Noise Study

for the

Arlington and Van Buren Plaza

7200 Arlington Avenue, Riverside, CA 92503

PREPARED FOR:

CCF PCG Riverside Plaza LLC 133 Penn Street Riverside, CA 90245

PREPARED BY:

Westlake Village Office 920 Hampshire Road, Suite A5 Westlake Village, CA 91361



Los Angeles Office 706 S. Hill Street, 11th Floor Los Angeles, CA 90014

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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 noisesensitive 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 noiseattenuation 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, constructionrelated 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



Project Site Location



SOURCE: McKently Malak Architects - October 2020

FIGURE 2



Proposed Site Plan

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

	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.

Table 1

^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.

EXAMPLES		DECIBELS $(dB)^{\ddagger}$	SUBJECTIVE EVALUATIONS
NEAR JET ENGINE		140	
THRESHOLD OF PAIN		130	DEAFENING
THRESHOLD OF FEELING- HARD ROCK BAND		120	
ACCELERATING MOTORCYCLE AT A FEW FEET AWAY*		110	
LOUD AUTO HORN AT 10' AWAY		100	
NOISY URBAN STREET			VERY LOUD
NOISY FACTORY	continuous exposure above 85db is likely to degrade the hearing of most people —	90 HEARI	NG PROTECTION RECOMMENDED
GAS LAWN MOWER		80	
FREIGHT TRAIN	Range	70	LOUD
NEAR FREEWAY AUTO TRAFFIC			
	of Speech	60	
AVERAGE OFFICE	ech	50	MODERATE
SOFT RADIO MUSIC IN APARTMENT		40	
AVERAGE RESIDENCE WITHOUT STEREO PLAYING			FAINT
AVERAGE WHISPER		20	
RUSTLE OF LEAVES IN WIND HUMAN BREATHING		10	VERY FAINT
THRESHOLD OF AUDIBILITY		0	
NOTE: 50' from motorcycle equals noise at a	about 2000' from a four-engine ie	t aircraft.	

SOURCE: Meridian Consultants, LLC - 2021



FIGURE 3

Common Noise Levels





Noise Attenuation by Barriers

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 polices to minimize the impacts of excessive noise levels throughout the community (City of Riverside 2018).

- Objective N-1Minimize 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-1.1Continue to enforce noise abatement and control measures
particularly within residential neighborhoods.
 - Policy N-1.2Require 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-1.4Incorporate 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-1.5Avoid locating noise-sensitive land uses in existing and
anticipated noise-impacted areas.Policy N-1.8Continue to consider noise concerns in evaluating all proposed
development decisions and roadway projects.Policy N 4.1Ensure that poice impacts generated by vehicular sources are
- Policy N-4.1Ensure 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.

	Day-Night Average Exterior Sound Level (CNEL dB)			
Land Use Category	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

 Table 2

 City of Riverside Land Use Compatibility for Community Noise Exposure

Source: City of Riverside 2018, Figure N-10 Note:

	Day-	Day-Night Average Exterior Sound Level (CNEL dB)					
	Normally	Conditionally	Normally	Conditionally			
Land Use Category	Acceptable	Acceptable	Unacceptable	Unacceptable			
A = Normally acceptable. Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional							

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. 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.

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

Table 3City of Riverside Exterior Noise Standards

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:

- 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**.

	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					

Table 4
City of Riverside Interior Noise Standards

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 onsite 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



Noise Monitoring Location (Site 1)





North





South



East



SOURCE: Google Earth - 2021

FIGURE 5b



Noise Monitoring Location (Site 2)







South







East



SOURCE: Google Earth - 2021

FIGURE 5c



Noise Monitoring Location (Site 3)





North





South



East



SOURCE: Google Earth - 2021

FIGURE 5d



Noise Monitoring Location (Site 4)



West

North



South



East



SOURCE: Google Earth - 2021

FIGURE 5e



Noise Monitoring Location (Site 5)

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).

	Ambient Noise Measurements						
					dBA		
Lo	cation Number/Description	Nearest Use	Time Period	Noise Source	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		

Table 5

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)

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

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).

Intersection No.Roadway SegmentAdjacent Land UseTime PeriodAverage Daily TripsExisting Roadway Noise Level (CKEL)Van Buren BoulevardNorth of Arlington Avenue South of Arlington AvenueCommercial CommercialAM28,4487.2.71South of Arlington Avenue South of Project Driveway No. 2 South of Project Driveway No. 2Commercial AMAM19,84068.04North of Project Driveway No. 2 South of Project Driveway No. 2Commercial AMAM19,96868.05North of Project Driveway No. 2 South of Project Driveway No. 3Commercial PMAM19,90468.06North of Project Driveway No. 3 South of Project Driveway No. 3Commercial PMAM19,90468.07PM23,82268.8AM19,90468.07PM23,82468.8AM19,64067.98South of Project Driveway No. 3 South of Project Driveway No. 3Commercial PMAM19,64067.99Motth of Project Driveway No. 3 South of Project Driveway No. 3Commercial PMAM16,19266.59AM16,09666.4PM18,85667.11East of Van Buren Boulevard West of Pegasus DriveCommercial PMAM16,36668.19West of Pegasus Drive West of Project Driveway No. 1Commercial PMAM16,13668.19West of Project Driveway No. 1Commercial PMAM </th <th></th> <th>Existing F</th> <th>Table 6 Roadway Noise</th> <th>e Levels</th> <th></th> <th></th>		Existing F	Table 6 Roadway Noise	e Levels		
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5 PM 23,824 68.8 South of Project Driveway No. 3 Commercial AM 19,640 67.9 Arlington Avenue PM 23,720 68.7 Arlington Avenue East of Van Buren Boulevard Commercial AM 16,192 66.5 1 East of Van Buren Boulevard Commercial AM 16,096 66.4 1 West of Van Buren Boulevard Commercial AM 16,096 66.4 2 East of Pegasus Drive Commercial AM 15,952 68.0 2 East of Pegasus Drive Commercial AM 16,136 68.1 2 West of Pegasus Drive Commercial AM 16,008 66.4 PM 18,032 68.6 AM 16,008 66.4 PM 18,032 68.6 AM 16,008 66.4 PM 18,032 68.6 AM 16,008 66.4 PM 18,032 67.0 AM 16,000 66.5		North of Project Drivoway No. 2	Commorcial	AM	19,792	68.0
South of Project Driveway No. 3 Commercial AM 19,640 67.9 Arlington Avenue PM 23,720 68.7 Arlington Avenue East of Van Buren Boulevard Commercial AM 16,192 66.5 1 East of Van Buren Boulevard Commercial AM 16,096 66.4 1 West of Van Buren Boulevard Commercial AM 16,096 66.4 PM 18,856 67.1 AM 15,952 68.0 2 East of Pegasus Drive Residential PM 17,720 68.5 West of Pegasus Drive Commercial AM 16,136 68.1 PM 18,032 68.6 AM 16,008 66.4 PM 18,032 68.6 AM 16,008 66.4 PM 18,032 68.6 AM 16,008 66.5 PM 18,152 67.0 AM 16,160 66.5 PM 18,368 67.0 AM 16,160 66.5 <td>F</td> <td>North of Project Driveway No. 5</td> <td>commercial</td> <td>PM</td> <td>23,824</td> <td>68.8</td>	F	North of Project Driveway No. 5	commercial	PM	23,824	68.8
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$\begin{array}{c cccc} & \ & \ & \ & \ & \ & \ & \ & \ & \ & $				PM	18,856	67.1
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$3 \qquad \begin{array}{c cccc} & East of Project Driveway No. 1 & Commercial & \hline PM & 18,152 & 67.0 \\ \hline & PM & 18,152 & 67.0 \\ \hline & AM & 16,160 & 66.5 \\ \hline & PM & 18,368 & 67.0 \\ \hline & PEgasus Drive & \\ \hline & \\ 2 & & \\ 2 & & \\ 2 & & \\ South of Arlington Avenue & \\ South of Arlington Avenue & \\ \hline & Residential & \hline & \\ \hline & AM & 552 & 51.1 \\ \hline & AM & 552 & 51.1 \\ \hline & AM & 552 & 51.1 \\ \hline & \\ \hline & AM & 552 & 51.1 \\ \hline & \\ \hline \hline & \\ \hline & \\ \hline \hline & \\ \hline \hline & \\ \hline & \\ \hline \hline \hline & \\ \hline \hline \hline & \\ \hline \hline \hline \hline$		west of Pegasus Drive	Commercial	PM	18,032	68.6
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West of Project Driveway No. 1 Commercial AM 16,160 66.5 PM 18,368 67.0 Pegasus Drive AM 592 51.4 2 North of Arlington Avenue Commercial AM 592 51.4 2 South of Arlington Avenue Residential AM 552 51.1	2	East of Project Driveway No. 1	commercial	PM	18,152	67.0
Pegasus Drive PM 18,368 67.0 2 North of Arlington Avenue Commercial AM 592 51.4 2 South of Arlington Avenue Residential AM 552 51.1	3	Mart of Duplost Duity N. 1	Commente	AM	16,160	66.5
2 North of Arlington Avenue Commercial AM 592 51.4 PM 1,104 54.2 South of Arlington Avenue Residential AM 552 51.1		west of Project Driveway No. 1	commercial	PM	18,368	67.0
North of Arlington Avenue Commercial <u>PM 1,104 54.2</u> 2 South of Arlington Avenue Residential <u>AM 552 51.1</u>	Pegasus Drive	2				
2 PM 1,104 54.2 South of Arlington Avenue Residential AM 552 51.1		North of Arliantan Avenue	Commercial	AM	592	51.4
AM 552 51.1	ſ	North of Arlington Avenue	commercial	PM	1,104	54.2
PM 776 52.6	Z			AM	552	51.1
		South of Arlington Avenue	Residential	PM	776	52.6

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

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						

Table 7 Typical Maximum Noise Levels for Project Construction Equipment

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 8Construction 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.

					•		0				
	Nearest Off-Site	Estim Sti	Significance								
Site	Building Structures	Vibratory Roller	Large Bulldozer	-		Jackhammer	Small bulldozer	Threshold (PPV ips)			
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			

Table 9 On-Site Construction Vibration Impacts—Building Damage

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

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

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

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						

Table 11Modeled Operational Exterior Noise Levels

Source: SoundPLAN

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


SOURCE: Google Earth - 2021

FIGURE 6



Operational Noise Level Contour Map

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.

			Future (2	Table : 023) Roadv	12 vay Noise Levels				
				_	e Daily Trips (ADTs)	Roadway Noise Levels (dBA)			
Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Future (2023)	Future (2023) plus Project	Future (2023)	Future (2023) plus Project	Difference (dBA)	Threshold Exceeded?
Van Buren Bo	ulevard								
	North of Arlington	Commercial	AM	34,216	34,624	74.7	74.8	+0.1	No
1	Avenue	Commercial	PM	37,544	38,344	75.1	75.2	+0.1	No
1	South of Arlington	Commonsial	AM	23,792	24,504	70.2	70.3	+0.1	No
	Avenue	Commercial	PM	24,288	29,552	70.3	71.1	+0.8	No
	North of Project Driveway No. 2	Common and a	AM	23,992	24,840	69.4	69.6	+0.2	No
4 —		Commercial	PM	28,200	29,904	70.1	70.4	+0.3	No
	South of Project	Commercial	AM	23,496	24,536	69.7	69.8	+0.1	No
	Driveway No. 2		PM	23,432	28,672	69.6	70.5	+0.9	No
	North of Project	a	AM	23,792	24,416	70.2	70.3	+0.1	No
-	Driveway No. 3	Commercial	PM	27,448	28,656	70.8	71.0	+0.2	No
5	South of Project		AM	23,632	24,352	70.2	70.3	+0.1	No
	Driveway No. 3	Commercial	PM	22,912	28,696	70.0	71.0	+0.1	No
Arlington Ave	nue								
	East of Van Buren	c	AM	19,208	19,672	68.2	68.3	+0.1	No
4	Boulevard	Commercial	PM	21,096	22,032	68.6	68.8	+0.2	No
1	West of Van Buren	Comm. i l	AM	18,992	19,648	67.9	68.0	+0.1	No
	Boulevard	Commercial	PM	21,808	23,128	68.5	68.7	+0.2	No
			AM	18,328	19,016	69.5	69.7	+0.2	No
_	East of Pegasus Drive	Residential	PM	20,016	21,352	69.9	70.2	+0.3	No
2		a	AM	18,504	19,056	69.6	69.7	+0.1	No
	West of Pegasus Drive	Commercial	PM	20,352	21,416	70.0	70.2	+0.2	No

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

				Average Daily Trips (ADTs)		Roadway Noise Levels (dBA)			
Intersection No.	Roadway Segment	Adjacent Land Use	Time Period	Future (2023)	Future (2023) plus Project	Future (2023)	Future (2023) plus Project	Difference (dBA)	Threshold Exceeded?
Project Drivew	vay No. 4								
North of Inchase Church	Common and al	AM	688	1,056	51.3	53.1	+1.8	No	
c	North of Jackson Street	Commercial	PM	1,608	2,392	55.0	56.7	+1.7	No
6			AM	N/A	N/A	N/A	N/A	N/A	N/A
	South of Jackson Street	Commercial	PM	N/A	N/A	N/A	N/A	N/A	N/A
Jackson Street	:								
	East of Project	De side atist	AM	5,280	5,416	62.3	62.4	+0.1	No
C	Driveway No. 4	Residential	PM	6,864	7,136	63.4	63.6	+0.2	No
6	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

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

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

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

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

ATTACHMENT B

Construction Noise Worksheet

B.1 Demolition

Roadway Construction Noise Model (RCNM), Version 1.1

Report dat

Case Desci Demolition

				Receptor #1								
	Baselines	(dBA)										
Descriptio Land Use	Daytime	Evenin	g Ni	ight								
Site 1 Residentia			3.3	58.3								
			Eq	quipment								
			Sp	pec Actual	Receptor	Estimated						
	Impact		Ln	max Lmax	Distance	Shielding						
Description	Device	Usage(%) (d	IBA) (dBA)	(feet)	(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						
			Re	esults								
	Calculated	d (dBA)		Noise Lii	nits (dBA)					Noise Lin	nit Exceedar	nce (dBA)
			Da	ау	Evening		Night		Day		Evening	
Equipment	*Lmax	Leq	Ln	nax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	70.3	6	3.3 N/	/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	62.4	5	3.4 N/	/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3	5	4.3 N/	/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	58.3	5	4.3 N/	/A N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.3		5.3 N/	-	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

			Equipme	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(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 Limi			imits (dBA)	mits (dBA) N					bise Limit Exceedance (dBA)			
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	74	67 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	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	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	74	69 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Night

Lmax

N/A

N/A

N/A

N/A

N/A

Leq

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

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

	Calculate	culated (dBA) Noise Limits (dBA)								Noise L	imit Exceeda	nce (dBA)	1	
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	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 L	max is the Loud	est value.										

