy Trucks	dB(A) CNEL	Day	Even	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total			
Segment	Land Use	Lanes	Width	Volume	(mph)	Receptor	Factor (1	dB(A)																													
Van Buren Boulevard n/o Arlington Avenue																																					
Existing (Year 2020) AM		2	0	28,448	60	60	0	0	1.8%	0.7%	72.7	####	####	####	448	177	26	6	39	16	74.2	80.8	84.5	-0.8	72.8	62.6	62.3	73.5	69.8	55.0	52.1	70.0	56.6	53.2	53.1	59.4	
Existing (Year 2020) PM		2	0	31,984	55	60	0	0	1.8%	0.7%	72.2	####	####	####	503	199	29	6	43	18	72.7	79.9	83.8	-0.8	72.2	62.5	62.5	73.0	69.2	54.9	52.3	69.5	56.0	53.1	53.2	59.1	
Existing plus Project AM Peak		2	0	28,856	55	60	0	0	1.8%	0.7%	71.8	####	####	####	454	180	26	6	39	16	72.7	79.9	83.8	-0.8	71.8	62.1	62.0	72.6	68.8	54.5	51.9	69.0	55.6	52.6	52.8	58.7	
Existing plus Project PM Peak		2	0	32,784	55	60	0	0	1.8%	0.7%	72.3	####	####	####	516	204	30	7	44	18	72.7	79.9	83.8	-0.8	72.3	62.6	62.6	73.2	69.3	55.0	52.4	69.6	56.1	53.2	53.3	59.2	
Existing plus Ambient AM Peak		2	0	30,160	55	60	0	0	1.8%	0.7%	72.0	####	####	####	475	188	27	6	41	17	72.7	79.9	83.8	-0.8	72.0	62.3	62.2	72.8	69.0	54.7	52.0	69.2	55.8	52.8	53.0	58.9	
Existing plus Ambient PM Peak		2	0	33,904	55	60	0	0	1.8%	0.7%	72.5	####	####	####	534	211	31	7	46	19	72.7	79.9	83.8	-0.8	72.5	62.8	62.7	73.3	69.5	55.2	52.6	69.7	56.3	53.3	53.5	59.4	
Existing plus Project plus Ambient AM Peak		2	0	30,568	55	60	0	0	1.8%	0.7%	72.0	####	####	####	481	191	28	6	41	17	72.7	79.9	83.8	-0.8	72.0	62.3	62.3	72.9	69.0	54.7	52.1	69.3	55.8	52.9	53.0	58.9	
Existing plus Project plus Ambient PM Peak		2	0	34,704	55	60	0	0	1.8%	0.7%	72.6	####	####	####	546	216	32	7	47	20	72.7	79.9	83.8	-0.8	72.6	62.9	62.8	73.4	69.6	55.3	52.7	69.8	56.4	53.4	53.6	59.5	
Van Buren Boulevard s/o Arlington Avenue																																					
Existing (Year 2020) AM		2	0	19,840	45	60	0	0	1.8%	0.7%	68.0	####	####	####	312	124	18	4	27	11	69.3	77.6	82.1	-0.8	67.6	59.1	59.6	68.8	64.6	51.5	49.4	65.0	51.4	49.6	50.4	55.3	
Existing (Year 2020) PM		2	0	24,144	45	60	0	0	1.8%	0.7%	68.8	####	####	####	380	151	22	5	33	14	69.3	77.6	82.1	-0.8	68.5	59.9	60.4	69.6	65.5	52.4	50.3	65.8	52.3	50.5	51.2	56.2	
Existing plus Project AM Peak		2	0	20,552	45	60	0	0	1.8%	0.7%	68.1	####	####	####	323	128	19	4	28	12	69.3	77.6	82.1	-0.8	67.8	59.2	59.7	68.9	64.8	51.7	49.6	65.1	51.6	49.8	50.5	55.5	
Existing plus Project PM Peak		2	0	25,600	45	60	0	0	1.8%	0.7%	69.1	####	####	####	403	160	23	5	35	14	69.3	77.6	82.1	-0.8	68.7	60.2	60.7	69.9	65.8	52.6	50.5	66.1	52.6	50.7	51.5	56.4	
Existing plus Ambient AM Peak		2	0	21,024	45	60	0	0	1.8%	0.7%	68.2	####	####	####	331	131	19	4	28	12	69.3	77.6	82.1	-0.8	67.9	59.3	59.8	69.0	64.9	51.8	49.7	65.2	51.7	49.9	50.6	55.6	
Existing plus Ambient PM Peak		2	0	25,592	45	60	0	0	1.8%	0.7%	69.1	####	####	####	403	160	23	5	35	14	69.3	77.6	82.1	-0.8	68.7	60.2	60.7	69.9	65.8	52.6	50.5	66.1	52.6	50.7	51.5	56.4	
Existing plus Project plus Ambient AM Peak		2	0	21,736	45	60	0	0	1.8%	0.7%	68.4	####	####	####	342	136	20	4	29	12	69.3	77.6	82.1	-0.8	68.0	59.5	60.0	69.2	65.0	51.9	49.8	65.4	51.8	50.0	50.8	55.7	
Existing plus Project plus Ambient PM Peak		2	0	27,048	45	60	0	0	1.8%	0.7%	69.3	####	####	####	426	169	25	5	37	15	69.3	77.6	82.1	-0.8	69.0	60.4	60.9	70.1	66.0	52.9	50.8	66.3	52.8	51.0	51.7	56.7	
Arlington Avenue s/o Van Buren Boulevard																																					
Existing (Year 2020) AM		4	0	16,192	40	55	0	0	1.8%	0.7%	66.5	####	####	####	255	101	15	3	22	9	67.4	76.3	81.2	-0.2	65.9	58.0	58.8	67.2	62.9	50.4	48.7	63.3	49.7	48.6	49.6	54.1	
Existing (Year 2020) PM		4	0	18,184	40	55	0	0	1.8%	0.7%	67.0	####	####	####	286	113	17	4	25	10	67.4	76.3	81.2	-0.2	66.4	58.5	59.3	67.7	63.4	50.9	49.2	63.8	50.2	49.1	50.1	54.6	
Existing plus Project AM Peak		4	0	16,656	40	55	0	0	1.8%	0.7%	66.6	####	####	####	262	104	15	3	23	9	67.4	76.3	81.2	-0.2	66.0	58.1	59.0	67.3	63.0	50.6	48.8	63.4	49.8	48.7	49.7	54.2	
Existing plus Project PM Peak		4	0	19,120	40	55	0	0	1.8%	0.7%	67.2	####	####	####	301	119	17	4	26	11	67.4	76.3	81.2	-0.2	66.6	58.7	59.6	67.9	63.6	51.2	49.4	64.0	50.4	49.3	50.3	54.8	
Existing plus Ambient AM Peak		4	0	17,168	40	55	0	0	1.8%	0.7%	66.7	####	####	####	270	107	16	3	23	10	67.4	76.3	81.2	-0.2	66.1	58.3	59.1	67.5	63.1	50.7	48.9	63.5	50.0	48.8	49.9	54.3	
Existing plus Ambient PM Peak		4	0	19,288	40	55	0	0	1.8%	0.7%	67.2	####	####	####	304	120	18	4	26	11	67.4	76.3	81.2	-0.2	66.6	58.8	59.6	68.0	63.7	51.2	49.4	64.0	50.5	49.3	50.4	54.8	
Existing plus Project plus Ambient AM Peak		4	0	17,632	40	55	0	0	1.8%	0.7%	66.8	####	####	####	277	110	16	4	24	10	67.4	76.3	81.2	-0.2	66.2	58.4	59.2	67.6	63.3	50.8	49.0	63.7	50.1	48.9	50.0	54.5	
Existing plus Project plus Ambient PM Peak		4	0	20,224	40	55	0	0	1.8%	0.7%	67.4	####	####	####	318	126	18	4	27	11	67.4	76.3	81.2	-0.2	66.8	59.0	59.8	68.2	63.9	51.4	49.6	64.2	50.7	49.5	50.6	55.1	
Arlington Avenue w/o Van Buren Boulevard																																					
Existing (Year 2020) AM		4	0	16,096	40	55	0	0	1.8%	0.7%	66.4	####	####	####	253	100	15	3	22	9	67.4	76.3	81.2	-0.2	65.8	58.0	58.8	67.2	62.9	50.4	48.6	63.3	49.7	48.5	49.6	54.1	
Existing (Year 2020) PM		4	0	18,856	40	55	0	0	1.8%	0.7%	67.1	####	####	####	297	118	17	4	26	11	67.4	76.3	81.2	-0.2	66.5	58.7	59.5	67.9	63.6	51.1	49.3	63.9	50.4	49.2	50.3	54.7	
Existing plus Project AM Peak		4	0	16,752	40	55	0	0	1.8%	0.7%	66.6	####	####	####	264	104	15	3	23	9	67.4	76.3	81.2	-0.2	66.0	58.2	59.0	67.4	63.0	50.6	48.8	63.4	49.8	48.7	49.8	54.2	
Existing plus Project PM Peak		4	0	20,176	40	55	0	0	1.8%	0.7%	67.4	####	####	####	318	126	18	4	27	11	67.4	76.3	81.2	-0.2	66.8	59.0	59.8	68.2	63.8	51.4	49.6	64.2	50.7	49.5	50.6	55.0	
Existing plus Ambient AM Peak		4	0	17,056	40	55	0	0	1.8%	0.7%	66.7	####	####	####	268	106	16	3	23	10	67.4	76.3	81.2	-0.2	66.1	58.2	59.1	67.4	63.1	50.7	48.9	63.5	49.9	48.8	49.8	54.3	
Existing plus Ambient PM Peak		4	0	19,984	40	55	0	0	1.8%	0.7%	67.4	####	####	####	314	125	18	4	27	11	67.4	76.3	81.2	-0.2	66.8	58.9	59.8	68.1	63.8	51.3	49.6	64.2	50.6	49.5	50.5	55.0	
Existing plus Project plus Ambient AM Peak		4	0	17,712	40	55	0	0	1.8%	0.7%	66.9	####	####	####	279	110	16	4	24	10	67.4	76.3	81.2	-0.2	66.3	58.4	59.2	67.6	63.3	50.8	49.1	63.7	50.1	48.9	50.0	54.5	
Existing plus Project plus Ambient PM Peak		4	0	21,304	40	55	0	0	1.8%	0.7%	67.7	####	####	####	335	133	19	4	29	12	67.4	76.3	81.2	-0.2	67.1	59.2	60.0	68.4	64.1	51.6	49.9	64.5	50.9	49.8	50.8	55.3	