---- Receptor #4 ----

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

			Equipme	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(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											
	Calculated (dBA	()	Noise L	imits (dBA)					Noise L	imit Exceed	ance (dBA))	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	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 Lma	ax is the Loude	st value.										

---- Receptor #5 ----Baselines (dBA) Descriptio Land Use Daytime Evening Night

Site 5 Residentia 56.3 56.3 56.3

			Equipm	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(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											
	Calculated (dB	BA)	Noise L	imits (dBA)					Noise L	imit Exceed	ance (dBA))	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leo	q Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	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.

B.2

Grading

Roadway Construction Noise Model (RCNM), Version 1.1

Report dat

Case Desci Grading

		<i>(</i>)= -)	Recep	tor #1		
	Baselines	. ,				
Descriptio Land Use	Daytime	Evening	Night			
Site 1 Residenti	a 58.3	58.3	58.3			
			Equipmer	nt		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(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			
	Calculate	d (dBA)		Noise Lim	its (dBA)	

		Results											
	Calculated (dBA)		Noise Li	mits (dBA)					Noise L	imit Exceed	ance (dBA)	j	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
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	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	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	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	N/A
	*Calculated Lmax	k is the Loude	st value.										

---- Receptor #2 ----

Baselines (dBA) Descriptio Land Use Daytime Evening Night

Site 2 Residentia 65.1 65.1 65.1

			Equipme	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(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 (dE	BA)	Noise L	imits (dBA)					Noise L	imit Exceed	ance (dBA)	j	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leo	q Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
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	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	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	74	69 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 Lr	navic the Loude	set value										

*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

			Equipme	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(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			

			Results											
	Calculate	ed (dBA)		Noise Li	mits (dBA)					Noise Li	imit Exceeda	ance (dBA)		
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	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 L	max is the Loud	est value.										

---- Receptor #4 ----

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

			Equipme	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(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											
	Calculated (dBA	()	Noise L	imits (dBA)					Noise L	imit Exceed	ance (dBA))	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	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 Lma	ax is the Loude	st value.										

---- Receptor #5 ----Baselines (dBA) Descriptio Land Use Daytime Evening Night

Site 5 Residentia 56.3 56.3 56.3

			Equipm	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(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											
	Calculated (dB	BA)	Noise L	imits (dBA)					Noise L	imit Exceed	ance (dBA))	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leo	q Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	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.

B.3

Building Construction

Roadway Construction Noise Model (RCNM), Version 1.1

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Case Desci Building Construction

			Recept	tor #1		
	Baselines	(dBA)				
Descriptio Land Use	Daytime	Evening	Night			
Site 1 Residentia	a 58.3	58.3	58.3			
			Equipmen	t		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(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

		Results											
	Calculated (dBA)		Noise Li	mits (dBA)					Noise Li	mit Exceed	ance (dBA)	1	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	61.3 53	3.3 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	1.7 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	1.7 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	4.3 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	4.3 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	5.7 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 i	is the Loude	st value.										

0

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

	Impact		Equipme Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(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											
	Calculated (dBA	A)	Noise L	imits (dBA)					Noise L	imit Exceed	ance (dBA))	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	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 Lm	ax is the Loude	est value.										

---- Receptor #3 ----

Baselines (dBA) Descriptio Land UseDaytimeEveningNightSite 3Residentia49.249.249.2

			Equipme Spec	ent Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(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 (dB	A)	Noise L	imits (dBA)					Noise L	imit Exceed	ance (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	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	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	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	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	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----Baselines (dBA) Daytime ۲۰ Descriptio Land UseDaytimeEveningNightSite 4Residentia69.369.369.3

			Equipme	nt		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	1180	0
Forklift	No	40		85	1180	0
Forklift	No	40		85	1180	0
Backhoe	No	40		77.6	1180	0
Backhoe	No	40		77.6	1180	0

		Results											
	Calculated (dBA	l)	Noise Li	mits (dBA)					Noise Li	imit Exceed	ance (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	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	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	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	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	N/A
	*Calculated Lma	ax is the Loude	st value.										

---- Receptor #5 ----

Baselines (dBA)

Descriptio Land UseDaytimeEveningNightSite 5Residentia56.356.356.3

			Equipme	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Crane	No	16		80.6	930	0
Forklift	No	40		85	930	0
Forklift	No	40		85	930	0
Backhoe	No	40		77.6	930	0
Backhoe	No	40		77.6	930	0

		Results											
	Calculated (dBA)		Noise Li	mits (dBA)					Noise Li	imit Exceed	ance (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 4	7.2 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	59.6 5	5.6 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Forklift	59.6 5	5.6 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 4	8.2 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 4	8.2 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	59.6 5	9.6 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	*Calculated Lmax	is the Loude	st value.										

B.4

Paving

Roadway Construction Noise Model (RCNM), Version 1.1

Report dat

Case Desci Paving

		Red	eptor #1								
	Baselines (dBA)									
Descriptio Land Use	Daytime Eve	ning Night									
Site 1 Residenti	a 58.3	58.3 5	8.3								
		Equipr	nent								
		Spec	Actual	Receptor	Estimated						
	Impact	Lmax	Lmax	Distance	Shielding						
Description	Device Usa	ge(%) (dBA)	(dBA)	(feet)	(dBA)						
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						
		Result	5								
	Calculated (dB	A)	Noise Lim	its (dBA)					Noise Lin	nit Exceeda	nce (dBA)
		Day		Evening		Night		Day		Evening	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Drum Mixer	60.7	57.7 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	57.9	54.9 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	60.7	53.7 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
				· · ·	· · · ·	· · ·	· · ·	· · ·	· · · ·	· · ·	· · · ·

---- Receptor #2 ----

N/A

N/A

N/A

N/A

N/A

N/A

N/A

Baselines (dBA) Descriptio Land Use Daytime Evening Night

60.7

Total

Site 2 Residentia 65.1 65.1 65.1

			Equipme	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
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

61.5 N/A

*Calculated Lmax is the Loudest value.

		Results											
	Calculated (dB	A)	Noise L	imits (dBA)					Noise L	imit Exceed	ance (dBA))	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Drum Mixer	64.4	61.4 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	61.7	58.6 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	64.4	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
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	64.4	65.2 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	*Coloulated In	anvic tha Lauda	at value										

N/A

N/A

Night

Lmax

N/A

N/A

N/A

N/A

N/A

Leq

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

			Equipm	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
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											
	Calculate	ed (dBA)		Noise Li	mits (dBA)					Noise Li	imit Exceeda	ance (dBA)		
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq

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 L	max is the Loud	est value.										

---- Receptor #4 ----

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

			Equipme	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(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											
	Calculated (dBA	.)	Noise L	imits (dBA)					Noise L	imit Exceed	ance (dBA))	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	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 Lma	ax is the Loude	st value.										

---- Receptor #5 ----

Baselines (dBA)DescriptioLand UseDaytimeEveningNightSite 5Residentia56.356.356.3

			Equipme	ent		
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(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											
	Calculated (dl	BA)	Noise L	imits (dBA).					Noise L	imit Exceed	ance (dBA))	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Le	q Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	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.

B.5

Architectural Coating

Roadway Construction Noise Model (RCNM), Version 1.1

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Case Desci Architectural Coating

Descriptio Land Use Site 1 Residenti	Baselines (dBA) Daytime Evening a 58.3 58.	Receptor #1 Night 3 58.3								
Description Compressor (air)	Impact Device Usage(% No 4	Equipment Spec Actual Lmax Lmax) (dBA) (dBA) 0 77.	Receptor Estim Distance Shield (feet) (dBA) 7 460	ding						
Equipment Compressor (air) Total		Day Lmax Leq 4 N/A N/A 4 N/A N/A	nits (dBA) Evening Lmax Leq N/A N/A N/A N/A	Night Lmax N/A N/A	Leq N/A	No Day Lmax Le N/A N/ N/A N/	A N/A		Night Lmax N/A N/A	Leq N/A N/A
Descriptio Land Use Site 2 Residenti	Baselines (dBA) Daytime Evening a 65.1 65.	Receptor #2 Night 1 65.1								
Description Compressor (air)	Impact Device Usage(% No 4	Equipment Spec Actual Lmax Lmax) (dBA) (dBA) 0 77.	Receptor Estim Distance Shield (feet) (dBA) 7 300	ding						
Equipment Compressor (air) Total	62.1 58.	Day Lmax Leq 1 N/A N/A 1 N/A N/A	nits (dBA) Evening Lmax Leq N/A N/A N/A N/A	Night Lmax N/A N/A	Leq N/A	No Day Lmax Le N/A N/ N/A N/	A N/A		Night Lmax N/A N/A	Leq N/A N/A
Descriptio Land Use Site 3 Residenti	*Calculated Lmax is Baselines (dBA) Daytime Evening a 49.2 49.	Receptor #3 Night								
Description Compressor (air)	Impact Device Usage(% No 4	Equipment Spec Actual Lmax Lmax) (dBA) (dBA) 0 77.	Receptor Estim Distance Shield (feet) (dBA) 7 740	ding						
Equipment Compressor (air) Total		Results Noise Lir Day Lmax Leq 3 N/A N/A 3 N/A N/A	nits (dBA) Evening Lmax Leq N/A N/A N/A N/A	Night Lmax N/A N/A	Leq N/A	No Day Lmax Le N/A N/ N/A N/	A N/A	Leq	Night Lmax N/A N/A	Leq N/A N/A
Descriptio Land Use	*Calculated Lmax is Baselines (dBA) Daytime Evening	the Loudest value. Receptor #4 Night				,. I v j				
Site 4 Residenti Description Compressor (air)	Impact Device Usage(%	Equipment Spec Actual Lmax Lmax	Receptor Estim Distance Shield (feet) (dBA) 7 1180	ding						

		Results											
	Calculated (dBA)		Noise Li	mits (dBA)					Noise L	imit Exceed	ance (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 Loude	st value.										

---- Receptor #5 ----Baselines (dBA) ;e Davtime 「 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)	(dBA)	(feet)	(dBA)			
Compressor (air)	No	40		77.7	930	0			

		Results											
	Calculated (dBA)		Noise Li	mits (dBA)					Noise L	imit Exceed	ance (dBA))	
		Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	52.3	48.3 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	52.3	48.3 N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	*Calculated Lmax	x is the Loude	est value.										

ATTACHMENT C

Construction Vibration Worksheet

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.

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.

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.

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.

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.

ATTACHMENT D

Roadway Data Worksheets

D.1

Existing Project

Pro	ject Name: Arling	ton &	Van				rev. (Da	ite)										
	Peak Hour and F							Ĺ			1	l		If Peak Hour = 69	6 of ADT, Scalir	ng Factor = 16.66	57	
														If Peak Hour = 79	6 of ADT, Scalir	ng Factor = 14.28	36	
	Intersection:	1					1				1	İ		If Peak Hour = 89	6 of ADT. Scalir	na Factor = 12.5		
	Van Buren Boulevard and Arlington Avenue													If Peak Hour = 9% of ADT, Scaling Factor = 11.111				
			Ŭ											If Peak Hour = 10% of ADT, Scaling Factor = 10				
					Van Bu	iren Bo	ulevard									ADT		
					Southbound									Road	Van Buren	Boulevard	Arlingtor	Avenue
						right	through	left						Leg	North of	South of	East of	West of
					Existing (Year 20	314	890	378						Cross Street	Arlingtor	Avenue	Van Buren	Boulevard
					Existing (Year 20	489	1,341	476						Existing (Year 20	28,448.0	19,840.0	16,192.0	16,096.0
					Existing plus Pro	314	909	388						Existing (Year 20	31,984.0	24,144.0	18,184.0	18,856.0
					Existing plus Pro		1,375	493						Existing plus Pro	28,856.0	20,552.0	16,656.0	16,752.0
					Existing plus Am		943	401						Existing plus Pro	32,784.0	25,600.0	19,120.0	20,176.0
		-			Existing plus Am		1,421	505		-				Existing plus Am	30,160.0	21,024.0	17,168.0	17,056.0
					Existing plus Pro		962	411						Existing plus Am	33,904.0	25,592.0	19,288.0	19,984.0
					Existing plus Pro	518	1,455	522						Existing plus Pro	30,568.0	21,736.0	17,632.0	17,712.0
	Eastbound								Westbound					Existing plus Pro	34,704.0	27,048.0	20,224.0	21,304.0
			through							<u>right</u>	through							
	Existing (Year 20	515	512	140					Existing (Year 20	430	407	155						
Avenue	Existing (Year 20	445	520	207					Existing (Year 20		513	225						
e le	Existing plus Pro	515	531	159		N			Existing plus Pro	437	422	162						
I₹	Existing plus Pro	445	554	241	W		E		Existing plus Pro	379	545	242						
5	Existing plus Am	546	543	148		S			Existing plus Am	456	431	164						
đ	Existing plus Am	472	551	219					Existing plus Am		544	239						
Arlington	Existing plus Pro	546	562	167					Existing plus Pro		446	171						
Ī₹	Existing plus Pro	472	585	253					Existing plus Pro	401	576	256						
-					Northbound													
-						left	through							+				
-					Existing (Year 20		1,029	142						+ +				
					Existing (Year 20		885	177										
-					Existing plus Pro		1,044	142			+							
-					Existing plus Pro		917 1091	177 151										
-					Existing plus Am Existing plus Am		938	151			+			+				
-					Existing plus Am Existing plus Pro		938	188										
							970	188										
-					Existing plus Pro	259	970	100						+				
-											+			+ +				
-											+							
L	1					1	1	I			1	I						
Existing plus Project plus Ambient AM Peak 2 0 30,568 55 60 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 72.9 69.0 54.7 52.1 69.3 55.8 52.9 5 Existing plus Project plus Ambient PM Peak 2 0 34,704 55 60 0 1.8% 0.7% 72.6 #### ##### 481 191 28 6 41 17 72.7 79.9 83.8 -0.8 72.6 62.3 62.3 72.7 69.0 54.7 52.1 69.8 56.4 53.4 52.7 69.8 56.4 53.4 52 5 Van Buren Bouleward sto Arlington Avenue Existing (Year 2020) AM 2 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<	53.1 59.4 53.2 59.1 52.8 58.7 53.3 59.2 53.0 58.9 53.5 59.4 53.0 58.9																	
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Segment Land Use Land Use Land Use Land Use (mph) Receptor Factor (1 dB(A) Trucks CNEL CV Valuer Boulevard n/o Arlington Avenue 2 0 28,448 60 60 0 1.8% 0.7% 72.7 #### ##### #### 488 177 26 6 39 16 74.2 80.8 84.5 -0.8 72.6 62.5 62.5 73.0 69.2 54.9 52.3 65.5 65.0 52.1 70.0 56.6 52.2 52.5 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 51.1 55.0 52.1 70.0 56.6 52.5 56.0 51.1 56.0 51.1 57.0 52.4 52.5 62.5 52.0 62.6 62.3 73.4 63.6 52.4 63.6 52.1 70.0 56.6 52.4 56.0 52.1 70.0 70.6 52.1 70.0 </th <th>53.1 59.4 53.2 59.1 52.8 58.7 53.3 59.2 53.0 58.9 53.5 59.4 53.0 58.9</th>	53.1 59.4 53.2 59.1 52.8 58.7 53.3 59.2 53.0 58.9 53.5 59.4 53.0 58.9																	
Van Buren Boulevard n/o Arlington Avenue 2 0 28,448 60 60 0 1.8% 0.7% 72.7 ####	53.2 59.1 52.8 58.7 53.3 59.2 53.0 58.9 53.5 59.4 53.0 58.9																	
Existing (Year 2020) AM 2 0 28,448 60 60 0 1.8% 0.7% 72.7 #### ##### ##### #### 48 177 26 6 39 16 74.2 80.8 84.5 -0.8 72.8 62.6 62.3 73.5 69.8 50.5 52.1 70.0 56.6 53.2 55 Existing plus Project AM Peak 2 0 31,864 55 60 0 1.8% 0.7% 72.1 #### #### ##### 43 19 29 6 43 18 72.7 79.9 83.8 -0.8 72.6 62.5 62.5 73.0 69.5 50.0 51.0 52.6 52.6 53.0 60.5 52.6 52.6 53.0 60.5 52.6	53.2 59.1 52.8 58.7 53.3 59.2 53.0 58.9 53.5 59.4 53.0 58.9																	
Existing (Year 2020) PM 2 0 31,984 55 60 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 50.0 53.1 55 Existing plus Project PM Peak 2 0 32,784 55 60 0 1.8% 0.7% 71.8 #### ##### ###<	53.2 59.1 52.8 58.7 53.3 59.2 53.0 58.9 53.5 59.4 53.0 58.9																	
Existing plus Project AM Peak 2 0 28,856 55 60 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 55 55.6 56.6	52.8 58.7 53.3 59.2 53.0 58.9 53.5 59.4 53.0 58.9																	
Existing plus Project PM Peak 2 0 32,784 55 60 0 1.8% 0.7% 72.3 #### ##### ##### #### #### #### 516 20.4 30 7 44 18 72.7 79.9 83.8 -0.8 72.3 62.6 62.6 73.2 69.3 50.5 52.4 69.6 56.1 53.2 5 Existing plus Ambient AM Peak 2 0 30,160 55 60 0 1.8% 0.7% 72.0 #### ##### #### 475 18 27 6 41 17 72.7 79.9 83.8 -0.8 72.0 62.2 62.8 62.6	53.3 59.2 53.0 58.9 53.5 59.4 53.0 58.9																	
Existing plus Ambient AM Peak 2 0 30,160 55 60 0 1.8% 0.7% 72.0 #### ##### #### #### #### #### #### #	53.0 58.9 53.5 59.4 53.0 58.9																	
Existing plus Ambient PM Peak 2 0 33,904 55 60 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 52.5 26.6 69.7 56.3 53.3 5 Existing plus Ambient PM Peak 2 0 30,568 55 60 0 1.8% 0.7% 72.6 #### ##### ### ####	53.5 59.4 53.0 58.9																	
Existing plus Project plus Ambient AM Peak 2 0 30,568 55 60 0 1.8% 0.7% 72.0 #### ##### ##### ##### ##### ##### #####	53.0 58.9																	
Existing plus Project plus Ambient PM Peak 2 0 34,704 55 60 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 5 Van Buren Boulevard s'o Arlington Avenue Existing (Year 2020) AM 2 0 19.840 45 60 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 55.3																		
Van Buren Boulevard sto 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 5	53.6 59.5																	
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 5																		
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 5																		
	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 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 5	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 5	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 5	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 5																		
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 5	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 5	51.7 56.7																	
Arlington Avenue e/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 4	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 5	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 4	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 5	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 4	49.9 54.3																	
Existing plus Ambient PM Peak 4 0 19,288 40 55 0 0 1.8% 0.7% 672 #### ##### 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 5	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 5	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 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 4	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 5	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 4	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 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 4	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 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 5	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 5	00.0 04.0																	

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%

Pro	ject Name: Arling	ton &	Van				rev. (Da	te)										
	Peak Hour and P													If Peak Hour = 69	6 of ADT, Scali	ng Factor = 16.6	67	
														If Peak Hour = 79	6 of ADT, Scali	ng Factor = 14.2	36	
	Intersection: 2												1	If Peak Hour = 89	6 of ADT, Scali	ng Factor = 12.5		
	Pegasus Drive and	d Arling	gton Ave	nue										If Peak Hour = 99	6 of ADT, Scali	ng Factor = 11.1	11	
														If Peak Hour = 10				
					Peg	asus D	Drive									ADT		
					Southbound									Road	Pegası	is Drive	Arlingtor	Avenue
						right	through	left						Leg	North of	South of	East of	West of
					Existing (Year 20	4	0	7						Cross Street	Arlingtor	Avenue	Pegasu	s Drive
					Existing (Year 20	27	0	18						Existing (Year 20	592.0	552.0	15,952.0	16,136.0
					Existing plus Pro	4	0	7						Existing (Year 20	1,104.0	776.0	17,720.0	18,032.0
					Existing plus Pro		0	18						Existing plus Pro	592.0	688.0	16,640.0	16,688.0
					Existing plus Am		0	7						Existing plus Pro	1,104.0	1,048.0	19,056.0	19,096.0
					Existing plus Am	29	0	19						Existing plus Am	616.0	584.0	16,904.0	17,096.0
					Existing plus Pro	4	0	7						Existing plus Am	1,176.0	824.0	18,784.0	19,120.0
					Existing plus Pro	29	0	19						Existing plus Pro	616.0	720.0	17,592.0	17,648.0
	Eastbound								Westbound					Existing plus Pro	1,176.0	1,096.0	20,120.0	20,184.0
		<u>left</u>	through							<u>right</u>	through	left						
	Existing (Year 20	41	960	14					Existing (Year 20		974	3						
en	Existing (Year 20	60	1,087	31					Existing (Year 20		1,030	18						
Avenue	Existing plus Pro	41	989	14		Ν			Existing plus Pro		1,014	13						
≷	Existing plus Pro	60	1,152	31	W		E		Existing plus Pro		1,098	35						
5	Existing plus Am	43	1,018	15		S			Existing plus Am		1,032	3						
đ	Existing plus Am	64	1,152	33					Existing plus Am		1,092	19						
Arlington	Existing plus Pro	43	1,047	15					Existing plus Pro		1,072	13						
Ā	Existing plus Pro	64	1,217	33					Existing plus Pro	35	1160	36						
					Northbound													
						left		<u>right</u>										
L					Existing (Year 20	24	0	28					I					
					Existing (Year 20	19	0	29										
L					Existing plus Pro		0	35					I					
L					Existing plus Pro		0	46										
					Existing plus Am		0	30										
	-				Existing plus Am		0	31										
					Existing plus Pro		0	37										
					Existing plus Pro	20	0	48					I					
-																		
													1					
L																		

										_ Traffi	ic Volu	mes						Ref. E	nergy L	evels Di	st Ld				Le			Lr	ı			
					Dist. from			hicle Mix																								
ROADWAY NAME		Median			Center tc Al			um Heavy		Day	Eve	Night M	Td HT	d MT	e HTe	MTn	HTn	A	MT H	IT Ac	ijΑ	M	т нт	Total	Α	MT I	нт т	Total A	MI	г н	T Total	
Segment	Land Use Lanes	s Width	Volume	(mph)	Receptor Fact	or(1 dB	A) Truc	ks Trucks	S CNEL	_																						
Pegasus Drive n/o Arlington Avenue																																
Existing (Year 2020) AM	2	0	592	25	20	0 0			51.4	460	75	57 9		1	0	1	0														8.2 40.5	
Existing (Year 2020) PM	2	0	1,104	25	20	0 0			54.2				7 7	1	0	1	1														0.9 43.2	
Existing plus Project AM Peak	2	0	592	25	20	0 0	1.89	6 0.7%	51.4		75	57 9	94	1	0	1	0														8.2 40.5	
Existing plus Project PM Peak	2	0	1,104	25	20	0 0	1.8	6 0.7%	54.2	858	140	106 1	7 7	1	0	1	1	59.4	71.1	78.7 3	.1 51	1.6 4	5.5 50.	1 54.7	48.7	38.9	39.9	49.6 3	5.5 37	7.0 4	0.9 43.2	2
Existing plus Ambient AM Peak	2	0	616	25	20	0 0	1.8	6 0.7%	51.6	479	78	59 1	0 4	1	0	1	0	59.4	71.1	78.7 3	.1 49	9.1 4	3.9 47.	6 52.1	46.1	36.4	37.4	47.1 3	2.9 34	1.5 3	8.3 40.6	j –
Existing plus Ambient PM Peak	2	0	1,176	25	20	0 0			54.4	914		113 1	9 7	1	0	2	1	59.4	71.1	78.7 3	.1 51	1.9 4	6.7 50.	4 54.9	48.9	39.2	40.2	49.9 3	5.7 37	7.3 4	1.1 43.4	ł
Existing plus Project plus Ambient AM Peak	2	0	616	25	20	0 0			51.6		78		0 4	1	0	1	0	59.4	71.1	78.7 3	.1 49	9.1 4	3.9 47.	6 52.1	46.1	36.4	37.4	47.1 3	2.9 34	1.5 3	8.3 40.6	i
Existing plus Project plus Ambient PM Peak	2	0	1,176	25	25	0 0	1.8	6 0.7%	54.4	914	149	113 1	9 7	1	0	2	1	59.4	71.1	78.7 3	.1 51	1.9 4	6.7 50.	4 54.9	48.9	39.2	40.2	49.9 3	5.7 37	7.3 4	1.1 43.4	ł
Pegasus Drive s/o Arlington Avenue																																
Existing (Year 2020) AM	2	0	552	25		0 (1.8	6 0.7%	51.1	429	70	53 9	93	1	0	1	0	59.4	71.1	78.7 3	.1 48	3.6 4	3.5 47.	1 51.7	45.6	35.9	36.9	46.6 3	2.5 34	1.0 3	7.9 40.2	2
Existing (Year 2020) PM	2	0	776	25	25	0 0	1.8	6 0.7%	52.6	603	99	74 1	2 5	1	0	1	0	59.4	71.1	78.7 3	.1 50).1 4	4.9 48.	6 53.1	47.1	37.4	38.4	48.1 3	3.9 35	5.5 3	9.3 41.6	;
Existing plus Project AM Peak	2	0	688	25	20	0 0	1.8	6 0.7%	52.1	535	87	66 1	1 4	1	0	1	0	59.4	71.1	78.7 3	.1 49	9.6 4	4.4 48.	1 52.6	46.6	36.8	37.9	47.5 3	3.4 35	5.0 3	8.8 41.1	
Existing plus Project PM Peak	2	0	1,048	25	25	0 0	1.8	6 0.7%	53.9	814	133	101 1	6 7	1	0	1	1	59.4	71.1	78.7 3	.1 51	1.4 4	5.2 49.	9 54.4	48.4	38.7	39.7	49.4 3	5.2 36	6.8 4	0.6 42.9)
Existing plus Ambient AM Peak	2	0	584	25	20	0 0	1.8	6 0.7%	51.4	454	74	56 9	94	1	0	1	0	59.4	71.1	78.7 3	.1 48	3.9 4	3.7 47.	3 51.9	45.9	36.1	37.2	46.8 3	2.7 34	1.3 3	8.1 40.4	ł
Existing plus Ambient PM Peak	2	0	824	25	20	0 0	1.8	6 0.7%	52.9	640	105	79 1	3 5	1	0	1	0	59.4	71.1	78.7 3	.1 50).4 4	5.2 48.	8 53.4	47.4	37.6	38.7	48.3 3	4.2 35	5.7 3	9.6 41.9	ł
Existing plus Project plus Ambient AM Peak	2	0	720	25	20	0 0	1.89	6 0.7%	52.3	559	91	69 1	1 4	1	0	1	0	59.4	71.1	78.7 3	.1 49	9.8 4	4.6 48.	2 52.8	46.8	37.0	38.1	47.7 3	3.6 35	5.2 3	9.0 41.3	j.
Existing plus Project plus Ambient PM Peak	2	0	1,096	25	25	0 0	1.8	6 0.7%	54.1	852	139	105 1	7 7	1	0	1	1	59.4	71.1	78.7 3	.1 51	1.6 4	5.4 50.	1 54.6	48.6	38.9	39.9	49.6 3	5.4 37	7.0 4	0.8 43.1	
Arlington Avenue e/o Pegasus Street																																
Existing (Year 2020) AM	4	0	15,952	40	.0	0 (68.0		#####				53	22															1.2 55.7	
Existing (Year 2020) PM	4	0	17,720	40		0 0			68.5		#####			1 16	6 4	24															1.6 56.1	
Existing plus Project AM Peak	4	0	16,640	40	10	0 0			68.2		#####			4 15	53	23	9														1.4 55.8	
Existing plus Project PM Peak	4	0	19,056	40		0 0			68.8	#####	######		00 11	9 17	4	26															1.9 56.4	
Existing plus Ambient AM Peak	4	0	16,904	40		0 0			68.3	#####	* #####	#### 2		5 15	53	23															1.4 55.9	
Existing plus Ambient PM Peak	4	0	18,784	40	10	0 0			68.7		#####			7 17	4	25	11														1.9 56.4	
Existing plus Project plus Ambient AM Peak	4	0	17,592	40		0 0			68.5	SS:	#####					24															1.6 56.1	
Existing plus Project plus Ambient PM Peak	4	0	20,120	40	40	0 0	1.8	6 0.7%	69.0	#####	#####	#### 3	17 12	5 18	3 4	27	11	67.4	76.3	81.2 1	.4 68	3.4 6	0.6 61.	4 69.8	65.5	53.0	51.2	65.9 5	2.3 51	.1 5	2.2 56.7	ć
Arlington Avenue w/o Pegasus Street																																
Existing (Year 2020) AM	4	0	16,136	40	40	0 0	1.8		68.1	#####	#####		54 10	1 15	53	22	9														1.2 55.7	
Existing (Year 2020) PM	4	0	18,032	40		0 0			68.6	#####	#####	#### 2		2 16	6 4	24	10														1.7 56.2	
Existing plus Project AM Peak	4	0	16,688	40	10	0 0			68.2		#####	mm 20	63 10	4 15	53	23	9														1.4 55.8	
Existing plus Project PM Peak	4	0	19,096	40		0 0		6 0.7%	68.8		#####	#### 30	01 11	9 17	4	26															2.0 56.4	
Existing plus Ambient AM Peak	4	0	17,096	40	10	0 0			68.3		#####	#### 2			3 3	23															1.5 56.0	
Existing plus Ambient PM Peak	4	0	19,120	40		0 0			68.8		#####	#### 30	01 11	9 17	4	26															2.0 56.4	
Existing plus Project plus Ambient AM Peak	4	0	17,648	40		0 0			68.5		#####				6 4	24															1.6 56.1	
Existing plus Project plus Ambient PM Peak	4	0	20,184	40	40	0 0	1.8	6 0.7%	69.1	#####	#####	#### 3	18 12	6 18	3 4	27	11	67.4	76.3	81.2 1	.4 68	3.5 6	0.6 61.	4 69.8	65.5	53.0	51.3	65.9 5	2.3 51	.1 5	2.2 56.7	•