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes								Ref. Energy Levels Dist				Le			Ln										
ROADWAY NAME			Median	ADT	Design	Dist. from	Barrier	Vehicle Mix			Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total	
Segment	Land Use	Lanes	Width	Volume	Speed (mph)	Center to Receptor	Alpha Factor (1)	Attn. dB(A)	Medium Trucks	Heavy Trucks	dB(A) CNEL																									
Pegasus Drive n/o Arlington Avenue																																				
Existing (Year 2020) AM		2	0	592	25	25	0	0	1.8%	0.7%	51.4	460	75	57	9	4	1	0	1	0	59.4	71.1	78.7	3.1	48.9	43.8	47.4	52.0	45.9	36.2	37.2	46.9	32.8	34.3	38.2	40.5
Existing (Year 2020) PM		2	0	1,104	25	25	0	0	1.8%	0.7%	54.2	858	140	106	17	7	1	0	1	1	59.4	71.1	78.7	3.1	51.6	46.5	50.1	54.7	48.7	38.9	39.9	49.6	35.5	37.0	40.9	43.2
Existing plus Project AM Peak		2	0	592	25	25	0	0	1.8%	0.7%	51.4	460	75	57	9	4	1	0	1	0	59.4	71.1	78.7	3.1	48.9	43.8	47.4	52.0	45.9	36.2	37.2	46.9	32.8	34.3	38.2	40.5
Existing plus Project PM Peak		2	0	1,104	25	25	0	0	1.8%	0.7%	54.2	858	140	106	17	7	1	0	1	1	59.4	71.1	78.7	3.1	51.6	46.5	50.1	54.7	48.7	38.9	39.9	49.6	35.5	37.0	40.9	43.2
Existing plus Ambient AM Peak		2	0	616	25	25	0	0	1.8%	0.7%	51.6	479	78	59	10	4	1	0	1	0	59.4	71.1	78.7	3.1	49.1	43.9	47.6	52.1	46.1	36.4	37.4	47.1	32.9	34.5	38.3	40.6
Existing plus Ambient PM Peak		2	0	1,176	25	25	0	0	1.8%	0.7%	54.4	914	149	113	19	7	1	0	2	1	59.4	71.1	78.7	3.1	51.9	46.7	50.4	54.9	48.9	39.2	40.2	49.9	35.7	37.3	41.1	43.4
Existing plus Project plus Ambient AM Peak		2	0	616	25	25	0	0	1.8%	0.7%	51.6	479	78	59	10	4	1	0	1	0	59.4	71.1	78.7	3.1	49.1	43.9	47.6	52.1	46.1	36.4	37.4	47.1	32.9	34.5	38.3	40.6
Existing plus Project plus Ambient PM Peak		2	0	1,176	25	25	0	0	1.8%	0.7%	54.4	914	149	113	19	7	1	0	2	1	59.4	71.1	78.7	3.1	51.9	46.7	50.4	54.9	48.9	39.2	40.2	49.9	35.7	37.3	41.1	43.4
Pegasus Drive s/o Arlington Avenue																																				
Existing (Year 2020) AM		2	0	552	25	25	0	0	1.8%	0.7%	51.1	429	70	53	9	3	1	0	1	0	59.4	71.1	78.7	3.1	48.6	43.5	47.1	51.7	45.6	35.9	36.9	46.6	32.5	34.0	37.9	40.2
Existing (Year 2020) PM		2	0	776	25	25	0	0	1.8%	0.7%	52.6	603	99	74	12	5	1	0	1	0	59.4	71.1	78.7	3.1	50.1	44.9	48.6	53.1	47.1	37.4	38.4	48.1	33.9	35.5	39.3	41.6
Existing plus Project AM Peak		2	0	688	25	25	0	0	1.8%	0.7%	52.1	535	87	66	11	4	1	0	1	0	59.4	71.1	78.7	3.1	49.6	44.4	48.1	52.6	46.6	36.8	37.9	47.5	33.4	35.0	38.8	41.1
Existing plus Project PM Peak		2	0	1,048	25	25	0	0	1.8%	0.7%	53.9	814	133	101	16	7	1	0	1	1	59.4	71.1	78.7	3.1	51.4	46.2	49.9	54.4	48.4	38.7	39.7	49.4	35.2	36.8	40.6	42.9
Existing plus Ambient AM Peak		2	0	584	25	25	0	0	1.8%	0.7%	51.4	454	74	56	9	4	1	0	1	0	59.4	71.1	78.7	3.1	48.9	43.7	47.3	51.9	45.9	36.1	37.2	46.8	32.7	34.3	38.1	40.4
Existing plus Ambient PM Peak		2	0	824	25	25	0	0	1.8%	0.7%	52.9	640	105	79	13	5	1	0	1	0	59.4	71.1	78.7	3.1	50.4	45.2	48.8	53.4	47.4	37.6	38.7	48.3	34.2	35.7	39.6	41.9
Existing plus Project plus Ambient AM Peak		2	0	720	25	25	0	0	1.8%	0.7%	52.3	559	91	69	11	4	1	0	1	0	59.4	71.1	78.7	3.1	49.8	44.6	48.2	52.8	46.8	37.0	38.1	47.7	33.6	35.2	39.0	41.3
Existing plus Project plus Ambient PM Peak		2	0	1,096	25	25	0	0	1.8%	0.7%	54.1	852	139	105	17	7	1	0	1	1	59.4	71.1	78.7	3.1	51.6	46.4	50.1	54.6	48.6	38.9	39.9	49.6	35.4	37.0	40.8	43.1
Arlington Avenue s/o Pegasus Street																																				
Existing (Year 2020) AM		4	0	15,952	40	40	0	0	1.8%	0.7%	68.0	####	####	####	251	99	15	3	22	9	67.4	76.3	81.2	1.4	67.4	59.6	60.4	68.8	64.5	52.0	50.2	64.8	51.3	50.1	51.2	55.7
Existing (Year 2020) PM		4	0	17,720	40	40	0	0	1.8%	0.7%	68.5	####	####	####	279	111	16	4	24	10	67.4	76.3	81.2	1.4	67.9	60.0	60.9	69.2	64.9	52.4	50.7	65.3	51.7	50.6	51.6	56.1
Existing plus Project AM Peak		4	0	16,640	40	40	0	0	1.8%	0.7%	68.2	####	####	####	262	104	15	3	23	9	67.4	76.3	81.2	1.4	67.6	59.8	60.6	69.0	64.6	52.2	50.4	65.0	51.4	50.3	51.4	55.8
Existing plus Project PM Peak		4	0	19,056	40	40	0	0	1.8%	0.7%	68.8	####	####	####	300	119	17	4	26	11	67.4	76.3	81.2	1.4	68.2	60.3	61.2	69.5	65.2	52.8	51.0	65.6	52.0	50.9	51.9	56.4
Existing plus Ambient AM Peak		4	0	16,904	40	40	0	0	1.8%	0.7%	68.3	####	####	####	266	105	15	3	23	10	67.4	76.3	81.2	1.4	67.7	59.8	60.7	69.0	64.7	52.2	50.5	65.1	51.5	50.4	51.4	55.9
Existing plus Ambient PM Peak		4	0	18,784	40	40	0	0	1.8%	0.7%	68.7	####	####	####	296	117	17	4	25	11	67.4	76.3	81.2	1.4	68.1	60.3	61.1	69.5	65.2	52.7	50.9	65.6	52.0	50.8	51.9	56.4
Existing plus Project plus Ambient AM Peak		4	0	17,592	40	40	0	0	1.8%	0.7%	68.5	####	####	####	277	110	16	3	24	10	67.4	76.3	81.2	1.4	67.9	60.0	60.8	69.2	64.9	52.4	50.7	65.3	51.7	50.5	51.6	56.1
Existing plus Project plus Ambient PM Peak		4	0	20,120	40	40	0	0	1.8%	0.7%	69.0	####	####	####	317	125	18	4	27	11	67.4	76.3	81.2	1.4	68.4	60.6	61.4	69.8	65.5	53.0	51.2	65.9	52.3	51.1	52.2	56.7
Arlington Avenue w/o Pegasus Street																																				
Existing (Year 2020) AM		4	0	16,136	40	40	0	0	1.8%	0.7%	68.1	####	####	####	254	101	15	3	22	9	67.4	76.3	81.2	1.4	67.5	59.6	60.5	68.8	64.5	52.0	50.3	64.9	51.3	50.2	51.2	55.7
Existing (Year 2020) PM		4	0	18,032	40	40	0	0	1.8%	0.7%	68.6	####	####	####	284	112	16	4	24	10	67.4	76.3	81.2	1.4	68.0	60.1	60.9	69.3	65.0	52.5	50.8	65.4	51.8	50.7	51.7	56.2
Existing plus Project AM Peak		4	0	16,688	40	40	0	0	1.8%	0.7%	68.2	####	####	####	263	104	15	3	23	9	67.4	76.3	81.2	1.4	67.6	59.8	60.6	69.0	64.7	52.2	50.4	65.0	51.5	50.3	51.4	55.8
Existing plus Project PM Peak		4	0	19,096	40	40	0	0	1.8%	0.7%	68.8	####	####	####	301	119	17	4	26	11	67.4	76.3	81.2	1.4	68.2	60.4	61.2	69.6	65.2	52.8	51.0	65.6	52.0	50.9	52.0	56.4
Existing plus Ambient AM Peak		4	0	17,096	40	40	0	0	1.8%	0.7%	68.3	####	####	####	269	107	16	3	23	10	67.4	76.3	81.2	1.4	67.7	59.9	60.7	69.1	64.8	52.3	50.5	65.1	51.6	50.4	51.5	56.0
Existing plus Ambient PM Peak		4	0	19,120	40	40	0	0	1.8%	0.7%	68.8	####	####	####	301	119	17	4	26	11	67.4	76.3	81.2	1.4	68.2	60.4	61.2	69.6	65.2	52.8	51.0	65.6	52.0	50.9	52.0	56.4
Existing plus Project plus Ambient AM Peak		4	0	17,648	40	40	0	0	1.8%	0.7%	68.5	####	####	####	278	110	16	4	24	10	67.4	76.3	81.2	1.4	67.9	60.0	60.8	69.2	64.9	52.4	50.7	65.3	51.7	50.6	51.6	56.1
Existing plus Project plus Ambient PM Peak		4	0	20,184	40	40	0	0	1.8%	0.7%	69.1	####	####	####	318	126	18	4	27	11	67.4	76.3	81.2	1.4	68.5	60.6	61.4	69.8	65.5	53.0	51.3	65.9	52.3	51.1	52.2	56.7

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:

	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes								Ref. Energy Levels Dist										Le				Ln				
ROADWAY NAME	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor (ft)	Alpha Factor (1)	Barrier Attn. (dB(A))	Vehicle Mix		dB(A) CNEL	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total			
Segment									Medium Trucks	Heavy Trucks																											
Project Driveway No. 1 n/o Arlington Avenue																																					
Existing (Year 2020) AM	2	0	392	25	30	0	0	1.8%	0.7%	48.8	305	50	38	6	2	0	0	1	0	59.4	71.1	78.7	2.2	46.3	41.1	44.8	49.3	43.3	33.6	34.6	44.3	30.1	31.7	35.5	37.8		
Existing (Year 2020) PM	2	0	456	25	30	0	0	1.8%	0.7%	49.5	354	58	44	7	3	0	0	1	0	59.4	71.1	78.7	2.2	47.0	41.8	45.4	50.0	44.0	34.2	35.3	44.9	30.8	32.3	36.2	38.5		
Existing plus Project AM Peak	2	0	392	25	30	0	0	1.8%	0.7%	48.8	305	50	38	6	2	0	0	1	0	59.4	71.1	78.7	2.2	46.3	41.1	44.8	49.3	43.3	33.6	34.6	44.3	30.1	31.7	35.5	37.8		
Existing plus Project PM Peak	2	0	456	25	30	0	0	1.8%	0.7%	49.5	354	58	44	7	3	0	0	1	0	59.4	71.1	78.7	2.2	47.0	41.8	45.4	50.0	44.0	34.2	35.3	44.9	30.8	32.3	36.2	38.5		
Existing plus Ambient AM Peak	2	0	416	25	30	0	0	1.8%	0.7%	49.1	323	53	40	7	3	0	0	1	0	59.4	71.1	78.7	2.2	46.6	41.4	45.0	49.6	43.6	33.8	34.9	44.5	30.4	31.9	35.8	38.1		
Existing plus Ambient PM Peak	2	0	888	25	30	0	0	1.8%	0.7%	52.4	690	113	85	14	6	1	0	1	1	59.4	71.1	78.7	2.2	49.9	44.7	48.3	52.9	46.9	37.1	38.2	47.8	33.7	35.2	39.1	41.4		
Existing plus Project plus Ambient AM Peak	2	0	416	25	30	0	0	1.8%	0.7%	49.1	323	53	40	7	3	0	0	1	0	59.4	71.1	78.7	2.2	46.6	41.4	45.0	49.6	43.6	33.8	34.9	44.5	30.4	31.9	35.8	38.1		
Existing plus Project plus Ambient PM Peak	2	0	488	25	30	0	0	1.8%	0.7%	49.8	379	62	47	8	3	0	0	1	0	59.4	71.1	78.7	2.2	47.3	42.1	45.7	50.3	44.3	34.5	35.6	45.2	31.1	32.6	36.5	38.8		
Project Driveway No. 1 s/o Arlington Avenue																																					
Existing (Year 2020) AM	2	0	160	25	30	0	0	1.8%	0.7%	44.9	124	20	15	3	1	0	0	0	0	59.4	71.1	78.7	2.2	42.4	37.3	40.9	45.4	39.4	29.7	30.7	40.4	26.2	27.8	31.7	34.0		
Existing (Year 2020) PM	2	0	64	25	30	0	0	1.8%	0.7%	41.0	50	8	6	1	0	0	0	0	0	59.4	71.1	78.7	2.2	38.4	33.3	36.9	41.5	35.5	25.7	26.7	36.4	22.3	23.8	27.7	30.0		
Existing plus Project AM Peak	2	0	1,440	25	30	0	0	1.8%	0.7%	54.5	####	183	138	23	9	1	0	2	1	59.4	71.1	78.7	2.2	52.0	46.8	50.4	55.0	49.0	39.2	40.3	49.9	35.8	37.3	41.2	43.5		
Existing plus Project PM Peak	2	0	2,976	25	30	0	0	1.8%	0.7%	57.6	####	378	286	47	19	3	1	4	2	59.4	71.1	78.7	2.2	55.1	49.9	53.6	58.1	52.1	42.4	43.4	53.1	38.9	40.5	44.3	46.6		
Existing plus Ambient AM Peak	2	0	160	25	30	0	0	1.8%	0.7%	44.9	124	20	15	3	1	0	0	0	0	59.4	71.1	78.7	2.2	42.4	37.3	40.9	45.4	39.4	29.7	30.7	40.4	26.2	27.8	31.7	34.0		
Existing plus Ambient PM Peak	2	0	328	25	30	0	0	1.8%	0.7%	48.0	255	42	31	5	2	0	0	0	0	59.4	71.1	78.7	2.2	45.5	40.4	44.0	48.6	42.6	32.8	33.8	43.5	29.4	30.9	34.8	37.1		
Existing plus Project plus Ambient AM Peak	2	0	1,440	25	30	0	0	1.8%	0.7%	54.5	####	183	138	23	9	1	0	2	1	59.4	71.1	78.7	2.2	52.0	46.8	50.4	55.0	49.0	39.2	40.3	49.9	35.8	37.3	41.2	43.5		
Existing plus Project plus Ambient PM Peak	2	0	2,976	25	30	0	0	1.8%	0.7%	57.6	####	378	286	47	19	3	1	4	2	59.4	71.1	78.7	2.2	55.1	49.9	53.6	58.1	52.1	42.4	43.4	53.1	38.9	40.5	44.3	46.6		
Arlington Avenue s/o Project Driveway No. 1																																					
Existing (Year 2020) AM	4	0	16,008	40	55	0	0	1.8%	0.7%	66.4	####	####	####	252	100	15	3	22	9	67.4	76.3	81.2	-0.2	65.8	58.0	58.8	67.2	62.8	50.4	48.6	63.2	49.6	48.5	49.6	54.0		
Existing (Year 2020) PM	4	0	18,152	40	55	0	0	1.8%	0.7%	67.0	####	####	####	286	113	17	4	25	10	67.4	76.3	81.2	-0.2	66.4	58.5	59.3	67.7	63.4	50.9	49.2	63.8	50.2	49.1	50.1	54.6		
Existing plus Project AM Peak	4	0	16,544	40	55	0	0	1.8%	0.7%	66.6	####	####	####	260	103	15	3	22	9	67.4	76.3	81.2	-0.2	66.0	58.1	58.9	67.3	63.0	50.5	48.8	63.4	49.8	48.7	49.7	54.2		
Existing plus Project PM Peak	4	0	19,200	40	55	0	0	1.8%	0.7%	67.2	####	####	####	302	120	17	4	26	11	67.4	76.3	81.2	-0.2	66.6	58.8	59.6	68.0	63.6	51.2	49.4	64.0	50.4	49.3	50.3	54.8		
Existing plus Ambient AM Peak	4	0	16,968	40	55	0	0	1.8%	0.7%	66.7	####	####	####	267	106	15	3	23	10	67.4	76.3	81.2	-0.2	66.1	58.2	59.0	67.4	63.1	50.6	48.9	63.5	49.9	48.8	49.8	54.3		
Existing plus Ambient PM Peak	4	0	18,440	40	55	0	0	1.8%	0.7%	67.0	####	####	####	290	115	17	4	25	10	67.4	76.3	81.2	-0.2	66.4	58.6	59.4	67.8	63.5	51.0	49.2	63.8	50.3	49.1	50.2	54.7		
Existing plus Project plus Ambient AM Peak	4	0	17,504	40	55	0	0	1.8%	0.7%	66.8	####	####	####	275	109	16	3	24	10	67.4	76.3	81.2	-0.2	66.2	58.4	59.2	67.6	63.2	50.8	49.0	63.6	50.0	48.9	49.9	54.4		
Existing plus Project plus Ambient PM Peak	4	0	20,536	40	55	0	0	1.8%	0.7%	67.5	####	####	####	323	128	19	4	28	12	67.4	76.3	81.2	-0.2	66.9	59.0	59.9	68.2	63.9	51.5	49.7	64.3	50.7	49.6	50.6	55.1		
Arlington Avenue w/o Project Driveway No. 1																																					
Existing (Year 2020) AM	4	0	16,160	40	55	0	0	1.8%	0.7%	66.5	####	####	####	254	101	15	3	22	9	67.4	76.3	81.2	-0.2	65.9	58.0	58.8	67.2	62.9	50.4	48.7	63.3	49.7	48.6	49.6	54.1		
Existing (Year 2020) PM	4	0	18,368	40	55	0	0	1.8%	0.7%	67.0	####	####	####	289	115	17	4	25	10	67.4	76.3	81.2	-0.2	66.4	58.6	59.4	67.8	63.4	51.0	49.2	63.8	50.2	49.1	50.2	54.6		
Existing plus Project AM Peak	4	0	16,616	40	55	0	0	1.8%	0.7%	66.6	####	####	####	261	104	15	3	22	9	67.4	76.3	81.2	-0.2	66.0	58.1	59.0	67.3	63.0	50.5	48.8	63.4	49.8	48.7	49.7	54.2		
Existing plus Project PM Peak	4	0	19,272	40	55	0	0	1.8%	0.7%	67.2	####	####	####	303	120	18	4	26	11	67.4	76.3	81.2	-0.2	66.6	58.8	59.6	68.0	63.6	51.2	49.4	64.0	50.5	49.3	50.4	54.8		
Existing plus Ambient AM Peak	4	0	17,128	40	55	0	0	1.8%	0.7%	66.7	####	####	####	270	107	16	3	23	10	67.4	76.3	81.2	-0.2	66.1	58.3	59.1	67.5	63.1	50.7	48.9	63.5	49.9	48.8	49.8	54.3		
Existing plus Ambient PM Peak	4	0	19,336	40	55	0	0	1.8%	0.7%	67.2	####	####	####	304	121	18	4	26	11	67.4	76.3	81.2	-0.2	66.6	58.8	59.6	68.0	63.7	51.2	49.4	64.1	50.5	49.3	50.4	54.9		
Existing plus Project plus Ambient AM Peak	4	0	17,584	40	55	0	0	1.8%	0.7%	66.8	####	####	####	277	110	16	3	24	10	67.4	76.3	81.2	-0.2	66.2	58.4	59.2	67.6	63.2	50.8	49.0	63.6	50.1	48.9	50.0	54.4		
Existing plus Project plus Ambient PM Peak	4	0	20,128	40	55	0	0	1.8%	0.7%	67.4	####	####	####	317	126	18	4	27	11	67.4	76.3	81.2	-0.2	66.8	59.0	59.8	68.2	63.8	51.4	49.6	64.2	50.6	49.5	50.6	55.0		

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:

	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Project Name: Arlington & Van				rev. (Date)															
AM Peak Hour and PM Peak Hour																If Peak Hour = 6% of ADT, Scaling Factor = 16.667			
																If Peak Hour = 7% of ADT, Scaling Factor = 14.286			
Intersection: 4																If Peak Hour = 8% of ADT, Scaling Factor = 12.5			
Van Buren Boulevard and Project Driveway No. 2																If Peak Hour = 9% of ADT, Scaling Factor = 11.111			
																If Peak Hour = 10% of ADT, Scaling Factor = 10			
				Van Buren Boulevard												ADT			
				Southbound								Road				Van Buren Boulevard			
												Leg				North of			
												Cross Street				South of			
																East of			
																West of			