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

Pro	ject Name: Arling	ton &	Van				rev. (Da	te)										
	Peak Hour and P						, i i i i i i i i i i i i i i i i i i i							If Peak Hour = 69	6 of ADT, Scalir	ng Factor = 16.66	67	
														If Peak Hour = 79	6 of ADT, Scalir	ng Factor = 14.28	36	
	Intersection: 3	3												If Peak Hour = 89	6 of ADT, Scalir	ng Factor = 12.5		
	Project Driveway	No. 1 a	nd Arling	ton Aver	nue									If Peak Hour = 99	6 of ADT, Scalir	ng Factor = 11.1	11	
			Ī											If Peak Hour = 10				
					Project	Drivewa	ay No. 1									ADT		
					Southbound									Road	Project Driv	eway No. 1	Arlington	Avenue
						right	through	left						Leg	North of	South of	East of	West of
					Existing (Year 20	24	0	4						Cross Street	Arlingtor	Avenue	Project Driv	eway No. 1
					Existing (Year 20	32	0	3						Existing (Year 20	392.0	160.0	16,008.0	16,160.0
					Existing plus Pro	24	0	4						Existing (Year 20	456.0	64.0	18,152.0	18,368.0
					Existing plus Pro		0	3						Existing plus Pro	392.0	1,440.0	16,544.0	16,616.0
					Existing plus Am	25	0	4						Existing plus Pro	456.0	2,976.0	19,200.0	19,272.0
					Existing plus Am	34	0	3						Existing plus Am	416.0	160.0	16,968.0	17,128.0
					Existing plus Pro	25	0	4						Existing plus Am	888.0	328.0	18,440.0	19,336.0
					Existing plus Pro	3	0	34						Existing plus Pro	416.0	1,440.0	17,504.0	17,584.0
	Eastbound								Westbound					Existing plus Pro	488.0	2,976.0	20,536.0	20,128.0
			through							<u>right</u>		<u>left</u>						
	Existing (Year 20	10	1,000	7					Existing (Year 20	11	976	7						
Avenue	Existing (Year 20	13	1,181	0					Existing (Year 20	9	1,069	5						
eu	Existing plus Pro	10	991	46		Ν			Existing plus Pro	11	967	56						
I ≷	Existing plus Pro	13	1,151	81	W		E		Existing plus Pro	9	1,039	103						
5	Existing plus Am	11	1,060	7		S			Existing plus Am	12	1,035	7						
g	Existing plus Am	64	1,152	33					Existing plus Am	10	1,133	5						
Arlington	Existing plus Pro	11	1,051	46					Existing plus Pro		1,026	56						
¥	Existing plus Pro	14	1,222	81					Existing plus Pro	10	1103	103						
					Northbound													
							through	right										
					Existing (Year 20	3	0	3										
					Existing (Year 20	1	0	2										
					Existing plus Pro		0	39										
					Existing plus Pro		0	95										
					Existing plus Am	3	0	3										
L					Existing plus Am	1	0	2										
					Existing plus Pro		0	39										
I					Existing plus Pro	93	0	95										
													ļ					

											Traffic	Volume	25						Ref. Er	nerav Le	evels D)ist Lo	d			Le	,			Ln				
				Design	Dist. from	Ba	rrier	Vehicle Mi	x																									
ROADWAY NAME		Median	ADT	Speed	Center to Al			edium Hea			Day E	ve N	ight MT	d HTd	MTe	HTe	MTn I	HTn	A I	ит⊦	IT A	dj A		ит н	IT 1	Total A	N	1T H1	T Tot	tal A	MT	HT	Total	
Segment	Land Use Lane	s Width	Volume	(mph)	Receptor Factor	or(1 dB	(A) Tr	rucks Tru	cks Cl	NEL																								
Project Driveway No. 1 n/o Arlington Avenue																																		
Existing (Year 2020) AM	2	0	392	25	30 0	0	0 1	.8% 0.7	% 4	48.8	305	50	38 6	2	0	0	1	0	59.4	71.1	78.7	2.2 4	6.3	41.1 4	44.8	49.3 43	3.3 3	33.6 3	4.6 44	.3 30.	.1 31.	7 35	5.5 37.8	
Existing (Year 2020) PM	2	0	456	25	30 (0	0 1	.8% 0.7	% 4	49.5	354	58	44 7	3	0	0	1	0	59.4	71.1	78.7	2.2 4	7.0	41.8 4	45.4	50.0 44	4.0 3	34.2 3	5.3 44	.9 30.	.8 32.1	3 36	6.2 38.5	
Existing plus Project AM Peak	2	0	392	25	30 0	0	0 1	.8% 0.7	% 4	48.8	305	50	38 6	2	0	0	1	0	59.4	71.1	78.7	2.2 4	6.3	41.1 4	44.8	49.3 43	3.3 3	33.6 34	4.6 44	.3 30.	.1 31.	7 35	5.5 37.8	
Existing plus Project PM Peak	2	0	456	25	30 0	0	0 1	.8% 0.7	% 4	49.5	354	58	44 7	3	0	0	1	0	59.4	71.1 7	78.7	2.2 4	7.0	41.8 4	45.4	50.0 44	4.0 3	34.2 3	5.3 44	.9 30.	.8 32.1	3 36	6.2 38.5	
Existing plus Ambient AM Peak	2	0	416	25	30 0	0	0 1	.8% 0.7	% 4	49.1	323	53	40 7	3	0	0	1	0	59.4	71.1	78.7	2.2 4	6.6	41.4 4	45.0	49.6 43	3.6 3	33.8 3	4.9 44	.5 30.	.4 31.9	9 35	5.8 38.1	
Existing plus Ambient PM Peak	2	0	888	25	30 0	0	0 1	.8% 0.7	% 5	52.4	690 [·]	113	85 14	16	1	0	1	1	59.4	71.1	78.7	2.2 4	9.9	44.7 4	48.3	52.9 46	3.9 3	37.1 3	8.2 47	.8 33.	.7 35.1	2 39	9.1 41.4	
Existing plus Project plus Ambient AM Peak	2	0	416	25	30 (0	0 1	.8% 0.7	% 4	49.1	323	53	40 7	3	0	0	1	0	59.4	71.1 7	78.7	2.2 4	6.6	41.4 4	45.0	49.6 43	3.6 3	33.8 34	4.9 44	.5 30.	.4 31.9	9 35	5.8 38.1	
Existing plus Project plus Ambient PM Peak	2	0	488	25	30 0	0	0 1	.8% 0.7	% 4	49.8	379	62	47 8	3	0	0	1	0	59.4	71.1	78.7	2.2 4	7.3	42.1 4	45.7	50.3 44	4.3 3	34.5 3	5.6 45	i.2 31.	.1 32.0	6 36	5.5 38.8	
Project Driveway No. 1 s/o Arlington Avenue																																		
Existing (Year 2020) AM	2	0	160	25	30 0	0	0 1	.8% 0.7	% 4	44.9	124	20	15 3	1	0	0	0	0	59.4	71.1	78.7	2.2 4	2.4	37.3 4	40.9	45.4 39	э.4 2	29.7 3	0.7 40	.4 26.	.2 27.5	8 31	1.7 34.0	
Existing (Year 2020) PM	2	0	64	25	30 (0	0 1	.8% 0.7	% 4	41.0	50	8	6 1	0	0	0	0	0	59.4	71.1	78.7	2.2 3	88.4	33.3 3	36.9	41.5 35	j.5 2	25.7 2	6.7 36	.4 22.	.3 23.9	8 27	7.7 30.0	
Existing plus Project AM Peak	2	0	1,440	25		0	0 1	.8% 0.7	% 5	54.5	#####	183 1	138 23	39	1	0	2	1	59.4	71.1 7	78.7	2.2 5	52.0	46.8 5	50.4	55.0 49	э.о з	39.2 4	0.3 49	.9 35.	.8 37.5	3 41	1.2 43.5	
Existing plus Project PM Peak	2	0	2,976	25	30 (0	0 1	.8% 0.7	% 5	57.6	##### 3	378 2	286 47	7 19	3	1	4	2	59.4	71.1 7	78.7	2.2 5	5.1	49.9 5	53.6	58.1 52	2.1 4	12.4 4	3.4 53	3.1 38.	.9 40.	5 44	4.3 46.6	
Existing plus Ambient AM Peak	2	0	160	25	30 0	0	0 1	.8% 0.7	% 4	44.9	124	20	15 3	1	0	0	0	0	59.4	71.1	78.7	2.2 4	2.4	37.3 4	40.9	45.4 39).4 2	29.7 3	0.7 40	.4 26.	.2 27.5	8 31	1.7 34.0	
Existing plus Ambient PM Peak	2	0	328	25		0	0 1	.8% 0.7	% 4	48.0	255	42	31 5	2	0	0	0	0	59.4	71.1	78.7	2.2 4	5.5	40.4 4	44.0	48.6 42	2.6 3	32.8 3	3.8 43	.5 29.	4 30.9	9 34	4.8 37.1	
Existing plus Project plus Ambient AM Peak	2	0	1,440	25	30 (0	0 1	.8% 0.7	% 5	54.5	#####	183 1	38 23		1	0	2	1	59.4	71.1 7	78.7	2.2 5	52.0	46.8 5	50.4	55.0 49	Э.О З	39.2 40	J.3 49	.9 35.	.8 37.5	3 41	1.2 43.5	
Existing plus Project plus Ambient PM Peak	2	0	2,976	25	30 (0	0 1	.8% 0.7	% 5	57.6	##### 3	378 2	286 47	7 19	3	1	4	2	59.4	71.1	78.7	2.2 5	5.1	49.9 5	53.6	58.1 52	2.1 🖉	12.4 4	3.4 53	3.1 38.	.9 40.	5 44	4.3 46.6	
Arlington Avenue e/o Project Driveway No. 1																																		
Existing (Year 2020) AM	4	0	16,008	40		•		.8% 0.7			##### #					3	22																9.6 54.0	
Existing (Year 2020) PM	4	0	18,152	40		•		.8% 0.7		7007000	##### #				17	4	25																0.1 54.6	
Existing plus Project AM Peak	4	0	16,544	40		•		.8% 0.7			##### #					3	22																9.7 54.2	
Existing plus Project PM Peak	4	0	19,200	40		•		.8% 0.7			##### #					4																	0.3 54.8	
Existing plus Ambient AM Peak	4	0	16,968	40		•		.8% 0.7			##### #		20		15	3	23																9.8 54.3	
Existing plus Ambient PM Peak	4	0	18,440	40		•		.8% 0.7			##### #					4	25																0.2 54.7	
Existing plus Project plus Ambient AM Peak	4	0	17,504	40		-	0 1	.8% 0.7			##### #					3	24																9.9 54.4	
Existing plus Project plus Ambient PM Peak	4	0	20,536	40	55 (0	0 1	.8% 0.7	% 6	67.5	##### #	#### #	### 32	3 128	19	4	28	12	67.4	76.3 8	31.2 -	-0.2 6	6.9	59.0 5	59.9	68.2 63	3.9 5	51.5 4	9.7 64	.3 50.	.7 49.6	8 50	0.6 55.1	
Arlington Avenue w/o Project Driveway No. 1																																		
Existing (Year 2020) AM	4	0	16,160	40	55 0	0		.8% 0.7	10000	100000000000000000000000000000000000000	##### #					3	22																9.6 54.1	
Existing (Year 2020) PM	4	0	18,368	40		•		.8% 0.7			##### #	##### ##			17	4	25	10															0.2 54.6	
Existing plus Project AM Peak	4	0	16,616	40		•		.8% 0.7		00.0	##### #				15	3	22	9								67.3 63							9.7 54.2	
Existing plus Project PM Peak	4	0	19,272	40	00	•		.8% 0.7			##### #	##### ##				4																	0.4 54.8	
Existing plus Ambient AM Peak	4	0	17,128	40		•		.8% 0.7			##### #	#### #	### 27			3	23																9.8 54.3	
Existing plus Ambient PM Peak	4	0	19,336	40		0		.8% 0.7		67.2	##### #	#### #	### 30	4 121	18	4	26).4 54.9	
Existing plus Project plus Ambient AM Peak	4	0	17,584	40		•	0 1	.8% 0.7			##### #					3	24																0.0 54.4	
Existing plus Project plus Ambient PM Peak	4	0	20,128	40	55 (0	0 1	.8% 0.7	% 6	67.4	##### #	#### #	### 31	7 126	18	4	27	11	67.4	76.3 8	31.2 -	-0.2 6	6.8	59.0 5	59.8	68.2 63	3.8 5	51.4 4	9.6 64	.2 50.	6 49.	5 50	0.6 55.0	