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes								Ref. Energy Levels Dist				Le				Ln										
ROADWAY NAME	Land Use	Lanes	Median Width	ADT Volume	Design Dist. from		Barrier Attn. dB(A)	Vehicle Mix		dB(A) CNEL	Day	Even	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total		
Segment					Speed (mph)	Center to Receptor (ft)		Alpha Factor (1)	Medium Trucks		Heavy Trucks	MTn	HTn	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total												
Van Buren Boulevard n/o Project Driveway																																					
Existing (Year 2020) AM	2	0	19,968	45	60	0	0	1.8%	0.7%	68.0	####	####	####	314	125	18	4	27	11	69.3	77.6	82.1	-0.8	67.7	59.1	59.6	68.8	64.7	51.5	49.5	65.0	51.5	49.7	50.4	55.3		
Existing (Year 2020) PM	2	0	24,168	45	60	0	0	1.8%	0.7%	68.8	####	####	####	380	151	22	5	33	14	69.3	77.6	82.1	-0.8	68.5	59.9	60.4	69.6	65.5	52.4	50.3	65.8	52.3	50.5	51.2	56.2		
Existing plus Project AM Peak	2	0	20,808	45	60	0	0	1.8%	0.7%	68.2	####	####	####	327	130	19	4	28	12	69.3	77.6	82.1	-0.8	67.8	59.3	59.8	69.0	64.9	51.7	49.6	65.2	51.7	49.8	50.6	55.5		
Existing plus Project PM Peak	2	0	25,872	45	60	0	0	1.8%	0.7%	69.1	####	####	####	407	161	24	5	35	15	69.3	77.6	82.1	-0.8	68.8	60.2	60.7	69.9	65.8	52.7	50.6	66.1	52.6	50.8	51.5	56.5		
Existing plus Ambient AM Peak	2	0	21,168	45	60	0	0	1.8%	0.7%	68.3	####	####	####	333	132	19	4	29	12	69.3	77.6	82.1	-0.8	67.9	59.4	59.9	69.0	64.9	51.8	49.7	65.3	51.7	49.9	50.6	55.6		
Existing plus Ambient PM Peak	2	0	25,624	45	60	0	0	1.8%	0.7%	69.1	####	####	####	403	160	23	5	35	14	69.3	77.6	82.1	-0.8	68.7	60.2	60.7	69.9	65.8	52.6	50.5	66.1	52.6	50.7	51.5	56.4		
Existing plus Project plus Ambient AM Peak	2	0	22,008	45	60	0	0	1.8%	0.7%	68.4	####	####	####	346	137	20	4	30	12	69.3	77.6	82.1	-0.8	68.1	59.5	60.0	69.2	65.1	52.0	49.9	65.4	51.9	50.1	50.8	55.8		
Existing plus Project plus Ambient PM Peak	2	0	27,328	45	60	0	0	1.8%	0.7%	69.4	####	####	####	430	170	25	5	37	15	69.3	77.6	82.1	-0.8	69.0	60.5	61.0	70.1	66.0	52.9	50.8	66.4	52.8	51.0	51.7	56.7		
Van Buren Boulevard s/o Project Driveway																																					
Existing (Year 2020) AM	2	0	19,904	45	60	0	0	1.8%	0.7%	68.0	####	####	####	313	124	18	4	27	11	69.3	77.6	82.1	-0.8	67.6	59.1	59.6	68.8	64.7	51.5	49.4	65.0	51.5	49.7	50.4	55.3		
Existing (Year 2020) PM	2	0	23,832	45	60	0	0	1.8%	0.7%	68.8	####	####	####	375	149	22	5	32	13	69.3	77.6	82.1	-0.8	68.4	59.9	60.4	69.6	65.4	52.3	50.2	65.8	52.2	50.4	51.2	56.1		
Existing plus Project AM Peak	2	0	20,400	45	60	0	0	1.8%	0.7%	68.1	####	####	####	321	127	19	4	28	12	69.3	77.6	82.1	-0.8	67.7	59.2	59.7	68.9	64.8	51.6	49.5	65.1	51.6	49.8	50.5	55.4		
Existing plus Project PM Peak	2	0	24,600	45	60	0	0	1.8%	0.7%	68.9	####	####	####	387	153	22	5	33	14	69.3	77.6	82.1	-0.8	68.6	60.0	60.5	69.7	65.6	52.4	50.4	65.9	52.4	50.6	51.3	56.3		
Existing plus Ambient AM Peak	2	0	21,104	45	60	0	0	1.8%	0.7%	68.2	####	####	####	332	132	19	4	29	12	69.3	77.6	82.1	-0.8	67.9	59.4	59.9	69.0	64.9	51.8	49.7	65.2	51.7	49.9	50.6	55.6		
Existing plus Ambient PM Peak	2	0	25,264	45	60	0	0	1.8%	0.7%	69.0	####	####	####	398	158	23	5	34	14	69.3	77.6	82.1	-0.8	68.7	60.1	60.6	69.8	65.7	52.6	50.5	66.0	52.5	50.7	51.4	56.4		
Existing plus Project plus Ambient AM Peak	2	0	21,600	45	60	0	0	1.8%	0.7%	68.3	####	####	####	340	135	20	4	29	12	69.3	77.6	82.1	-0.8	68.0	59.5	60.0	69.1	65.0	51.9	49.8	65.3	51.8	50.0	50.7	55.7		
Existing plus Project plus Ambient PM Peak	2	0	26,032	45	60	0	0	1.8%	0.7%	69.2	####	####	####	410	162	24	5	35	15	69.3	77.6	82.1	-0.8	68.8	60.3	60.8	69.9	65.8	52.7	50.6	66.2	52.6	50.8	51.5	56.5		
Project Driveway No. 2 e/o Van Buren																																					
Existing (Year 2020) AM	4	0	168	25	30	0	0	1.8%	0.7%	46.0	131	21	16	3	1	0	0	0	0	59.4	71.1	78.7	3.1	43.5	38.3	42.0	46.5	40.5	30.8	31.8	41.5	27.3	28.9	32.7	35.0		
Existing (Year 2020) PM	4	0	504	25	30	0	0	1.8%	0.7%	50.8	392	64	48	8	3	0	0	1	0	59.4	71.1	78.7	3.1	48.3	43.1	46.8	51.3	45.3	35.5	36.6	46.2	32.1	33.7	37.5	39.8		
Existing plus Project AM Peak	4	0	1,392	25	30	0	0	1.8%	0.7%	55.2	####	177	134	22	9	1	0	2	1	59.4	71.1	78.7	3.1	52.7	47.5	51.2	55.7	49.7	39.9	41.0	50.6	36.5	38.1	41.9	44.2		
Existing plus Project PM Peak	4	0	3,120	25	30	0	0	1.8%	0.7%	58.7	####	396	300	49	19	3	1	4	2	59.4	71.1	78.7	3.1	56.2	51.0	54.7	59.2	53.2	43.5	44.5	54.2	40.0	41.6	45.4	47.7		
Existing plus Ambient AM Peak	4	0	176	25	30	0	0	1.8%	0.7%	46.2	137	22	17	3	1	0	0	0	0	59.4	71.1	78.7	3.1	43.7	38.5	42.2	46.7	40.7	31.0	32.0	41.7	27.5	29.1	32.9	35.2		
Existing plus Ambient PM Peak	4	0	536	25	30	0	0	1.8%	0.7%	51.1	416	68	51	8	3	0	0	1	0	59.4	71.1	78.7	3.1	48.5	43.4	47.0	51.6	45.6	35.8	36.9	46.5	32.4	33.9	37.8	40.1		
Existing plus Project plus Ambient AM Peak	4	0	1,400	25	30	0	0	1.8%	0.7%	55.2	####	178	134	22	9	1	0	2	1	59.4	71.1	78.7	3.1	52.7	47.6	51.2	55.7	49.7	40.0	41.0	50.7	36.5	38.1	42.0	44.3		
Existing plus Project plus Ambient PM Peak	4	0	3,152	25	30	0	0	1.8%	0.7%	58.8	####	400	303	50	20	3	1	4	2	59.4	71.1	78.7	3.1	56.2	51.1	54.7	59.3	53.3	43.5	44.5	54.2	40.1	41.6	45.5	47.8		
Project Driveway No. 2 w/o Van Buren																																					
Existing (Year 2020) AM	4	0	1,496	25	30	0	0	1.8%	0.7%	55.5	####	190	144	24	9	1	0	2	1	59.4	71.1	78.7	3.1	53.0	47.8	51.5	56.0	50.0	40.3	41.3	51.0	36.8	38.4	42.2	44.5		
Existing (Year 2020) PM	4	0	2,312	25	30	0	0	1.8%	0.7%	57.4	####	294	222	36	14	2	0	3	1	59.4	71.1	78.7	3.1	54.9	49.7	53.4	57.9	51.9	42.1	43.2	52.9	38.7	40.3	44.1	46.4		
Existing plus Project AM Peak	4	0	1,496	25	30	0	0	1.8%	0.7%	55.5	####	190	144	24	9	1	0	2	1	59.4	71.1	78.7	3.1	53.0	47.8	51.5	56.0	50.0	40.3	41.3	51.0	36.8	38.4	42.2	44.5		
Existing plus Project PM Peak	4	0	2,312	25	30	0	0	1.8%	0.7%	57.4	####	294	222	36	14	2	0	3	1	59.4	71.1	78.7	3.1	54.9	49.7	53.4	57.9	51.9	42.1	43.2	52.9	38.7	40.3	44.1	46.4		
Existing plus Ambient AM Peak	4	0	1,584	25	30	0	0	1.8%	0.7%	55.8	####	201	152	25	10	1	0	2	1	59.4	71.1	78.7	3.1	53.3	48.1	51.7	56.3	50.3	40.5	41.6	51.2	37.1	38.6	42.5	44.8		
Existing plus Ambient PM Peak	4	0	2,448	25	30	0	0	1.8%	0.7%	57.7	####	311	235	39	15	2	0	3	1	59.4	71.1	78.7	3.1	55.1	50.0	53.6	58.2	52.2	42.4	43.4	53.1	39.0	40.5	44.4	46.7		
Existing plus Project plus Ambient AM Peak	4	0	1,584	25	30	0	0	1.8%	0.7%	55.8	####	201	152	25	10	1	0	2	1	59.4	71.1	78.7	3.1	53.3	48.1	51.7	56.3	50.3	40.5	41.6	51.2	37.1	38.6	42.5	44.8		
Existing plus Project plus Ambient PM Peak	4	0	2,448	25	30	0	0	1.8%	0.7%	57.7	####	311	235	39	15	2	0	3	1	59.4	71.1	78.7	3.1	55.1	50.0	53.6	58.2	52.2	42.4	43.4	53.1	39.0	40.5	44.4	46.7		

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:

	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes								Ref. Energy Levels Dist				Le				Ln									
ROADWAY NAME	Land Use	Lanes	Median Width	ADT Volume	Design Dist. from		Barrier Attn. dB(A)	Vehicle Mix		dB(A) CNEL	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total			
Segment					Speed (mph)	Center to Receptor (ft)		Alpha Factor (1)	Medium Trucks																									Heavy Trucks		
Van Buren Boulevard n/o Project Driveway																																				
Existing (Year 2020) AM	2	0	19,792	45	60	0	0	1.8%	0.7%	68.0	####	####	####	311	123	18	4	27	11	69.3	77.6	82.1	-0.8	67.6	59.1	59.6	68.7	64.6	51.5	49.4	65.0	51.4	49.6	50.3	55.3	
Existing (Year 2020) PM	2	0	23,824	45	60	0	0	1.8%	0.7%	68.8	####	####	####	375	149	22	5	32	13	69.3	77.6	82.1	-0.8	68.4	59.9	60.4	69.5	65.4	52.3	50.2	65.8	52.2	50.4	51.2	56.1	
Existing plus Project AM Peak	2	0	20,280	45	60	0	0	1.8%	0.7%	68.1	####	####	####	319	126	18	4	27	11	69.3	77.6	82.1	-0.8	67.7	59.2	59.7	68.9	64.7	51.6	49.5	65.1	51.5	49.7	50.5	55.4	
Existing plus Project PM Peak	2	0	24,600	45	60	0	0	1.8%	0.7%	68.9	####	####	####	387	153	22	5	33	14	69.3	77.6	82.1	-0.8	68.6	60.0	60.5	69.7	65.6	52.4	50.4	65.9	52.4	50.6	51.3	56.3	
Existing plus Ambient AM Peak	2	0	20,984	45	60	0	0	1.8%	0.7%	68.2	####	####	####	330	131	19	4	28	12	69.3	77.6	82.1	-0.8	67.9	59.3	59.8	69.0	64.9	51.8	49.7	65.2	51.7	49.9	50.6	55.6	
Existing plus Ambient PM Peak	2	0	25,248	45	60	0	0	1.8%	0.7%	69.0	####	####	####	397	157	23	5	34	14	69.3	77.6	82.1	-0.8	68.7	60.1	60.6	69.8	65.7	52.6	50.5	66.0	52.5	50.7	51.4	56.4	
Existing plus Project plus Ambient AM Peak	2	0	21,472	45	60	0	0	1.8%	0.7%	68.3	####	####	####	338	134	20	4	29	12	69.3	77.6	82.1	-0.8	68.0	59.4	59.9	69.1	65.0	51.9	49.8	65.3	51.8	50.0	50.7	55.7	
Existing plus Project plus Ambient PM Peak	2	0	26,024	45	60	0	0	1.8%	0.7%	69.2	####	####	####	410	162	24	5	35	15	69.3	77.6	82.1	-0.8	68.8	60.3	60.8	69.9	65.8	52.7	50.6	66.2	52.6	50.8	51.5	56.5	
Van Buren Boulevard s/o Project Driveway																																				
Existing (Year 2020) AM	2	0	19,640	45	60	0	0	1.8%	0.7%	67.9	####	####	####	309	122	18	4	27	11	69.3	77.6	82.1	-0.8	67.6	59.0	59.5	68.7	64.6	51.5	49.4	64.9	51.4	49.6	50.3	55.3	
Existing (Year 2020) PM	2	0	23,720	45	60	0	0	1.8%	0.7%	68.7	####	####	####	373	148	22	5	32	13	69.3	77.6	82.1	-0.8	68.4	59.9	60.4	69.5	65.4	52.3	50.2	65.7	52.2	50.4	51.1	56.1	
Existing plus Project AM Peak	2	0	20,232	45	60	0	0	1.8%	0.7%	68.1	####	####	####	318	126	18	4	27	11	69.3	77.6	82.1	-0.8	67.7	59.2	59.7	68.8	64.7	51.6	49.5	65.1	51.5	49.7	50.4	55.4	
Existing plus Project PM Peak	2	0	24,640	45	60	0	0	1.8%	0.7%	68.9	####	####	####	388	154	22	5	33	14	69.3	77.6	82.1	-0.8	68.6	60.0	60.5	69.7	65.6	52.4	50.4	65.9	52.4	50.6	51.3	56.3	
Existing plus Ambient AM Peak	2	0	20,824	45	60	0	0	1.8%	0.7%	68.2	####	####	####	328	130	19	4	28	12	69.3	77.6	82.1	-0.8	67.8	59.3	59.8	69.0	64.9	51.7	49.6	65.2	51.7	49.8	50.6	55.5	
Existing plus Ambient PM Peak	2	0	25,144	45	60	0	0	1.8%	0.7%	69.0	####	####	####	396	157	23	5	34	14	69.3	77.6	82.1	-0.8	68.7	60.1	60.6	69.8	65.7	52.5	50.5	66.0	52.5	50.7	51.4	56.3	
Existing plus Project plus Ambient AM Peak	2	0	21,416	45	60	0	0	1.8%	0.7%	68.3	####	####	####	337	134	19	4	29	12	69.3	77.6	82.1	-0.8	68.0	59.4	59.9	69.1	65.0	51.8	49.8	65.3	51.8	50.0	50.7	55.6	
Existing plus Project plus Ambient PM Peak	2	0	26,064	45	60	0	0	1.8%	0.7%	69.2	####	####	####	410	163	24	5	35	15	69.3	77.6	82.1	-0.8	68.8	60.3	60.8	69.9	65.8	52.7	50.6	66.2	52.6	50.8	51.5	56.5	
Project Driveway No. 3 e/o Van Buren																																				
Existing (Year 2020) AM	4	0	360	25	30	0	0	1.8%	0.7%	49.3	280	46	35	6	2	0	0	0	0	59.4	71.1	78.7	3.1	46.8	41.7	45.3	49.8	43.8	34.1	35.1	44.8	30.6	32.2	36.1	38.4	
Existing (Year 2020) PM	4	0	248	25	30	0	0	1.8%	0.7%	47.7	193	31	24	4	2	0	0	0	0	59.4	71.1	78.7	3.1	45.2	40.0	43.7	48.2	42.2	32.5	33.5	43.2	29.0	30.6	34.4	36.7	
Existing plus Project AM Peak	4	0	640	25	30	0	0	1.8%	0.7%	51.8	497	81	61	10	4	1	0	1	0	59.4	71.1	78.7	3.1	49.3	44.2	47.8	52.3	46.3	36.6	37.6	47.3	33.1	34.7	38.6	40.9	
Existing plus Project PM Peak	4	0	888	25	30	0	0	1.8%	0.7%	53.3	690	113	85	14	6	1	0	1	1	59.4	71.1	78.7	3.1	50.7	45.6	49.2	53.8	47.8	38.0	39.0	48.7	34.6	36.1	40.0	42.3	
Existing plus Ambient AM Peak	4	0	384	25	30	0	0	1.8%	0.7%	49.6	298	49	37	6	2	0	0	1	0	59.4	71.1	78.7	3.1	47.1	41.9	45.6	50.1	44.1	34.4	35.4	45.1	30.9	32.5	36.3	38.6	
Existing plus Ambient PM Peak	4	0	264	25	30	0	0	1.8%	0.7%	48.0	205	34	25	4	2	0	0	0	0	59.4	71.1	78.7	3.1	45.5	40.3	43.9	48.5	42.5	32.7	33.8	43.4	29.3	30.9	34.7	37.0	
Existing plus Project plus Ambient AM Peak	4	0	664	25	30	0	0	1.8%	0.7%	52.0	516	84	64	10	4	1	0	1	0	59.4	71.1	78.7	3.1	49.5	44.3	47.9	52.5	46.5	36.7	37.8	47.4	33.3	34.9	38.7	41.0	
Existing plus Project plus Ambient PM Peak	4	0	904	25	30	0	0	1.8%	0.7%	53.3	702	115	87	14	6	1	0	1	1	59.4	71.1	78.7	3.1	50.8	45.7	49.3	53.8	47.8	38.1	39.1	48.8	34.6	36.2	40.1	42.4	
Project Driveway No. 3 w/o Van Buren																																				
Existing (Year 2020) AM	4	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	3.1	####	####	####	####	####	####	####	####	####	####	####	####	####
Existing (Year 2020) PM	4	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	3.1	####	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project AM Peak	4	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	3.1	####	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project PM Peak	4	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	3.1	####	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Ambient AM Peak	4	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	3.1	####	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Ambient PM Peak	4	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	3.1	####	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project plus Ambient AM Peak	4	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	3.1	####	####	####	####	####	####	####	####	####	####	####	####	####
Existing plus Project plus Ambient PM Peak	4	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	3.1	####	####	####	####	####	####	####	####	####	####	####	####	####

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:

	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes										Ref. Energy Level: Dist				Ld				Le				Ln								
ROADWAY NAME			Median	ADT	Design	Dist. from	Barrier	Vehicle Mix			Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total						
Segment	Land Use	Lanes	Width	Volume	Speed (mph)	Center to Receptor	Factor (1)	Attn. dB(A)	Medium Trucks	Heavy Trucks	dB(A) CNEL																														
Project Driveway No. 4 n/o Jackson Street																																									
Existing (Year 2020) AM		2	0	536	25	30	0	0	1.8%	0.7%	50.2	416	68	51	8	3	0	0	1	0	59.4	71.1	78.7	2.2	47.7	42.5	46.1	50.7	44.7	34.9	36.0	45.6	31.5	33.0	36.9	39.2					
Existing (Year 2020) PM		2	0	1,144	25	30	0	0	1.8%	0.7%	53.5	889	145	110	18	7	1	0	2	1	59.4	71.1	78.7	2.2	51.0	45.8	49.4	54.0	48.0	38.2	39.3	48.9	34.8	36.3	40.2	42.5					
Existing plus Project AM Peak		2	0	1,008	25	30	0	0	1.8%	0.7%	52.9	783	128	97	16	6	1	0	1	1	59.4	71.1	78.7	2.2	50.4	45.2	48.9	53.4	47.4	37.7	38.7	48.4	34.2	35.8	39.6	41.9					
Existing plus Project PM Peak		2	0	2,328	25	30	0	0	1.8%	0.7%	56.6	####	296	223	37	15	2	0	3	1	59.4	71.1	78.7	2.2	54.0	48.9	52.5	57.1	51.1	41.3	42.3	52.0	37.9	39.4	43.3	45.6					
Existing plus Ambient AM Peak		2	0	568	25	30	0	0	1.8%	0.7%	50.4	441	72	55	9	4	1	0	1	0	59.4	71.1	78.7	2.2	47.9	42.8	46.4	50.9	44.9	35.2	36.2	45.9	31.7	33.3	37.2	39.5					
Existing plus Ambient PM Peak		2	0	1,208	25	30	0	0	1.8%	0.7%	53.7	939	153	116	19	8	1	0	2	1	59.4	71.1	78.7	2.2	51.2	46.0	49.7	54.2	48.2	38.4	39.5	49.1	35.0	36.6	40.4	42.7					
Existing plus Project plus Ambient AM Peak		2	0	1,040	25	30	0	0	1.8%	0.7%	53.1	808	132	100	16	6	1	0	1	1	59.4	71.1	78.7	2.2	50.5	45.4	49.0	53.6	47.6	37.8	38.8	48.5	34.4	35.9	39.8	42.1					
Existing plus Project plus Ambient PM Peak		2	0	2,392	25	30	0	0	1.8%	0.7%	56.7	####	304	230	38	15	2	0	3	1	59.4	71.1	78.7	2.2	54.2	49.0	52.6	57.2	51.2	41.4	42.5	52.1	38.0	39.5	43.4	45.7					
Project Driveway No. 4 s/o Jackson Street																																									
Existing (Year 2020) AM		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	####			
Existing (Year 2020) PM		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####		
Existing plus Project AM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	
Existing plus Project PM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	
Existing plus Ambient AM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	
Existing plus Ambient PM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	
Existing plus Project plus Ambient AM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	
Existing plus Project plus Ambient PM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####
Jackson Street s/o Project Driveway No. 4																																									
Existing (Year 2020) AM		4	0	4,960	25	30	0	0	1.8%	0.7%	60.7	####	630	476	78	31	5	1	7	3	59.4	71.1	78.7	3.1	58.2	53.0	56.7	61.2	55.2	45.5	46.5	56.2	42.0	43.6	47.4	49.7					
Existing (Year 2020) PM		4	0	6,472	25	30	0	0	1.8%	0.7%	61.9	####	822	621	102	40	6	1	9	4	59.4	71.1	78.7	3.1	59.4	54.2	57.8	62.4	56.4	46.6	47.7	57.3	43.2	44.7	48.6	50.9					
Existing plus Project AM Peak		4	0	5,096	25	30	0	0	1.8%	0.7%	60.8	####	647	489	80	32	5	1	7	3	59.4	71.1	78.7	3.1	58.3	53.2	56.8	61.4	55.3	45.6	46.6	56.3	42.2	43.7	47.6	49.9					
Existing plus Project PM Peak		4	0	6,744	25	30	0	0	1.8%	0.7%	62.1	####	856	647	106	42	6	1	9	4	59.4	71.1	78.7	3.1	59.5	54.4	58.0	62.6	56.6	46.8	47.8	57.5	43.4	44.9	48.8	51.1					
Existing plus Ambient AM Peak		4	0	5,264	25	30	0	0	1.8%	0.7%	61.0	####	669	505	83	33	5	1	7	3	59.4	71.1	78.7	3.1	58.5	53.3	56.9	61.5	55.5	45.7	46.8	56.4	42.3	43.9	47.7	50.0					
Existing plus Ambient PM Peak		4	0	6,864	25	30	0	0	1.8%	0.7%	62.1	####	872	659	108	43	6	1	9	4	59.4	71.1	78.7	3.1	59.6	54.5	58.1	62.6	56.6	46.9	47.9	57.6	43.4	45.0	48.9	51.2					
Existing plus Project plus Ambient AM Peak		4	0	5,400	25	30	0	0	1.8%	0.7%	61.1	####	686	518	85	34	5	1	7	3	59.4	71.1	78.7	3.1	58.6	53.4	57.1	61.6	55.6	45.8	46.9	56.5	42.4	44.0	47.8	50.1					
Existing plus Project plus Ambient PM Peak		4	0	7,136	25	30	0	0	1.8%	0.7%	62.3	####	906	685	112	45	6	1	10	4	59.4	71.1	78.7	3.1	59.8	54.6	58.3	62.8	56.8	47.0	48.1	57.7	43.6	45.2	49.0	51.3					
Jackson Street w/o Project Driveway No. 4																																									
Existing (Year 2020) AM		4	0	5,048	25	30	0	0	1.8%	0.7%	60.8	####	641	485	79	31	5	1	7	3	59.4	71.1	78.7	3.1	58.3	53.1	56.8	61.3	55.3	45.5	46.6	56.2	42.1	43.7	47.5	49.8					
Existing (Year 2020) PM		4	0	6,496	25	30	0	0	1.8%	0.7%	61.9	####	825	624	102	41	6	1	9	4	59.4	71.1	78.7	3.1	59.4	54.2	57.9	62.4	56.4	46.6	47.7	57.3	43.2	44.8	48.6	50.9					
Existing plus Project AM Peak		4	0	5,384	25	30	0	0	1.8%	0.7%	61.1	####	684	517	85	34	5	1	7	3	59.4	71.1	78.7	3.1	58.6	53.4	57.0	61.6	55.6	45.8	46.9	56.5	42.4	43.9	47.8	50.1					
Existing plus Project PM Peak		4	0	7,408	25	30	0	0	1.8%	0.7%	62.5	####	941	711	117	46	7	1	10	4	59.4	71.1	78.7	3.1	60.0	54.8	58.4	63.0	57.0	47.2	48.3	57.9	43.8	45.3	49.2	51.5					
Existing plus Ambient AM Peak		4	0	5,352	25	30	0	0	1.8%	0.7%	61.1	####	680	514	84	33	5	1	7	3	59.4	71.1	78.7	3.1	58.5	53.4	57.0	61.6	55.6	45.8	46.8	56.5	42.4	43.9	47.8	50.1					
Existing plus Ambient PM Peak		4	0	6,888	25	30	0	0	1.8%	0.7%	62.2	####	875	661	108	43	6	1	9	4	59.4	71.1	78.7	3.1	59.6	54.5	58.1	62.7	56.7	46.9	47.9	57.6	43.5	45.0	48.9	51.2					
Existing plus Project plus Ambient AM Peak		4	0	5,688	25	30	0	0	1.8%	0.7%	61.3	####	722	546	90	35	5	1	8	3	59.4	71.1	78.7	3.1	58.8	53.6	57.3	61.8	55.8	46.1	47.1	56.8	42.6	44.2	48.0	50.3					
Existing plus Project plus Ambient PM Peak		4	0	7,800	25	30	0	0	1.8%	0.7%	62.7	####	991	749	123	49	7	2	11	4	59.4	71.1	78.7	3.1	60.2	55.0	58.6	63.2	57.2	47.4	48.5	58.1	44.0	45.6	49.4	51.7					