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%

Pro	ject Name: Arlin	gton &	Van				rev. (Da	te)										
	Peak Hour and						Ì	,						If Peak Hour = 6	% of ADT, Scalir	ng Factor = 16.6	57	
														If Peak Hour = 7	% of ADT, Scalir	ng Factor = 14.2	36	
	Intersection:	4												If Peak Hour = 8	% of ADT, Scalir	ng Factor = 12.5		
	Van Buren Boule	evard an	d Project	Drivewa	ay No. 2									If Peak Hour = 9	% of ADT, Scalir	ng Factor = 11.1	11	
														If Peak Hour = 1	0% of ADT, Scal	ing Factor = 10		
					Van Bu	ren Bo	ulevard									ADT		
					Southbound									Road	Van Buren	Boulevard	Project Driv	eway No. 2
							through	left						Leg	North of	South of	East of	West of
					Existing (Year 20	87	1,077	21						Cross Street	Project Driv	eway No. 2	Van Buren	Boulevard
					Existing (Year 20		1,599	25						Existing (Year 20	19,968.0	19,904.0	168.0	1,496.0
					Existing plus Pro		1,083	77						Existing (Year 20	24,168.0	23,832.0	504.0	2,312.0
					Existing plus Pro	149	1,595	145						Existing plus Pro		20,400.0	1,392.0	1,496.0
					Existing plus Am		1,142	22						Existing plus Pro		24,600.0	3,120.0	2,312.0
					Existing plus Am	158	1,695	27						Existing plus Am		21,104.0	176.0	1,584.0
					Existing plus Pro	92	1,148	78						Existing plus Am		25,264.0	536.0	2,448.0
					Existing plus Pro	158	1,691	147						Existing plus Pro		21,600.0	1,400.0	1,584.0
	Eastbound								Westbound					Existing plus Pro	27,328.0	26,032.0	3,152.0	2,448.0
		<u>left</u>	through	<u>right</u>						<u>right</u>	through							
	Existing (Year 20	0	0	49					Existing (Year 20	0	0	0						
۶	Existing (Year 20	0	0	88					Existing (Year 20	23	0	0						
ş	Existing plus Pro		0	49		Ν			Existing plus Pro	42	0	0						
Driveway	Existing plus Pro	0	0	88	W		E		Existing plus Pro	125	0	0						
ž	Existing plus Am	0	0	52		S			Existing plus Am	0	0	0						
	Existing plus Am	0	0	93					Existing plus Am	24	0	0						
SC 1	Existing plus Pro	0	0	52					Existing plus Pro		0	0						
Project	Existing plus Pro	0	0	93					Existing plus Pro	126	0	0						
Ē																		
					Northbound													
1							through											
					Existing (Year 20		1,311	0										
					Existing (Year 20	52	1,225	15										
					Existing plus Pro		1,312	55										
					Existing plus Pro		1,220	120										
					Existing plus Am		1390	0										
					Existing plus Am		1299	16					-					
					Existing plus Pro		1391	55										
					Existing plus Pro	55	1294	121						 				
													-	 				
							1				1	1						

											- Traffic	c Volume	5					F	Ref. Ene	av Leve	als Dist	Ld			Le	3			Ln			
				Desig	n Dist. from		Barrier	Vehic	le Mix																							
ROADWAY NAME		Med			Center to							Eve Ni	ight MTd	HTd	MTe	HTe	MTn H	iTn /	A M	т нт	Adj	Α	MT	HT	Total A	M	IT HT	T Tota	al A	MT	ΗT	Total
Segment	Land Use Lan	nes Wio	th Volume	e (mph)	ReceptorFa	actor (1	dB(A)	Trucks	Trucks	CNEL	-																					
Van Buren Boulevard n/o Project Driveway																																
Existing (Year 2020) AM	2		19,968		60	0	0	1.8%	0.7%	68.0		##### ##	0			4									68.8 6							
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 7	7.6 82.	1 -0.8	68.5	5 59.9) 60.4	69.6 6	5.5 5	52.4 50	0.3 65	.8 52.3	.3 50.5	i 51.'	.2 56.2
Existing plus Project AM Peak	2		20,808		60	0	0	1.8%	0.7%	68.2		##### ##	### 327	130	19	4	28	12	69.3 7	7.6 82.	1 -0.8	67.8	3 59.3	3 59.8	69.0 6	4.9 5	51.7 49	9.6 65	.2 51.	.7 49.8	3 50.0	.6 55.5
Existing plus Project PM Peak	2		25,872		60	0	0	1.8%	0.7%	69.1	#####	##### ##	### 407	161	24	5	35	15	69.3 7	7.6 82.	1 -0.8	68.8	3 60.2	2 60.7	69.9 6	5.8 5	52.7 50	0.6 66	.1 52.0	.6 50.8	3 51./	.5 56.5
Existing plus Ambient AM Peak	2		21,168		60	0	0	1.8%	0.7%	68.3	#####	##### ##	### 333	132	19	4	29	12	69.3 7	7.6 82.	1 -0.8	67.9	9 59.4	4 59.9	69.0 6	4.9 5	j1.8 49	9.7 65	.3 51.	.7 49.9	€ 50.0	.6 55.6
Existing plus Ambient PM Peak	2		25,624		60	0	0	1.8%	0.7%	69.1	######	##### ##	### 403	160	23	5	35	14	69.3 7	7.6 82.	1 -0.8	68.7	7 60.2	2 60.7	69.9 6	5.8 5	2.6 50	0.5 66	.1 52.0	.6 50.7	/ 51/	.5 56.4
Existing plus Project plus Ambient AM Peak	2		22,008		60	0	0	1.8%	0.7%	68.4	#####	##### ##	### 346	137	20	4	30	12	69.3 7	7.6 82.	1 -0.8	68.1	1 59.5	5 60.0	69.2 6	5.1 5	52.0 49	9.9 65	.4 51.9	.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 7	7.6 82.	1 -0.8	69.0	0 60.5	5 61.0	70.1 6	ô.0 5	j2.9 50	0.8 66	.4 52.1	.8 51.0) 51.	.7 56.7
Van Buren Boulevard s/o Project Driveway																																
Existing (Year 2020) AM	2		19,904		60	0	0	1.8%	0.7%	68.0		##### ##	### 313	124		4									68.8 6							
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 7	7.6 82.	1 -0.8	68.4	4 59.9) 60.4	69.6 6	5.4 5	52.3 50	0.2 65	.8 52.2	.2 50.4	↓ 51.'	.2 56.1
Existing plus Project AM Peak	2		20,400		60	0	0	1.8%	0.7%	68.1		##### ##	### 321	127	19	4		12	69.3 7	7.6 82.	1 -0.8	67.7	7 59.2	2 59.7	68.9 6	4.8 5	1.6 49	9.5 65	.1 51.0	.6 49.8	3 50.4	.5 55.4
Existing plus Project PM Peak	2	-	24,600		60	0	0	1.8%	0.7%	68.9		##### ##	### 387	153	22	5									69.7 6							
Existing plus Ambient AM Peak	2		21,104		60	0	0	1.8%	0.7%	68.2	#####	##### ##	### 332	132	19	4	29	12	69.3 7	7.6 82.	1 -0.8	67.9	9 59.4	4 59.9	69.0 6	4.9 5	51.8 49	9.7 65	.2 51.	.7 49.9	3 50.0	.6 55.6
Existing plus Ambient PM Peak	2		25,264		60	0	0	1.8%	0.7%	69.0		##### ##	### 398	158	23	5			69.3 7						69.8 6							
Existing plus Project plus Ambient AM Peak	2		21,600		60	0	0	1.8%	0.7%	68.3	#####	##### ##	### 340	135	20	4	29	12	69.3 7	7.6 82.	1 -0.8	68.0	59.5	5 60.0	69.1 6	5.0 5	51.9 49	9.8 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 7	7.6 82.	1 -0.8	68.8	60.3	3 60.8	69.9 6	5.8 5	j2.7 50	0.6 66	.2 52.0	.6 50.8	3 51./	.5 56.5
Project Driveway No. 2 e/o Van Buren																																
Existing (Year 2020) AM			400	05		~	~	4.00/	0.70/		404				~	~	~	~				40.7			40.5.4							7 05 0
Existing (Year 2020) AM Existing (Year 2020) PM	- 4	. 0	168 504	25 25	30 30	0	0	1.8% 1.8%	0.7% 0.7%	46.0 50.8			16 3 48 8	1	0	0	0								46.5 4							
Existing plus Project AM Peak	- 4	. 0	1.392	25 25	30 30	0	0	1.8%	0.7%	55.2				3	0	0	2		59.4 7 59.4 7						55.7 4							
Existing plus Project PM Peak	- 4	. 0	3,120	25 25	30 30	0	0	1.8%	0.7%	55.2 58.7			34 22 00 49	10	3	1	-								59.2 5							
Existing plus Ambient AM Peak	4	. 0	3,120	25	30	0	0	1.8%	0.7%	46.2			00 49 17 3	19	0	0	4								39.2 3 46.7 4							
Existing plus Ambient RM Peak		. 0	536	25	30	0	0	1.8%	0.7%	40.2 51.1			51 8	2	0	0	4								51.6 4							
Existing plus Project plus Ambient AM Peak	- 4	. 0	1.400	25 25	30 30	0	0	1.8%	0.7%		416		34 22	3 9	0	0									51.6 4							
Existing plus Project plus Ambient AM Peak		. 0	3,152	25	30 30	0	0	1.8%	0.7%	58.8		400 3		20	3	4									59.3 5							
Existing plus Project plus Ambient PM Peak	4	0	3,152	25	30	0	0	1.6%	0.7%	0.00	*****	400 3	03 50	20	3		4	2	59.4 7	1.1 70.	/ 3.1	30. 4	2 51.	1 04.7	59.3 5	3.3 4	-3.5 44	4.5 54.	.2 40.	1 41.0) 45.3	5 47.6
Project Driveway No. 2 w/o Van Buren																																
Existing (Year 2020) AM	-	0	1.496	25	30	0	0	1.8%	0.7%	55.5	######	190 1	44 24	0	1	0	2	1	50 / 7	1 1 78	7 31	53 (175	8 51 F	56.0 5	00 1	10 3 4	1 3 51	0.36	8 38	1 12	2 11 5
Existing (Year 2020) PM	- 4	. 0	2.312		30	0	0	1.8%	0.7%	57.4			22 36	14	2	0	2		59.4 7						57.9 5							
Existing (real 2020) This Existing plus Project AM Peak		. 0	1.496	25	30	0	ő	1.8%	0.7%	55.5			44 24	9	1	0	2		59.4 7						56.0 5							2 44.5
Existing plus Project PM Peak	- 4	. 0	2.312	25	30	0	0	1.8%	0.7%	57.4			22 36	14	2	0	3								57.9 5							
Existing plus Ambient AM Peak	- 4	. 0	1.584	25	30	0	0	1.8%	0.7%	55.8			52 25	10	1	ñ	2		59.4 7						56.3 5							
Existing plus Ambient PM Peak	4	. 0	2,448	25	30	0	0	1.8%	0.7%	57.7			35 39	15	2	0	3		59.4 7 59.4 7						58.2 5							
Existing plus Project plus Ambient AM Peak		. 0	1.584	25	30	0	0	1.8%	0.7%	55.8			52 25	10	1	0	2								56.3 5							
Existing plus Project plus Ambient AM Peak	4		2,448	25	30	0	0	1.8%	0.7%			311 2		15	2	0	-								58.2 5							
Existing plus Project plus Amblent PM Peak	4	0	2,448	25	30	U	U	1.0%	U.1%	57.7	*****	311 2	. 	15	2	U	3	1	JJ.4 /	1.1 78.	1 3.1	DD .1	1 30.0	1 00.0	00.2 5	<u>2.</u> 2 4	2.4 43	3.4 53	.1 39.0	J 40.5) 44.4	4 40.7

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%

Pro	ject Name: Arling	ton &	Van				rev. (Da	ite)											
AM	Peak Hour and P	M Peal	k Hour										1		If Peak Hour = 69	% of ADT, Scali	ng Factor = 16.66	57	
															If Peak Hour = 79	% of ADT. Scali	ng Factor = 14.28	36	
	Intersection:	5					1				1	1			If Peak Hour = 89 If Peak Hour = 99	6 of ADT, Scali	ng Factor = 12.5		
	Van Buren Boule	vard an	d Project	Drivewa	ay No. 3										If Peak Hour = 99	% of ADT, Scali	ng Factor = 11.11	1	
					·										If Peak Hour = 10	% of ADT, Sca	ling Factor = 10		
					Van Bu	ren Bo	ulevard										ADT		
					Southbound										Road	Van Burer	n Boulevard	Project Driv	eway No. 3
						right	through	left							Leg	North of	South of	East of	West of
					Existing (Year 20	0	1,112	0							Cross Street	Project Driv	veway No. 3	Van Buren	Boulevard
					Existing (Year 20	0	1,686	0							Existing (Year 20	19,792.0	19,640.0	360.0	0.0
					Existing plus Pro	0	1,118	0							Existing (Year 20	23,824.0	23,720.0	248.0	0.0
					Existing plus Pro	0	1,682	0							Existing plus Pro	20,280.0	20,232.0	640.0	0.0
					Existing plus Am	0	1,179	0		-			1		Existing plus Pro	24,600.0	24,640.0	888.0	0.0
					Existing plus Am		1,787	0							Existing plus Am	20,984.0	20,824.0	384.0	0.0
					Existing plus Pro		1,185	0							Existing plus Am	25,248.0	25,144.0	264.0	0.0
					Existing plus Pro	0	1,783	0							Existing plus Pro	21,472.0	21,416.0	664.0	0.0
	Eastbound								Westbound						Existing plus Pro	26,024.0	26,064.0	904.0	0.0
		<u>left</u>	through	right						<u>right</u>	through								
9	Existing (Year 20	0	0	0					Existing (Year 20	32	0	0							
۶	Existing (Year 20	0	0	0					Existing (Year 20	22	0	0							
S S	Existing plus Pro	0	0	0		Ν			Existing plus Pro	43	0	0							
Driveway	Existing plus Pro	0	0	0	W		E		Existing plus Pro	53	0	0							
ž	Existing plus Am	0	0	0		S			Existing plus Am	34	0	0							
ā	Existing plus Am	0	0	0					Existing plus Am	23	0	0							
1 to	Existing plus Pro	0	0	0					Existing plus Pro		0	0							
Project	Existing plus Pro	0	0	0					Existing plus Pro	54	0	0							
Ē																			
					Northbound														
						left	through						1						
<u> </u>					Existing (Year 20		1,330	13				-							
<u> </u>					Existing (Year 20		1,270	9				-							
<u> </u>					Existing plus Pro		1,374	37			+								
┣					Existing plus Pro		1,340	58			-		<u> </u>						
-					Existing plus Am		1410	14											
					Existing plus Am Existing plus Pro		1346 1454	10 38											
-							1454	- 38 - 59											
<u> </u>					Existing plus Pro	U	1410	29											
-																			
-											+		+						
-																			
L							1				1	1	1	1			1		

										_ Traffi	ic Volum	es					F	Ref. Enera	/ Levels	Dist L	d			Le				Ln			
				Design	Dist. from	Barri	er Vehi	cle Mix																							
ROADWAY NAME		Median	ADT	Speed	Center to Alp					Day	Eve N	light MTd	HTd	MTe	HTe I	MTn H	Tn A	MT	HT	Adj A	A I	МТ ⊢	HT T	Total A	M	т нт	í Tot	alA	MT	ΗT	Total
Segment	Land Use Lanes	Width	Volume	(mph)	Receptor Facto	or(1 dB(A	.) Trucks	Trucks	CNEL	-																					
Van Buren Boulevard n/o Project Driveway																															
Existing (Year 2020) AM	2	0	19,792	45	60 0	0 0	1.8%	0.7%	68.0	#####	ŧ ##### #	#### 311	123	18	4	27 .	11 6	69.3 77.6	82.1	-0.8	67.6	59.1	59.6	68.7 64	.6 51	1.5 49	J.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 6	69.3 77.6	6 82.1	-0.8	68.4	59.9	60.4	69.5 65	.4 52	2.3 50	J.2 65	.8 52.1	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	#####	ŧ ##### #	#### 319	126	18	4	27 .	11 6	69.3 77.6	82.1	-0.8	67.7	59.2 \$	59.7	68.9 64	.7 51	1.6 49	J.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 6	69.3 77.6	6 82.1	-0.8	68.6	60.0	60.5	69.7 65	i.6 52	2.4 50	J.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	#####	ŧ ##### #	#### 330	131	19	4	28 '	12 6	69.3 77.6	6 82.1	-0.8	67.9	59.3	59.8	69.0 64	.9 51	1.8 49	J.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	#####	ŧ ##### #	#### 397	157	23	5			69.3 77.6						69.8 65							
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									69.1 65							
Existing plus Project plus Ambient PM Peak	2	0	26,024	45	60 0) ()	1.8%	0.7%	69.2	#####	ŧ ##### #	#### 410	162	24	5	35 1	15 6	69.3 77.6	6 82.1	-0.8	68.8	60.3 (60.8	69.9 65	i.8 52	2.7 50	J.6 66	.2 52.0	6 50.8	3 51.	.5 56.5
Van Buren Boulevard s/o Project Driveway																															
Existing (Year 2020) AM	2	0	19,640	45	60 0	0 0	1.8%	0.7%	67.9	#####	ŧ ##### #	#### 309	122	18	4	27 .	11 6	69.3 77.6	82.1	-0.8	67.6	59.0	59.5	68.7 64	.6 51	1.5 49	J.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 6	69.3 77.6	6 82.1	-0.8	68.4	59.9	60.4	69.5 65	.4 52	2.3 50	J.2 65	.7 52.1	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	#####	ŧ ##### #	#### 318	126	18	4	27 .	11 6	69.3 77.6	82.1	-0.8	67.7	59.2 \$	59.7	68.8 64	.7 51	1.6 49	J.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 ⁻								69.7 65							
Existing plus Ambient AM Peak	2	0	20,824	45	60 0	0 0	1.8%	0.7%	68.2	#####	ŧ ##### #	#### 328	130	19	4	28	12 6	69.3 77.6	82.1	-0.8	67.8	59.3	59.8	69.0 64	.9 51	1.7 49	J.6 65	.2 51.	7 49.8	5 0.	.6 55.5
Existing plus Ambient PM Peak	2	0	25,144	45	60 0	0 0	1.8%	0.7%	69.0	#####	* ##### #	#### 396	157	23	5	34 ·	14 6	69.3 77.6	82.1	-0.8	68.7	60.1 (60.6	69.8 65	.7 52	2.5 50	J.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	#####	ŧ ##### #	#### 337	134	19	4	29	12 6	69.3 77.6	6 82.1	-0.8	68.0	59.4	59.9	69.1 65	.0 51	1.8 49	3.8 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	#####	ŧ ##### #	#### 410	163	24	5	35	15 6	69.3 77.6	82.1	-0.8	68.8	60.3 (60.8	69.9 65	i.8 52	2.7 50	J.6 66	.2 52.0	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 5	59.4 71.1	78.7	3.1	46.8	41.7	45.3	49.8 43	i.8 34	4.1 35	5.1 44	.8 30.0	6 32.2	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	05	59.4 71.1	78.7	3.1	45.2	40.0	43.7	48.2 42	.2 32	2.5 33	3.5 43	.2 29.0	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 5	59.4 71. ⁻	78.7	3.1	49.3	44.2 4	47.8	52.3 46	i.3 36	6.6 37	7.6 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 5	59.4 71.1	78.7	3.1	50.7	45.6	49.2	53.8 47	.8 38	8.0 39	J.0 48	.7 34.0	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	05	59.4 71.1	78.7	3.1	47.1	41.9 4	45.6	50.1 44	.1 34	4.4 35	j.4 45	.1 30.	9 32.5	5 36.	.3 38.6
Existing plus Ambient PM Peak	4	0	264	25	30 (0 0	1.8%	0.7%	48.0	205		25 4	2	0	0	0	0 5	59.4 71. ⁻	78.7	3.1	45.5	40.3	43.9	48.5 42	.5 32	2.7 33	3.8 43	.4 29.1	3 30.9	34.	.7 37.0
Existing plus Project plus Ambient AM Peak	4	0	664	25	30 0) ()	1.8%	0.7%	52.0	516	84	64 10	4	1	0	1	0 5	59.4 71.1	78.7	3.1	49.5	44.3 4	47.9	52.5 46	i.5 36	6.7 37	1.8 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 5	59.4 71.1	78.7	3.1	50.8	45.7	49.3	53.8 47	.8 38	8.1 39	J.1 48	.8 34.0	6 36.2	2 40.	.1 42.4
Project Driveway No. 3 w/o Van Buren																															
Existing (Year 2020) AM	4	0	0	25	30 0	0 0	1.8%	0.7%	#NUM	! 0	0	0 0	0	0	0	0	0 5	59.4 71.4	78.7	3.1 ;	****	##### #	##### 1	##### ###	## ##	### ##	## ###	## ####	# ####	ŧ ####	# ####
Existing (Year 2020) PM	4	0	0	25	30 0	0 0	1.8%	0.7%	#NUM	! 0	0	0 0	0	0	0	0	0 5	59.4 71. ⁴	78.7	3.1 i	#####	##### #	##### 1	##### ###	## ##	### ###	### ####	## ####	# ####	ŧ ####	# ####
Existing plus Project AM Peak	4	0	0	25	30 0	0 0	1.8%	0.7%	#NUM	! 0	0	0 0	0	0	0	0	0 5	59.4 71.1	78.7	3.1 i	#####	##### #	##### 1	#### ##	## ##	### ##	## ###	## ####	# ####	ŧ ####	# ####
Existing plus Project PM Peak	4	0	0	25	30 0	0 0	1.8%	0.7%	#NUM	! 0	0	0 0	0	0	0	0	0 5	59.4 71.1	78.7	3.1	#####	##### #	##### 1	##### ###	## ##	### ###	## ###	## ####	# ####	# ####	#######
Existing plus Ambient AM Peak	4	0	0	25	30 0	0 0	1.8%	0.7%	#NUM	! 0	0	0 0	0	0	0	0	0 5	59.4 71. ⁴	78.7	3.1 ;	#####	##### #	##### {	##### ###	## ##	### ##	## ###	## ####	# ####	ŧ ####	# ####
Existing plus Ambient PM Peak	4	0	0	25	30 0	0 0	1.8%	0.7%	#NUM	! 0	0	0 0	0	0	0	0	0 5	59.4 71. ⁴	78.7	3.1 i	#####	##### #	##### 1	#### ##	## ##	### ###	## ###	## ####	# ####	ŧ ####	# ####
Existing plus Project plus Ambient AM Peak	4	0	0	25	30 0	0 0	1.8%	0.7%	#NUM	! 0	0	0 0	0	0	0	0	0 5	59.4 71.1	78.7	3.1 ;	#####	##### #	##### 1	#### ##	## ##	### ##	## ###	## ####	# ####	ŧ ####	# ####
Existing plus Project plus Ambient PM Peak	4	0	0	25	30 0	0 0	1.8%	0.7%	#NUM	! 0	0	0 0	0	0	0	0	0 5	59.4 71.4	78.7	3.1	***	##### #	##### 1	##### ###	## ##	### ##	## ###	## ####	# ####	# ####	# ####

Assumed 24-Hour Traffic Distribution: Total ADT Volumes	Day Evening 77.70% 12.70%	5
Medium-Duty Trucks Heavy-Duty Trucks	87.43% 5.05% 89.10% 2.84%	

Pro	ject Name: Arling	ton &	Van				rev. (Da	te)										
	Peak Hour and P						,	,						If Peak Hour = 6%	6 of ADT, Scali	ng Factor = 16.66	57	
														If Peak Hour = 7%	6 of ADT, Scali	ng Factor = 14.28	36	
	Intersection: 6	3												If Peak Hour = 8%	6 of ADT, Scali	ng Factor = 12.5		
	Project Driveway	No. 4 a	nd Jacks	on Stree	t									If Peak Hour = 9%	6 of ADT, Scali	ng Factor = 11.11	11	
														If Peak Hour = 10				
					Project	Drivewa	ay No. 4									ADT		
					Southbound		1							Road	Project Driv	eway No. 4	Jackso	n Street
						right	through	left						Leg	North of	South of	East of	West of
					Existing (Year 20	7	0	13						Cross Street	Jackso	n Street	Project Driv	eway No. 4
					Existing (Year 20	35	0	35						Existing (Year 20	536.0	0.0	4,960.0	5,048.0
					Existing plus Pro	49	0	20						Existing (Year 20	1,144.0	0.0	6,472.0	6,496.0
					Existing plus Pro	149	0	52						Existing plus Pro	1,008.0	0.0	5,096.0	5,384.0
					Existing plus Am	7	0	14						Existing plus Pro	2,328.0	0.0	6,744.0	7,408.0
					Existing plus Am	37	0	37						Existing plus Am	568.0	0.0	5,264.0	5,352.0
					Existing plus Pro		0	21						Existing plus Am	1,208.0	0.0	6,864.0	6,888.0
					Existing plus Pro	151	0	54						Existing plus Pro	1,040.0	0.0	5,400.0	5,688.0
	Eastbound								Westbound					Existing plus Pro	2,392.0	0.0	7,136.0	7,800.0
			through	<u>right</u>						<u>right</u>	through	left						
Street	Existing (Year 20	32	266	0					Existing (Year 20		326	0						
tr.	Existing (Year 20	38	394	0					Existing (Year 20		345	0						
	Existing plus Pro	32	266	0		Ν			Existing plus Pro		326	0						
Jackson	Existing plus Pro	38	394	0	W		E		Existing plus Pro	52	345	0						
ĸ	Existing plus Am	34	282	0		S			Existing plus Am	16	346	0						
Ja	Existing plus Am	40	418	0					Existing plus Am	37	366	0						
	Existing plus Pro	34	282	0					Existing plus Pro		346	0						
	Existing plus Pro	40	418	0					Existing plus Pro	54	366	0						
					Northbound													
							through											
L					Existing (Year 20	0	0	0						ļ				
					Existing (Year 20		0	0						ļ				
					Existing plus Pro		0	0						ļ				
					Existing plus Pro		0	0										
					Existing plus Am	0	0	0										
					Existing plus Am	0	0	0						ļ				
					Existing plus Pro		0	0										
					Existing plus Pro	0	0	0						ļ				
L														 ļ				
<u> </u>							1											