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes										Ref. Energy Levels Dist										Le			Ln		
ROADWAY NAME	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor (ft)	Alpha Factor (1)	Barrier Attn. dB(A)	Vehicle Mix		dB(A) CNEL	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total A		
Segment									Medium Trucks	Heavy Trucks																										
Van Buren Boulevard n/o Arlington Avenue																																				
Future (Year 2023) AM Peak		9	0	34,216	55	60	0	0	1.8%	0.7%	74.7	####	####	####	538	213	31	7	46	19	72.7	79.9	83.8	1.4	74.7	65.0	65.0	75.5	71.7	57.4	54.8	72.0	58.5	55.6	55.7	61.6
Future (Year 2023) PM Peak		9	0	37,544	55	60	0	0	1.8%	0.7%	75.1	####	####	####	591	234	34	7	51	21	72.7	79.9	83.8	1.4	75.1	65.4	65.4	75.9	72.1	57.8	55.2	72.4	58.9	56.0	56.1	62.0
Future (Year 2023) plus Project AM Peak		9	0	34,624	55	60	0	0	1.8%	0.7%	74.8	####	####	####	545	216	31	7	47	20	72.7	79.9	83.8	1.4	74.8	65.1	65.0	75.6	71.8	57.5	54.8	72.0	58.6	55.6	55.8	61.7
Future (Year 2023) plus Project PM Peak		9	0	38,344	55	60	0	0	1.8%	0.7%	75.2	####	####	####	603	239	35	8	52	22	72.7	79.9	83.8	1.4	75.2	65.5	65.5	76.0	72.2	57.9	55.3	72.5	59.0	56.1	56.2	62.1
Van Buren Boulevard s/o Arlington Avenue																																				
Future (Year 2023) AM Peak		8	0	23,792	45	60	0	0	1.8%	0.7%	70.2	####	####	####	374	148	22	5	32	13	69.3	77.6	82.1	0.6	69.9	61.3	61.8	71.0	66.9	53.7	51.7	67.2	53.7	51.9	52.6	57.5
Future (Year 2023) PM Peak		8	0	24,288	45	60	0	0	1.8%	0.7%	70.3	####	####	####	382	151	22	5	33	14	69.3	77.6	82.1	0.6	69.9	61.4	61.9	71.1	67.0	53.8	51.7	67.3	53.8	52.0	52.7	57.6
Future (Year 2023) plus Project AM Peak		8	0	24,504	45	60	0	0	1.8%	0.7%	70.3	####	####	####	386	153	22	5	33	14	69.3	77.6	82.1	0.6	70.0	61.5	62.0	71.1	67.0	53.9	51.8	67.3	53.8	52.0	52.7	57.7
Future (Year 2023) plus Project PM Peak		8	0	29,552	45	60	0	0	1.8%	0.7%	71.1	####	####	####	465	184	27	6	40	17	69.3	77.6	82.1	0.6	70.8	62.3	62.8	71.9	67.8	54.7	52.6	68.1	54.6	52.8	53.5	58.5
Arlington Avenue e/o Van Buren Boulevard																																				
Future (Year 2023) AM Peak		7	0	19,208	40	55	0	0	1.8%	0.7%	68.2	####	####	####	302	120	17	4	26	11	67.4	76.3	81.2	0.7	67.6	59.7	60.6	68.9	64.6	52.1	50.4	65.0	51.4	50.3	51.3	55.8
Future (Year 2023) PM Peak		7	0	21,096	40	55	0	0	1.8%	0.7%	68.6	####	####	####	332	132	19	4	29	12	67.4	76.3	81.2	0.7	68.0	60.1	61.0	69.3	65.0	52.5	50.8	65.4	51.8	50.7	51.7	56.2
Future (Year 2023) plus Project AM Peak		7	0	19,672	40	55	0	0	1.8%	0.7%	68.3	####	####	####	310	123	18	4	27	11	67.4	76.3	81.2	0.7	67.7	59.8	60.7	69.0	64.7	52.2	50.5	65.1	51.5	50.4	51.4	55.9
Future (Year 2023) plus Project PM Peak		7	0	22,032	40	55	0	0	1.8%	0.7%	68.8	####	####	####	347	137	20	4	30	12	67.4	76.3	81.2	0.7	68.2	60.3	61.1	69.5	65.2	52.7	51.0	65.6	52.0	50.9	51.9	56.4
Arlington Avenue w/o Van Buren Boulevard																																				
Future (Year 2023) AM Peak		6	6	18,992	40	55	0	0	1.8%	0.7%	67.9	####	####	####	299	118	17	4	26	11	67.4	76.3	81.2	0.5	67.3	59.4	60.3	68.6	64.3	51.8	50.1	64.7	51.1	50.0	51.0	55.5
Future (Year 2023) PM Peak		6	6	21,808	40	55	0	0	1.8%	0.7%	68.5	####	####	####	343	136	20	4	30	12	67.4	76.3	81.2	0.5	67.9	60.0	60.9	69.2	64.9	52.4	50.7	65.3	51.7	50.6	51.6	56.1
Future (Year 2023) plus Project AM Peak		6	6	19,648	40	55	0	0	1.8%	0.7%	68.0	####	####	####	309	123	18	4	27	11	67.4	76.3	81.2	0.5	67.4	59.6	60.4	68.8	64.5	52.0	50.2	64.8	51.3	50.1	51.2	55.7
Future (Year 2023) plus Project PM Peak		6	6	23,128	40	55	0	0	1.8%	0.7%	68.7	####	####	####	364	144	21	5	31	13	67.4	76.3	81.2	0.5	68.1	60.3	61.1	69.5	65.2	52.7	50.9	65.6	52.0	50.8	51.9	56.4

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:

	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	67.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes										Ref. Energy Levels Dist										Le			Ln		
ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1)	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks	Vehicle Mix Heavy Trucks	dB(A) CNEL	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total
Pegasus Drive n/o Arlington Avenue																																				
Future (Year 2023) AM Peak		2	0	616	25	25	0	0	1.8%	0.7%	51.6	479	78	59	10	4	1	0	1	0	59.4	71.1	78.7	3.1	49.1	43.9	47.6	52.1	46.1	36.4	37.4	47.1	32.9	34.5	38.3	40.6
Future (Year 2023) PM Peak		2	0	1,176	25	25	0	0	1.8%	0.7%	54.4	914	149	113	19	7	1	0	2	1	59.4	71.1	78.7	3.1	51.9	46.7	50.4	54.9	48.9	39.2	40.2	49.9	35.7	37.3	41.1	43.4
Future (Year 2023) plus Project AM Peak		2	0	616	25	25	0	0	1.8%	0.7%	51.6	479	78	59	10	4	1	0	1	0	59.4	71.1	78.7	3.1	49.1	43.9	47.6	52.1	46.1	36.4	37.4	47.1	32.9	34.5	38.3	40.6
Future (Year 2023) plus Project PM Peak		2	0	1,176	25	25	0	0	1.8%	0.7%	54.4	914	149	113	19	7	1	0	2	1	59.4	71.1	78.7	3.1	51.9	46.7	50.4	54.9	48.9	39.2	40.2	49.9	35.7	37.3	41.1	43.4
Pegasus Drive s/o Arlington Avenue																																				
Future (Year 2023) AM Peak		2	0	600	25	25	0	0	1.8%	0.7%	51.5	466	76	58	9	4	1	0	1	0	59.4	71.1	78.7	3.1	49.0	43.8	47.5	52.0	46.0	36.2	37.3	46.9	32.8	34.4	38.2	40.5
Future (Year 2023) PM Peak		2	0	824	25	25	0	0	1.8%	0.7%	52.9	640	105	79	13	5	1	0	1	0	59.4	71.1	78.7	3.1	50.4	45.2	48.8	53.4	47.4	37.6	38.7	48.3	34.2	35.7	39.6	41.9
Future (Year 2023) plus Project AM Peak		2	0	736	25	25	0	0	1.8%	0.7%	52.4	572	93	71	12	5	1	0	1	0	59.4	71.1	78.7	3.1	49.9	44.7	48.3	52.9	46.9	37.1	38.2	47.8	33.7	35.3	39.1	41.4
Future (Year 2023) plus Project PM Peak		2	0	1,096	25	25	0	0	1.8%	0.7%	54.1	852	139	105	17	7	1	0	1	1	59.4	71.1	78.7	3.1	51.6	46.4	50.1	54.6	48.6	38.9	39.9	49.6	35.4	37.0	40.8	43.1
Arlington Avenue e/o Pegasus Drive																																				
Future (Year 2023) AM Peak		5	7	18,328	40	40	0	0	1.8%	0.7%	69.5	####	####	####	288	114	17	4	25	10	67.4	76.3	81.2	2.3	68.9	61.1	61.9	70.3	66.0	53.5	51.7	66.4	52.8	51.6	52.7	57.2
Future (Year 2023) PM Peak		5	7	20,016	40	40	0	0	1.8%	0.7%	69.9	####	####	####	315	125	18	4	27	11	67.4	76.3	81.2	2.3	69.3	61.5	62.3	70.7	66.3	53.9	52.1	66.7	53.1	52.0	53.1	57.5
Future (Year 2023) plus Project AM Peak		5	7	19,016	40	40	0	0	1.8%	0.7%	69.7	####	####	####	299	119	17	4	26	11	67.4	76.3	81.2	2.3	69.1	61.2	62.1	70.4	66.1	53.7	51.9	66.5	52.9	51.8	52.8	57.3
Future (Year 2023) plus Project PM Peak		5	7	21,352	40	40	0	0	1.8%	0.7%	70.2	####	####	####	336	133	19	4	29	12	67.4	76.3	81.2	2.3	69.6	61.7	62.6	70.9	66.6	54.2	52.4	67.0	53.4	52.3	53.3	57.8
Arlington Avenue w/o Pegasus Drive																																				
Future (Year 2023) AM Peak		5	7	18,504	40	40	0	0	1.8%	0.7%	69.6	####	####	####	291	115	17	4	25	10	67.4	76.3	81.2	2.3	69.0	61.1	61.9	70.3	66.0	53.5	51.8	66.4	52.8	51.7	52.7	57.2
Future (Year 2023) PM Peak		5	7	20,352	40	40	0	0	1.8%	0.7%	70.0	####	####	####	320	127	18	4	28	11	67.4	76.3	81.2	2.3	69.4	61.5	62.4	70.7	66.4	54.0	52.2	66.8	53.2	52.1	53.1	57.6
Future (Year 2023) plus Project AM Peak		5	7	19,056	40	40	0	0	1.8%	0.7%	69.7	####	####	####	300	119	17	4	26	11	67.4	76.3	81.2	2.3	69.1	61.2	62.1	70.4	66.1	53.7	51.9	66.5	52.9	51.8	52.8	57.3
Future (Year 2023) plus Project PM Peak		5	7	21,416	40	40	0	0	1.8%	0.7%	70.2	####	####	####	337	134	19	4	29	12	67.4	76.3	81.2	2.3	69.6	61.8	62.6	71.0	66.6	54.2	52.4	67.0	53.4	52.3	53.3	57.8