											Traffic	Volur	nes						Ref	f. Energ	/Level	٤Dist	Ld			L	.e			Ln			
					Dist. from			Vehid																									
ROADWAY NAME		Median			Center to A						Day	Eve I	Night M	Td H	Td M	Te H	Te M	Tn HTr	ıА	MT	ΗT	Adj	А	MT	ΗT	Total A	۱ N	ИТ Н	T Tot	tal A	MT	ΗT	Total
Segment	Land Use Lane	s Width	Volume	(mph)	Receptor Fac	tor (1 o	dB(A)	Trucks	Trucks	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								50.7 4							
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	2 1	59	9.4 71.1	78.7					54.0 4							
Existing plus Project AM Peak	2	0	1,008	25	30	0	0	1.8%	0.7%	52.9		128	97	16	6 1	1	0 '	1 1	59	.4 71.1	78.7	2.2	50.4	45.2	2 48.9	53.4 4	47.4	37.7 3	8.7 48	3.4 34.3	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 3	37	15 2	2	0 3	31	59	9.4 71.1	78.7	2.2	54.0	48.9	9 52.5	57.1 5	51.1 ·	41.3 4	.2.3 52	2.0 37.9	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	9.4 71.1	78.7	2.2	47.9	42.8	3 46.4	50.9 4	44.9	35.2 3	6.2 45	5.9 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 7	1	0 2	21	59	.4 71.1	78.7	2.2	51.2	2 46.0) 49.7	54.2 4	48.2	38.4 3	9.5 49	9.1 35.	0 36.6	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				16	6 1	1	0 '	1 1	59	.4 71. 1	78.7	2.2	50.5	5 45.4	49.0	53.6 4	47.6	37.8 3	8.8 48	3.5 34.4	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	2	0 :	31	59	9.4 71.1	78.7	2.2	54.2	2 49.0	52.6	57.2 5	51.2	41.4 4	2.5 52	2.1 38.0	0 39.5	6 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 0	59	9.4 71.1	78.7	2.2	#####	ŧ ####	¥ #####	. ##### #	#### 1	#########	### ##	## ####	# ####	ŧ #####	ŧ #####
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 0	59	.4 71.1	78.7	2.2	#####	ŧ ####	¥ #####	. ##### #	#### 1	##### ##	### ##	## ####	# ####	ŧ #####	ŧ #####
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	0 0	59	.4 71.1	78.7	2.2	#####	ŧ ####	¥ #####	* ##### #	#### 1	****	#### ###	## ####	# ####	ŧ #####	ŧ #####
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	0 0	59	.4 71 .1	78.7	2.2	#####	ŧ #####	¥ #####	. ##### #	#### 1	##########	### ##	## ####	# ####	ŧ #####	ŧ #####
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 0	59	9.4 71.1	78.7	2.2	#####	ŧ ####	¥ #####	. ##### #	#### 1	#########	### ##	## ####	# ####	ŧ #####	ŧ #####
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 0	59	.4 71.1	78.7	2.2	#####	ŧ ####	¥ #####	. ##### #	#### 1		### ##	## ####	# ####	ŧ #####	ŧ #####
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	0 0	59	.4 71. 1	78.7	2.2	#####	ŧ #####	¥ #####	##### #	#### 1		### ###	## ####	# ####	ŧ #####	ŧ #####
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	0 0	59	9.4 71.1	78.7	2.2	#####	ŧ ####	4 #####	##### #	#### 1	##### ##	### ###	## ####	# #####	#####	; #####
Jackson Street e/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	5	1 7	73	59	9.4 71.1	78.7	3.1	58.2	2 53.0	56.7	61.2 5	55.2	45.5 4	6.5 56	6.2 42.	0 43.F	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 1	102	40 6	6	1 9	94	59	.4 71.1	78.7	3.1	59.4	54.2	2 57.8	62.4 5	56.4	46.6 4	7.7 57	7.3 43.3	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	5	1 7	73	59	.4 71.1	78.7	3.1	58.3	53.2	2 56.8	61.4 5	<i>5</i> 5.3	45.6 4	6.6 56	6.3 42.3	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 1	106 4	42 6	6	1 9	94	59	.4 71. 1	78.7	3.1	59.5	54.4	4 58.0	62.6 5	56.6	46.8 4	7.8 57	7.5 43.4	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	5	1 7	73	59	9.4 71.1	78.7	3.1	58.5	53.3	3 56.9	61.5 5	<i>5</i> 5.5	45.7 4	6.8 56	6.4 42.3	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 1	108 4	43 6	6	1 9	94	59	.4 71.1	78.7	3.1	59.6	54.5	5 58.1	62.6 5	<i>5</i> 6.6	46.9 4	7.9 57	7.6 43.4	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 3	34 5	5	1 7	73	59	.4 71. 1	78.7	3.1	58.6	53.4	4 57.1	61.6 5	<i>5</i> 5.6	45.8 4	6.9 56	6.5 42.4	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 1	12	45 6	6	1 1	10 4	59	9.4 71.1	78.7	3.1	59.8	54.6	5 58.3	62.8	56.8	47.0 4	8.1 57	7.7 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	5	1 7	73	59	.4 71.1	78.7	3.1	58.3	3 53.1	1 56.8	61.3	55.3	45.5 4	46.6 5f	5.2 42.	1 43.7	47.5	i 49.8
Existing (Year 2020) PM	4	0	6,496	25	30	0	0	1.8%	0.7%	61.9	#####	825		102	41 6	6	1 9	94		.4 71.1						62.4							
Existing plus Project AM Peak	4	0	5.384	25	30	0	0	1.8%	0.7%	61.1	#####	684		85 3	34 5	5	1 7	7 3			78.7					61.6 5							
Existing plus Project PM Peak	4	0	7,408	25	30	0	0	1.8%	0.7%		#####	941		17	46 7	7	1 1	0 4		.4 71.1						63.0 5							
Existing plus Ambient AM Peak	4	0	5,352	25	30	0	0	1.8%	0.7%	61.1			514	84 :	33 5	5	1 7	7 3		.4 71.1						61.6 5							
Existing plus Ambient PM Peak	4	0	6.888	25	30	0	0	1.8%	0.7%	62.2	#####	875	661 1	108	43 6	6	1 9	94			78.7					62.7 5							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	5	1 8	8 3	59	0.4 71.1						61.8 5						48.0	50.3
Existing plus Project plus Ambient PM Peak	4	0	7,800	25	30	0	0	1.8%	0.7%		#####				49 7	7	2 1	1 4								63.2 5							

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%

D.2

Future Scenario

Pro	ect Name: Arling	gton & V	Van				rev. (Da	te)										
AM	Peak Hour and F	M Peal	k Hour				<u>``</u>							If Peak Hour = 6	% of ADT, Scali	ng Factor = 16.6	67	
														If Peak Hour = 7	% of ADT, Scali	ng Factor = 14.2	36	
	Intersection:	1												If Peak Hour = 8	% of ADT, Scali	ng Factor = 12.5		
	Van Buren Boule	vard and	d Arlingto	on Aveni	Je									If Peak Hour = 9	% of ADT, Scali	ng Factor = 11.1	11	
														If Peak Hour = 10				
					Van Bu	ren Bo	levard									ADT		
					Southbound									Road	Van Buren	Boulevard	Arlingtor	Avenue
						right	through	left						Leg	North of	South of	East of	West of
					Future (Year 202	381	1,036	457						Cross Street	Arlingtor	n Avenue	Van Buren	Boulevard
					Future (Year 202	584	1,531	568						Future (Year 202	34,216.0	23,792.0	19,208.0	18,992.0
					Future (Year 202		1,055	467						Future (Year 202	37,544.0	24,288.0	21,096.0	21,808.0
					Future (Year 202	584	1,565	585						Future (Year 202	34,624.0	24,504.0	19,672.0	19,648.0
					Project-Only AM	0	19	10						Future (Year 202	38,344.0	29,552.0	22,032.0	23,128.0
					Project-Only PM	0	34	17										
					, , , ,													
	Eastbound								Westbound									
		left	through	right						right	through	left						
	Future (Year 202	646	574	175					Future (Year 202	533	448	212						
Avenue	Future (Year 202	542	576	241					Future (Year 202	439	563	279						
B	Future (Year 202	646	593	194		Ν			Future (Year 202	540	463	219						
≷	Future (Year 202	542	610	275	W		E		Future (Year 202		595	296						
	Project-Only AM	0	19	19		S			Project-Only AM	7	15	7						
Ыğ	Project-Only PM	0	34	34					Project-Only PM	17	32	17						
Arlington																		
Ł																		
					Northbound													
							through											
					Future (Year 202		1,224	177										
					Future (Year 202	220	1,029	212										
					Future (Year 202		1239	177										
					Future (Year 202		1061	212										
					Project-Only AM		15	0										
					Project-Only PM	65	32	0										

											Traffic	Volume						F	Ref. Er	nergy Le	vels D	Dist I	Ld			L	e			L	.n			
					n Dist. from		Barrier	Vehic	leMix																									
ROADWAY NAME		Median			Center to			Medium				Eve Ni	ght MTc	I HTd	MTe	HTe	MTn I	HTn A	A 1	NT H	ΤA	۸dj /	A	MT	HT	Total A	4 N	ИТ Н	iT Te	otal A	ι M	1T F	ЛT	Total
Segment	Land Use Lane	s Width	Volume	(mph)	Receptor Fa	ctor (1	dB(A)	Trucks	Trucks	CNEL	_																							
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 8	3.8	1.4	74.7	65.0	65.0	75.5	71.7	57.4 5	54.8 7	72.0 5	58.5 5	5.6	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 8	3.8	1.4	75.1	65.4	65.4	75.9	72.1	57.8 5	55.2 7	72.4 5	58.9 5	6.0	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 8	3.8	1.4	74.8	65.1	65.0	75.6	71.8	57.5 f	54.8 7	/2.0 f	58.6 5	5.6	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 8	3.8	1.4	75.2	65.5	65.5	76.0	72.2	57.9 5	55.3 7	72.5 5	59.0 5	i6.1	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 8	2.1	0.6	69.9	61.3	61.8	71.0	66.9	53.7 f	51.7 E	37.2 f	53.7 5	1.9ز	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 8	2.1	0.6	69.9	61.4	61.9	71.1	67.0	53.8 !	51.7 E	37.3 f	53.8 5	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 8	2.1	0.6	70.0	61.5	62.0	71.1	67.0	53.9 f	51.8 E	37.3 f	53.8 5	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 8	2.1	0.6	70.8	62.3	62.8	71.9	67.8	54.7 f	52.6 F	38.1 f	54.6 5	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 8	1.2	0.7	67.6	59.7	60.6	68.9	64.6	52.1 !	50.4 E	35.0 f	51.4 5	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 8	1.2	0.7	68.0	60.1	61.0	69.3	65.0	52.5 f	50.8 F	35.4 f	51.8 5	j0.7	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 8	1.2	0.7	67.7	59.8	60.7	69.0	64.7	52.2 f	50.5 E	35.1 f	51.5 E	0.4	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 8	1.2	0.7	68.2	60.3	61.1	69.5	65.2	52.7 !	51.0 E	35.6 f	52.0 E	6.0	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 8	1.2	0.5	67.3	59.4	60.3	68.6	64.3	51.8 f	50.1 E	54.7 f	51.1 E	0.0	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 8	1.2	0.5	67.9	60.0	60.9	69.2	64.9	52.4 !	50.7 E	35.3 f	51.7 E	0.6	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 8	1.2	0.5	67.4	59.6	60.4	68.8	64.5	52.0 f	50.2 E	54.8 f	51.3 E	0.1	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 8	1.2	0.5	68.1	60.3	61.1	69.5	65.2	52.7 !	50.9 f	35.6 f	52.0 5	<i>5</i> 0.8	51.9	56.4
(1) Alpha Eactor: Coefficient of absorption relation	-	An alnha fa	ator of 0 ind	ionton th	at the site is																													

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%

Pro	ject Name: Arling	ton & ۱	Van				rev. (Da	ite)										
AM	Peak Hour and P	M Peal	k Hour											If Peak Hour = 69	% of ADT, Scali	ng Factor = 16.6	67	
														If Peak Hour = 79	% of ADT, Scali	ng Factor = 14.2	86	
	Intersection: 2	2												If Peak Hour = 8°	% of ADT. Scali	ng Factor = 12.5		
	Pegasus Drive an	d Arling	gton Ave	nue										If Peak Hour = 99	% of ADT, Scali	ng Factor = 11.1 ⁻	11	
	Ť													If Peak Hour = 10	0% of ADT, Scal	ling Factor = 10		
					Peg	asus D	rive									ADT		
					Southbound									Road	Pegası	us Drive	Arlingtor	Avenue
						right	through	left						Leg	North of	South of	East of	West of
					Future (Year 202	4	0	7						Cross Street	Arlingtor	n Avenue	Pegasu	s Drive
					Future (Year 202	29	0	19						Future (Year 202	616.0	600.0	18,328.0	18,504.0
					Future (Year 202	4	0	7						Future (Year 202	1,176.0	824.0	20,016.0	20,352.0
					Future (Year 202	29	0	19						Future (Year 202	616.0	736.0	19,016.0	19,056.0
					Project-Only AM	0	0	0						Future (Year 202	1,176.0	1,096.0	21,352.0	21,416.0
					Project-Only PM	0	0	0										
	Eastbound								Westbound									
		left	through							right		left						
	Future (Year 202	43	1,092	15					Future (Year 202		1,134	4						
Avenue	Future (Year 202	64	1,228	33					Future (Year 202		1,170	19						
e	Future (Year 202	43	1,121	15		N			Future (Year 202		1174	14						
≷	Future (Year 202	64	1,293	33	W		E		Future (Year 202		1238	36						
5	Project-Only AM	0	29	0		S			Project-Only AM		40	10						
gt	Project-Only PM	0	65	0					Project-Only PM	0	68	17						
Arlington																		
l₹																		
					Northbound													
							through											
					Future (Year 202		0	31										
					Future (Year 202		0	31										
					Future (Year 202		0	38										
					Future (Year 202		0	48										
					Project-Only AM		0	7										
					Project-Only PM	0	0	17										