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:

Total ADT Volumes	Day	Evening	Night
	77.70%	12.70%	9.60%
Medium-Duty Trucks	67.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes										Ref. Energy Levels Dist										Le			Ln								
ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1)	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks Heavy Trucks		dB(A) CNEL	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total						
Project Driveway No. 1 n/o Arlington Avenue																																										
Future (Year 2023) AM Peak		2	0	416	25	30	0	0	1.8%	0.7%	49.1	323	53	40	7	3	0	0	1	0	59.4	71.1	78.7	2.2	46.6	41.4	45.0	49.6	43.6	33.8	34.9	44.5	30.4	31.9	35.8	38.1						
Future (Year 2023) PM Peak		2	0	488	25	30	0	0	1.8%	0.7%	49.8	379	62	47	8	3	0	0	1	0	59.4	71.1	78.7	2.2	47.3	42.1	45.7	50.3	44.3	34.5	35.6	45.2	31.1	32.6	36.5	38.8						
Future (Year 2023) plus Project AM Peak		2	0	416	25	30	0	0	1.8%	0.7%	49.1	323	53	40	7	3	0	0	1	0	59.4	71.1	78.7	2.2	46.6	41.4	45.0	49.6	43.6	33.8	34.9	44.5	30.4	31.9	35.8	38.1						
Future (Year 2023) plus Project PM Peak		2	0	488	25	30	0	0	1.8%	0.7%	49.8	379	62	47	8	3	0	0	1	0	59.4	71.1	78.7	2.2	47.3	42.1	45.7	50.3	44.3	34.5	35.6	45.2	31.1	32.6	36.5	38.8						
Project Driveway No. 1 s/o Arlington Avenue																																										
Future (Year 2023) AM Peak		2	0	408	25	30	0	0	1.8%	0.7%	49.0	317	52	39	6	3	0	0	1	0	59.4	71.1	78.7	2.2	46.5	41.3	45.0	49.5	43.5	33.7	34.8	44.4	30.3	31.9	35.7	38.0						
Future (Year 2023) PM Peak		2	0	984	25	30	0	0	1.8%	0.7%	52.8	765	125	94	15	6	1	0	1	1	59.4	71.1	78.7	2.2	50.3	45.1	48.8	53.3	47.3	37.6	38.6	48.3	34.1	35.7	39.5	41.8						
Future (Year 2023) plus Project AM Peak		2	0	1,432	25	30	0	0	1.8%	0.7%	54.4	####	182	137	23	9	1	0	2	1	59.4	71.1	78.7	2.2	51.9	46.8	50.4	55.0	49.0	39.2	40.2	49.9	35.8	37.3	41.2	43.5						
Future (Year 2023) plus Project PM Peak		2	0	2,968	25	30	0	0	1.8%	0.7%	57.6	####	377	285	47	19	3	1	4	2	59.4	71.1	78.7	2.2	55.1	49.9	53.6	58.1	52.1	42.4	43.4	53.1	38.9	40.5	44.3	46.6						
Arlington Avenue e/o Project Driveway No. 1																																										
Future (Year 2023) AM Peak		4	7	18,360	40	55	0	0	1.8%	0.7%	67.1	####	####	####	289	115	17	4	25	10	67.4	76.3	81.2	-0.1	66.5	58.7	59.5	67.9	63.6	51.1	49.3	63.9	50.4	49.2	50.3	54.7						
Future (Year 2023) PM Peak		4	7	20,456	40	55	0	0	1.8%	0.7%	67.6	####	####	####	322	128	19	4	28	12	67.4	76.3	81.2	-0.1	67.0	59.1	60.0	68.3	64.0	51.6	49.8	64.4	50.8	49.7	50.7	55.2						
Future (Year 2023) plus Project AM Peak		4	7	18,912	40	55	0	0	1.8%	0.7%	67.3	####	####	####	298	118	17	4	26	11	67.4	76.3	81.2	-0.1	66.7	58.8	59.6	68.0	63.7	51.2	49.5	64.1	50.5	49.3	50.4	54.9						
Future (Year 2023) plus Project PM Peak		4	7	21,520	40	55	0	0	1.8%	0.7%	67.8	####	####	####	339	134	20	4	29	12	67.4	76.3	81.2	-0.1	67.2	59.4	60.2	68.6	64.2	51.8	50.0	64.6	51.0	49.9	51.0	55.4						
Arlington Avenue w/o Project Driveway No. 1																																										
Future (Year 2023) AM Peak		4	16	18,512	40	55	0	0	1.8%	0.7%	67.4	####	####	####	291	115	17	4	25	10	67.4	76.3	81.2	0.1	66.8	58.9	59.7	68.1	63.8	51.3	49.6	64.2	50.6	49.4	50.5	55.0						
Future (Year 2023) PM Peak		4	16	20,680	40	55	0	0	1.8%	0.7%	67.8	####	####	####	325	129	19	4	28	12	67.4	76.3	81.2	0.1	67.2	59.4	60.2	68.6	64.3	51.8	50.0	64.6	51.1	49.9	51.0	55.5						
Future (Year 2023) plus Project AM Peak		4	16	18,984	40	55	0	0	1.8%	0.7%	67.5	####	####	####	299	118	17	4	26	11	67.4	76.3	81.2	0.1	66.9	59.0	59.8	68.2	63.9	51.4	49.7	64.3	50.7	49.6	50.6	55.1						
Future (Year 2023) plus Project PM Peak		4	16	21,600	40	55	0	0	1.8%	0.7%	68.0	####	####	####	340	135	20	4	29	12	67.4	76.3	81.2	0.1	67.4	59.6	60.4	68.8	64.4	52.0	50.2	64.8	51.3	50.1	51.2	55.6						

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:

	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	67.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes										Ref. Energy Levels Dist										Le			Ln		
ROADWAY NAME Segment	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor	Alpha Factor (1)	Barrier Attn. dB(A)	Vehicle Mix Medium Trucks Heavy Trucks		dB(A) CNEL	Day	Even	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total
Van Buren Boulevard n/o Project Driveway																																				
Future (Year 2023) AM Peak		6	0	23,992	45	60	0	0	1.8%	0.7%	69.4	####	####	####	378	150	22	5	32	14	69.3	77.6	82.1	-0.2	69.1	60.5	61.0	70.2	66.1	52.9	50.9	66.4	52.9	51.1	51.8	56.7
Future (Year 2023) PM Peak		6	0	28,200	45	60	0	0	1.8%	0.7%	70.1	####	####	####	444	176	26	6	38	16	69.3	77.6	82.1	-0.2	69.8	61.2	61.7	70.9	66.8	53.6	51.6	67.1	53.6	51.8	52.5	57.4
Future (Year 2023) plus Project AM Peak		6	0	24,840	45	60	0	0	1.8%	0.7%	69.6	####	####	####	391	155	23	5	34	14	69.3	77.6	82.1	-0.2	69.2	60.7	61.2	70.3	66.2	53.1	51.0	66.6	53.0	51.2	51.9	56.9
Future (Year 2023) plus Project PM Peak		6	0	29,904	45	60	0	0	1.8%	0.7%	70.4	####	####	####	471	187	27	6	40	17	69.3	77.6	82.1	-0.2	70.0	61.5	62.0	71.1	67.0	53.9	51.8	67.4	53.8	52.0	52.7	57.7
Van Buren Boulevard s/o Project Driveway																																				
Future (Year 2023) AM Peak		7	0	23,496	45	60	0	0	1.8%	0.7%	69.7	####	####	####	370	147	21	5	32	13	69.3	77.6	82.1	0.1	69.3	60.8	61.3	70.4	66.3	53.2	51.1	66.7	53.1	51.3	52.0	57.0
Future (Year 2023) PM Peak		7	0	23,432	45	60	0	0	1.8%	0.7%	69.6	####	####	####	369	146	21	5	32	13	69.3	77.6	82.1	0.1	69.3	60.8	61.3	70.4	66.3	53.2	51.1	66.6	53.1	51.3	52.0	57.0
Future (Year 2023) plus Project AM Peak		7	0	24,536	45	60	0	0	1.8%	0.7%	69.8	####	####	####	386	153	22	5	33	14	69.3	77.6	82.1	0.1	69.5	61.0	61.5	70.6	66.5	53.4	51.3	66.8	53.3	51.5	52.2	57.2
Future (Year 2023) plus Project PM Peak		7	0	28,672	45	60	0	0	1.8%	0.7%	70.5	####	####	####	451	179	26	6	39	16	69.3	77.6	82.1	0.1	70.2	61.6	62.1	71.3	67.2	54.1	52.0	67.5	54.0	52.2	52.9	57.9
Project Driveway No. 2 e/o Van Buren																																				
Future (Year 2023) AM Peak		2	0	360	25	30	0	0	1.8%	0.7%	48.5	280	46	35	6	2	0	0	0	0	59.4	71.1	78.7	2.2	45.9	40.8	44.4	49.0	43.0	33.2	34.2	43.9	29.8	31.3	35.2	37.5
Future (Year 2023) PM Peak		2	0	1,320	25	30	0	0	1.8%	0.7%	54.1	####	168	127	21	8	1	0	2	1	59.4	71.1	78.7	2.2	51.6	46.4	50.1	54.6	48.6	38.8	39.9	49.5	35.4	37.0	40.8	43.1
Future (Year 2023) plus Project AM Peak		2	0	1,368	25	30	0	0	1.8%	0.7%	54.3	####	174	131	22	9	1	0	2	1	59.4	71.1	78.7	2.2	51.7	46.6	50.2	54.8	48.8	39.0	40.0	49.7	35.6	37.1	41.0	43.3
Future (Year 2023) plus Project PM Peak		2	0	3,160	25	30	0	0	1.8%	0.7%	57.9	####	401	303	50	20	3	1	4	2	59.4	71.1	78.7	2.2	55.4	50.2	53.8	58.4	52.4	42.6	43.7	53.3	39.2	40.8	44.6	46.9
Project Driveway No. 2 w/o Van Buren																																				
Future (Year 2023) AM Peak		2	0	1,912	25	30	0	0	1.8%	0.7%	55.7	####	243	184	30	12	2	0	3	1	59.4	71.1	78.7	2.2	53.2	48.0	51.7	56.2	50.2	40.4	41.5	51.1	37.0	38.6	42.4	44.7
Future (Year 2023) PM Peak		2	0	3,000	25	30	0	0	1.8%	0.7%	57.7	####	381	288	47	19	3	1	4	2	59.4	71.1	78.7	2.2	55.1	50.0	53.6	58.2	52.2	42.4	43.5	53.1	39.0	40.5	44.4	46.7
Future (Year 2023) plus Project AM Peak		2	0	2,328	25	30	0	0	1.8%	0.7%	56.6	####	296	223	37	15	2	0	3	1	59.4	71.1	78.7	2.2	54.0	48.9	52.5	57.1	51.1	41.3	42.3	52.0	37.9	39.4	43.3	45.6
Future (Year 2023) plus Project PM Peak		2	0	3,000	25	30	0	0	1.8%	0.7%	57.7	####	381	288	47	19	3	1	4	2	59.4	71.1	78.7	2.2	55.1	50.0	53.6	58.2	52.2	42.4	43.5	53.1	39.0	40.5	44.4	46.7

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:

Total ADT Volumes	Day	Evening	Night
Medium-Duty Trucks	77.70%	12.70%	9.60%
Heavy-Duty Trucks	67.43%	5.05%	7.52%
	89.10%	2.84%	8.06%

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes										Ref. Energy Levels Dist										Le			Ln			
ROADWAY NAME	Land Use	Lanes	Median Width	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor (ft)	Alpha Factor (1)	Barrier Attn. dB(A)	Vehicle Mix		dB(A) CNEL	Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total A	MT	HT	Total A	MT	HT	Total			
Segment									Medium Trucks	Heavy Trucks																											
Van Buren Boulevard n/o Project Driveway																																					
Future (Year 2023) AM Peak		8	0	23,792	45	60	0	0	1.8%	0.7%	70.2	####	####	####	374	148	22	5	32	13	69.3	77.6	82.1	0.6	69.9	61.3	61.8	71.0	66.9	53.7	51.7	67.2	53.7	51.9	52.6	57.5	
Future (Year 2023) PM Peak		8	0	27,448	45	60	0	0	1.8%	0.7%	70.8	####	####	####	432	171	25	5	37	15	69.3	77.6	82.1	0.6	70.5	61.9	62.4	71.6	67.5	54.4	52.3	67.8	54.3	52.5	53.2	58.2	
Future (Year 2023) plus Project AM Peak		8	0	24,416	45	60	0	0	1.8%	0.7%	70.3	####	####	####	384	152	22	5	33	14	69.3	77.6	82.1	0.6	70.0	61.4	61.9	71.1	67.0	53.9	51.8	67.3	53.8	52.0	52.7	57.7	
Future (Year 2023) plus Project PM Peak		8	0	28,656	45	60	0	0	1.8%	0.7%	71.0	####	####	####	451	179	26	6	39	16	69.3	77.6	82.1	0.6	70.7	62.1	62.6	71.8	67.7	54.5	52.5	68.0	54.5	52.7	53.4	58.4	
Van Buren Boulevard s/o Project Driveway																																					
Future (Year 2023) AM Peak		8	0	23,632	45	60	0	0	1.8%	0.7%	70.2	####	####	####	372	147	21	5	32	13	69.3	77.6	82.1	0.6	69.8	61.3	61.8	71.0	66.8	53.7	51.6	67.2	53.7	51.8	52.6	57.5	
Future (Year 2023) PM Peak		8	0	22,912	45	60	0	0	1.8%	0.7%	70.0	####	####	####	361	143	21	5	31	13	69.3	77.6	82.1	0.6	69.7	61.2	61.7	70.8	66.7	53.6	51.5	67.0	53.5	51.7	52.4	57.4	
Future (Year 2023) plus Project AM Peak		8	0	24,352	45	60	0	0	1.8%	0.7%	70.3	####	####	####	383	152	22	5	33	14	69.3	77.6	82.1	0.6	70.0	61.4	61.9	71.1	67.0	53.8	51.8	67.3	53.8	52.0	52.7	57.6	
Future (Year 2023) plus Project PM Peak		8	0	28,696	45	60	0	0	1.8%	0.7%	71.0	####	####	####	452	179	26	6	39	16	69.3	77.6	82.1	0.6	70.7	62.1	62.6	71.8	67.7	54.6	52.5	68.0	54.5	52.7	53.4	58.4	
Project Driveway No. 3 e/o Van Buren																																					
Future (Year 2023) AM Peak		2	0	464	25	30	0	0	1.8%	0.7%	49.6	361	59	45	7	3	0	0	1	0	59.4	71.1	78.7	2.2	47.0	41.9	45.5	50.1	44.1	34.3	35.3	45.0	30.9	32.4	36.3	38.6	
Future (Year 2023) PM Peak		2	0	496	25	30	0	0	1.8%	0.7%	49.8	385	63	48	8	3	0	0	1	0	59.4	71.1	78.7	2.2	47.3	42.2	45.8	50.4	44.3	34.6	35.6	45.3	31.2	32.7	36.6	38.9	
Future (Year 2023) plus Project AM Peak		2	0	672	25	30	0	0	1.8%	0.7%	51.2	522	85	65	11	4	1	0	1	0	59.4	71.1	78.7	2.2	48.6	43.5	47.1	51.7	45.7	35.9	37.0	46.6	32.5	34.0	37.9	40.2	
Future (Year 2023) plus Project PM Peak		2	0	904	25	30	0	0	1.8%	0.7%	52.5	702	115	87	14	6	1	0	1	1	59.4	71.1	78.7	2.2	49.9	44.8	48.4	53.0	47.0	37.2	38.2	47.9	33.8	35.3	39.2	41.5	
Project Driveway No. 3 w/o Van Buren																																					
Future (Year 2023) AM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####
Future (Year 2023) PM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####
Future (Year 2023) plus Project AM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####
Future (Year 2023) plus Project PM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####

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Assumed 24-Hour Traffic Distribution:

	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	67.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

NOISE LEVEL CONTOURS - Existing Plus Project Weekday Off-Site ADT Volumes

											Traffic Volumes										Ref. Energy Level: Dist				Ld				Le				Ln					
ROADWAY NAME			Median	ADT	Design Dist. from		Barrier	Vehicle Mix			Day	Eve	Night	MTd	HTd	MTe	HTe	MTn	HTn	A	MT	HT	Adj	A	MT	HT	Total	A	MT	HT	Total	A	MT	HT	Total			
Segment	Land Use	Lanes	Width	Volume	Speed (mph)	Center to Receptor	Alpha Factor (1)	Attn. dB(A)	Medium Trucks	Heavy Trucks	dB(A) CNEL																											
Project Driveway No. 4 n/o Jackson Street																																						
Future (Year 2023) AM Peak		2	0	688	25	30	0	0	1.8%	0.7%	51.3	535	87	66	11	4	1	0	1	0	59.4	71.1	78.7	2.2	48.7	43.6	47.2	51.8	45.8	36.0	37.1	46.7	32.6	34.1	38.0	40.3		
Future (Year 2023) PM Peak		2	0	1,608	25	30	0	0	1.8%	0.7%	55.0	####	204	154	25	10	1	0	2	1	59.4	71.1	78.7	2.2	52.4	47.3	50.9	55.5	49.5	39.7	40.7	50.4	36.3	37.8	41.7	44.0		
Future (Year 2023) plus Project AM Peak		2	0	1,056	25	30	0	0	1.8%	0.7%	53.1	821	134	101	17	7	1	0	1	1	59.4	71.1	78.7	2.2	50.6	45.4	49.1	53.6	47.6	37.9	38.9	48.6	34.4	36.0	39.8	42.1		
Future (Year 2023) plus Project PM Peak		2	0	2,392	25	30	0	0	1.8%	0.7%	56.7	####	304	230	38	15	2	0	3	1	59.4	71.1	78.7	2.2	54.2	49.0	52.6	57.2	51.2	41.4	42.5	52.1	38.0	39.5	43.4	45.7		
Project Driveway No. 4 s/o Jackson Street																																						
Future (Year 2023) AM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	
Future (Year 2023) PM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	
Future (Year 2023) plus Project AM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	
Future (Year 2023) plus Project PM Peak		2	0	0	25	30	0	0	1.8%	0.7%	#NUM!	0	0	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	####	####	####	####	####	####	####	####	####	####	####	####	####	
Jackson Street s/o Project Driveway No. 4																																						
Future (Year 2023) AM Peak		5	0	5,280	25	30	0	0	1.8%	0.7%	62.3	####	671	507	83	33	5	1	7	3	59.4	71.1	78.7	4.4	59.7	54.6	58.2	62.8	56.8	47.0	48.0	57.7	43.6	45.1	49.0	51.3		
Future (Year 2023) PM Peak		5	0	6,864	25	30	0	0	1.8%	0.7%	63.4	####	872	659	108	43	6	1	9	4	59.4	71.1	78.7	4.4	60.9	55.7	59.3	63.9	57.9	48.1	49.2	58.8	44.7	46.3	50.1	52.4		
Future (Year 2023) plus Project AM Peak		5	0	5,416	25	30	0	0	1.8%	0.7%	62.4	####	688	520	85	34	5	1	7	3	59.4	71.1	78.7	4.4	59.8	54.7	58.3	62.9	56.9	47.1	48.2	57.8	43.7	45.2	49.1	51.4		
Future (Year 2023) plus Project PM Peak		5	0	7,136	25	30	0	0	1.8%	0.7%	63.6	####	906	685	112	45	6	1	10	4	59.4	71.1	78.7	4.4	61.0	55.9	59.5	64.1	58.1	48.3	49.3	59.0	44.9	46.4	50.3	52.6		
Jackson Street w/o Project Driveway No. 4																																						
Future (Year 2023) AM Peak		5	0	5,456	25	30	0	0	1.8%	0.7%	62.4	####	693	524	86	34	5	1	7	3	59.4	71.1	78.7	4.4	59.9	54.7	58.3	62.9	56.9	47.1	48.2	57.8	43.7	45.3	49.1	51.4		
Future (Year 2023) PM Peak		5	0	7,288	25	30	0	0	1.8%	0.7%	63.7	####	926	700	115	45	7	1	10	4	59.4	71.1	78.7	4.4	61.1	56.0	59.6	64.2	58.2	48.4	49.4	59.1	45.0	46.5	50.4	52.7		
Future (Year 2023) plus Project AM Peak		5	0	5,688	25	30	0	0	1.8%	0.7%	62.6	####	722	546	90	35	5	1	8	3	59.4	71.1	78.7	4.4	60.1	54.9	58.5	63.1	57.1	47.3	48.4	58.0	43.9	45.4	49.3	51.6		
Future (Year 2023) plus Project PM Peak		5	0	7,800	25	30	0	0	1.8%	0.7%	63.9	####	991	749	123	49	7	2	11	4	59.4	71.1	78.7	4.4	61.4	56.3	59.9	64.5	58.5	48.7	49.7	59.4	45.3	46.8	50.7	53.0		

(1) Alpha Factor: Coefficient of absorption relating to the effects of the ground surface. An alpha factor of 0 indicates that the site is an acoustically "hard" site such as asphalt. An alpha factor of 0.5 indicates that the site is an acoustically "soft" site such as vegetative ground cover.

Assumed 24-Hour Traffic Distribution:

	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

ATTACHMENT E

Roadway Data Worksheets