												Traffi	cVolu	mes						F	Ref. Er	nergy Le	evels	Dist	Ld				Le				Ln				
						n Dist. fron		Barrier		leMix																											
ROADWAY NAME			Median	ADT		Center to			Medium		dB(A)	Day	Eve	Night N	MTd H	Td I	MTe	HTe I	MTn H	HTn A	A 1	MT F	IT – J	Adj	A	MT	ΗT	Total	A	MT I	ΗT	Total	A	MT	ΗT	То	a
Segment	Land Use Lar	nes	Width	Volume	(mph)	Receptor	Factor (1	dB(A)	Trucks	Trucks	CNEL	-																									
Pegasus Drive n/o Arlington Avenue																																					
Future (Year 2023) AM Peak	2	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	i 38	.3 40).(
Future (Year 2023) PM Peak	2	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	4 54.9	48.9	39.2	40.2	49.9	35.7	37.3	3 41	.1 43	į.,
Future (Year 2023) plus Project AM Peak	2	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	i 38	.3 40	J.I
Future (Year 2023) plus Project PM Peak	2	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 7	78.7	3.1	51.9	46.7	50.4	4 54.9	48.9	39.2	40.2	49.9	35.7	37.3	3 41	.1 43	j.,
Pegasus Drive s/o Arlington Avenue																																					
Future (Year 2023) AM Peak	2	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	5 52.0	46.0	36.2	37.3	46.9	32.8	34.4	i 38	.2 40	J.(
Future (Year 2023) PM Peak	2	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	3 53.4	47.4	37.6	38.7	48.3	34.2	35.7	39	.6 4	L.
Future (Year 2023) plus Project AM Peak	2	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	3 52.9	46.9	37.1	38.2	47.8	33.7	35.3	39	.1 4	i.
Future (Year 2023) plus Project PM Peak	2	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	J 40	.8 4	3.
Arlington Avenue e/o Pegasus Drive																																					
Future (Year 2023) AM Peak	5	5	7	18,328	40	40	0	0	1.8%	0.7%	69.5	#####	#####	#####	288 1	114	17	4	25	10	67.4	76.3 8	31.2	2.3	68.9	61.1	61.9	70.3	66.0	53.5	51.7	66.4	52.8	51.6	52 ز	.7 5	4
Future (Year 2023) PM Peak	5	5	7	20,016	40	40	0	0	1.8%	0.7%	69.9	#####	#####	#####	315 1	125	18	4	27	11	67.4	76.3 8	31.2	2.3	69.3	61.5	62.3	3 70.7	66.3	53.9	52.1	66.7	53.1	52.0	53	.1 5	Ŋ
Future (Year 2023) plus Project AM Peak	5	5	7	19,016	40	40	0	0	1.8%	0.7%	69.7	#####	#####	#####	299 1	119	17	4	26	11	67.4	76.3 8	31.2	2.3	69.1	61.2	2 62.1	70.4	66.1	53.7	51.9	66.5	52.9	51.8	52	.8 5	Ľ,
Future (Year 2023) plus Project PM Peak	5	5	7	21,352	40	40	0	0	1.8%	0.7%	70.2	#####	#####	#####	336 1	133	19	4	29	12	67.4	76.3 8	31.2	2.3	69.6	61.7	62.6	5 70.9	66.6	54.2	52.4	67.0	53.4	52.3	53	.3 5	Ċ,
Arlington Avenue w/o Pegasus Drive																																					
Future (Year 2023) AM Peak	5	5	7	18,504	40	40	0	0	1.8%	0.7%	69.6	#####	#####	#####	291 1	115	17	4	25	10	67.4	76.3 8	31.2	2.3	69.0	61.1	61.9	70.3	66.0	53.5	51.8	66.4	52.8	51.7	52	.7 5	Ċ,
Future (Year 2023) PM Peak	5	5	7	20,352	40	40	0	0	1.8%	0.7%	70.0	#####	#####	#####	320 1	127	18	4	28	11	67.4	76.3 8	31.2	2.3	69.4	61.5	62.4	1 70.7	66.4	54.0	52.2	66.8	53.2	52.1	53	.1 57	4
Future (Year 2023) plus Project AM Peak	5	5	7	19,056	40	40	0	0	1.8%	0.7%	69.7	#####	#####	#####	300 1	119	17	4	26	11	67.4	76.3 8	31.2	2.3	69.1	61.2	2 62.1	70.4	66.1	53.7	51.9	66.5	52.9	51.8	52	.8 5	ġ
	5	5	7	21,416	40	40	0	0	1.8%	0.7%	70.2	#####	#####	#####	337 1	134	19	4	29	12	67.4	76.3 8	31.2	2.3	69.6	61.8	62.6	5 71.0	66.6	54.2	52.4	67.0	53.4	52.3	53	.3 5	Ċ,
Future (Year 2023) plus Project PM Peak	5	5	7	, -		40	0	0	1.8%	•••••	70.2	#####	#####	#####	337 1	134	19	4	29	12	67.4	76.3 8	31.2	2.3	69.6	61.8	62.6	71.0	66.6	54.2	52.4	67.0	53.4	52.3	1 8	53.	53.3 57

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%

Proi	ect Name: Arlin	gton & Van				rev. (Da	te)									
AM	Peak Hour and I	PM Peak Hour					,			1	l	If Peak Hour =	6% of ADT, Scali	ing Factor = 16.6	67	
												If Peak Hour =	7% of ADT, Scali	ing Factor = 14.2	86	
	ntersection:	3				1				1	İ	If Peak Hour =	8% of ADT, Scali	ing Factor = 12.5		
	Project Driveway	No. 1 and Arlin	igton Ave	nue								If Peak Hour =	9% of ADT, Scali	ing Factor = 11.1	11	
														ling Factor = 10		
				Project	Drivew	ay No. 1								ADT		
				Southbound		T						Road	Project Dri	veway No. 1	Arlingtor	n Avenue
					right	through	left					Leg	North of	South of	East of	West of
				Future (Year 202	25	0	4					Cross Street	Arlingto	n Avenue	Project Driv	/eway No. 1
				Future (Year 202	34	0	3					Future (Year 20	416.0	408.0	18,360.0	18,512.0
				Future (Year 202	25	0	4					Future (Year 20		984.0	20,456.0	20,680.0
				Future (Year 202		0	3					Future (Year 20		1,432.0	18,912.0	18,984.0
				Project-Only AM	0	0	0					Future (Year 20	488.0	2,968.0	21,520.0	21,600.0
				Project-Only PM		0	0					,				
	Eastbound							Westbound								
		left through							<u>right</u>							
	Future (Year 202	11 1,125	16					Future (Year 202	12	1,128	16					
	Future (Year 202	14 1,298	29					Future (Year 202		1,181	35					
E I	Future (Year 202	11 1,125	46		Ν			Future (Year 202	12	1128	56					
l ≩ l	Future (Year 202	14 1,298	80	W		E		Future (Year 202		1181	103					
	Project-Only AM	0 0	30		S			Project-Only AM	0	0	40					
B	Project-Only PM	0 0	51					Project-Only PM	0	0	68					
Arlington																
₹ I																
				Northbound												
						through	<u>right</u>									
				Future (Year 202		0	10									
				Future (Year 202		0	30									
				Future (Year 202		0	39									
				Future (Year 202		0	95									
				Project-Only AM		0	29									
				Project-Only PM	64	0	65									

											Traffi	cVolu	mes						F	Ref. En	ergy L	evels	Dist	Ld				Le			L	Ln			
					n Dist. from		Barrier																												
ROADWAY NAME		Median			Center to			Medium				Eve	Night I	MTd H	ITd I	MTe I	HTe M	MTn H	iTn A	N 1	ΛT ⊦	IT .	Adj	A	MT	ΗT	Total	A M	мт н	IT T	Total A	4 N	VL I	ΗT	Total
Segment	Land Use Lane	s Width	Volume	(mph)	ReceptorFa	ctor (1	dB(A)	Trucks	Trucks	CNEL	_																								
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 9	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 5	59.4	71.1	78.7	2.2	47.3	42.1	45.7	50.3	44.3	34.5	35.6 4	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 5	59.4	71.1	78.7	2.2	46.6	41.4	45.0	49.6	43.6	33.8 3	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 5	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 9	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 8	59.4	71.1	78.7	2.2	50.3	45.1	48.8	53.3	47.3	37.6 2	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 8	59.4	71.1	78.7	2.2	51.9	46.8	50.4	55.0	49.0	39.2 4	40.2 4	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 5	59.4	71.1	78.7	2.2	55.1	49.9	53.6	58.1	52.1	42.4 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 6	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 6	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 6	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 6	67.4	76.3	31.2	-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 0	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 6	67.4	76.3	81.2	0.1		59.4		68.6								55.5
Future (Year 2023) plus Project AM Peak	4	16	18,984	40	55	0	Ő	1.8%	0.7%	67.5	#####	#####	#####		118	17	4	26	11 6	67.4	76.3	81.2		66.9			68.2						49.6		
Future (Year 2023) plus Project PM Peak	4	16	21.600	40	55	0	0	1.8%	0.7%	68.0	#####	#####	#####		135	20	4	29	12 6	67.4	76.3	31.2	0.1	67.4			68.8								
(4) Alaba Fastari Caeffiniant of abaantian relation	_ · · · · · · · · · · · · · · · · · · ·		,000			-		1.070		- 0.0															20.0	20.1	20.0								20.0

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%

Pro	ject Name: Arlingt	on & \	/an				rev. (Da	ite)										
AM	Peak Hour and PM	M Peak	(Hour				Ì							If Peak Hour = 6	% of ADT, Scali	ng Factor = 16.6	67	
														If Peak Hour = 7	% of ADT, Scali	ng Factor = 14.2	86	
	Intersection: 4													If Peak Hour = 8	% of ADT, Scali	ng Factor = 12.5		
	Van Buren Bouleva	ard and	d Project	Drivewa	ay No. 2									If Peak Hour = 9	% of ADT, Scali	ng Factor = 11.1	11	
														If Peak Hour = 10	0% of ADT, Sca	ling Factor = 10		
					Van Bu	ren Bo	ulevard									ADT		
					Southbound									Road	Van Burer	Boulevard	Project Driv	eway No. 2
						right	through							Leg	North of	South of	East of	West of
					Future (Year 202	134	1,264	36						Cross Street	Project Driv	veway No. 2	Van Buren	Boulevard
					Future (Year 202	189	1,792	80						Future (Year 202	23,992.0	23,496.0	360.0	1,912.0
					Future (Year 202	134	1,286	76						Future (Year 202	28,200.0	23,432.0	1,320.0	3,000.0
					Future (Year 202	189	1,841	147						Future (Year 202	24,840.0	24,536.0	1,368.0	2,328.0
					Project-Only AM		22	40					1	Future (Year 202	29,904.0	28,672.0	3,160.0	3,000.0
					Project-Only PM	0	49	67										
	Eastbound								Westbound									
			through							<u>right</u>	through							
2	Future (Year 202	0	0	25					Future (Year 202	3	0	0						
۶	Future (Year 202	0	0	112					Future (Year 202		0	0						
a S	Future (Year 202	0	0	77		Ν			Future (Year 202	40	0	0						
Driveway	Future (Year 202	0	0	112	W		E		Future (Year 202		0	0						
Ę	Project-Only AM	0	0	52		S			Project-Only AM		0	0						
ā	Project-Only PM	0	0	0					Project-Only PM	80	0	0						
Project																		
ē																		
ā					N													
<u> </u>					Northbound	1- 4	the second second	ad as le d										
I					E. t		through						-					
<u> </u>					Future (Year 202 Future (Year 202		1,562	6				+						
<u> </u>							1,418	39				+						
					Future (Year 202 Future (Year 202		1569 1435	55 122				+	-					
<u> </u>					Project-Only AM		1435	49										
							17	49 83				+	-					
<u> </u>					Project-Only PM	U	17	83				+	-					
<u> </u>													+					
<u> </u>																		
<u> </u>																		
-							+				-	+	+				+	
							+					+	+				+	
L											1	1	1					

												Traffi	cVolum	es					F	Ref. En	ergy Lev	els D	ist Lo	b			Le				Ln				
					Design	Dist. from		Barrier	Vehic	leMix																									
ROADWAY NAME			Median	ADT		Center to			Medium				Eve N	light MT	d HTd	MTe	HTe	MTn I	HTn /	A N	1T HT	- A	dj A	1	ИТ Н	ТΤ	Total A	M7	г нт	Tota	A	MT	HT	Г То	Jta
Segment	Land Use	Lanes	Width	Volume	(mph)	ReceptorF	actor (1	dB(A)	Trucks	Trucks	CNEL	_																							
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	#####	##### #	### 37	3 150	22	5	32	14	69.3 7	7.6 82	2.1 -	0.2 6	9.1	60.5 6	j1.0	70.2 66	i.1 52	2.9 50.9	9 66.4	4 52.9	J 51.1	1 51	1.8 5/	6.
Future (Year 2023) PM Peak		6	0	28,200	45	60	0	0	1.8%	0.7%	70.1	#####	##### #	#### 44	4 176	26	6	38	16	69.3 7	7.6 82	2.1 -	0.2 6	9.8	61.2 6	i1.7	70.9 66	i.8 53	3.6 51.0	6 67.4	i 53.6	ۍ 51.t	8 52	2.5 5	7.
Future (Year 2023) plus Project AM Peak		6	0	24,840	45	60	0	0	1.8%	0.7%	69.6	#####	##### #	#### 39	1 155	23	5	34	14	69.3 7	7.6 82	2.1 -	0.2 6	9.2	60.7 6	j1.2	70.3 66	6.2 53	3.1 51./	0 66.F	3 53.0	J 51.3	2 51	1.9 50	ô.
Future (Year 2023) plus Project PM Peak		6	0	29,904	45	60	0	0	1.8%	0.7%	70.4	#####	##### #	#### 47	1 187	27	6	40	17	69.3 7	7.6 82	2.1 -	0.2 7	0.0	61.5 6	j2.0	71.1 67	.0 53	3.9 51.	8 67.4	4 53.8	52.0	0 52	2.7 5	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	#####	##### #	#### 37) 147	21	5	32	13	69.3 7	7.6 82	2.1 ().1 6	9.3	60.8 6	j1.3	70.4 66	i.3 53	3.2 51.	1 66.7	7 53.1	51.3	3 52	2.0 5	7.
Future (Year 2023) PM Peak		7	0	23,432	45	60	0	0	1.8%	0.7%	69.6	#####	##### #	### 36	9 146	21	5	32	13	69.3 7	7.6 82	2.1 ().1 6	9.3	60.8 6	j1.3	70.4 66	6.3 52	3.2 51.	.1 66.f	3 53.1	51.	3 52	2.0 5	7.
Future (Year 2023) plus Project AM Peak		7	0	24,536	45	60	0	0	1.8%	0.7%	69.8	#####	##### #	#### 38	3 153	22	5	33	14	69.3 7	7.6 82	2.1 ().1 6	9.5	61.0 6	j1.5	70.6 66	0.5 52	3.4 51.	.3 66.8	3 53.7	3 51.5	5 52	2.2 5	7.
Future (Year 2023) plus Project PM Peak		7	0	28,672	45	60	0	0	1.8%	0.7%	70.5	#####	##### #	#### 45	1 179	26	6	39	16	69.3 7	7.6 82	2.1 ().1 7	0.2	61.6 6	j2.1	71.3 67	.2 54	1.1 52.	.0 67.5	5 54.0	52.2	2 52	2.9 5	7
1																																			
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 7	1.1 78	3.7 2	2.2 4	5.9	40.8 4	4.4	49.0 43	3.0 3?	3.2 34.	.2 43.9	3 29.8	3 31.3	3 35	5.2 3	7.
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 7	1.1 78	8.7 2	2.2 5	1.6	46.4 5	j0.1	54.6 48	J.6 38	3.8 39.9	9 49.5	5 35.4	4 37.0	0 40).8 43	3.
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 7	1.1 78	3.7 2	2.2 5	1.7	46.6 5	0.2	54.8 48	J.8 39	J.0 40.	.0 49.7	7 35.F	3 37.	1 41	1.0 4	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 7	1.1 78	3.7 2	2.2 5	5.4	50.2 5	j3.8	58.4 52	4 42	2.6 43.	7 53.3	3 39.2	2 40.5	8 44	4.6 4	6
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 7	71.1 78	3.7 2	2.2 5	3.2	48.0 5	j1.7	56.2 50	J.2 40).4 41.	.5 51.'	1 37.0	38.0	6 42	2.4 4	4.
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 7	1.1 78	3.7 2	2.2 5	5.1	50.0 5	j3.6	58.2 52	.2 42	2.4 43.	.5 53. ⁻	1 39.0) 40.9	5 44	4.4 4	6
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 7	1.1 78	3.7 2	2.2 5	4.0	48.9 5	2.5	57.1 51	.1 41	1.3 42.	.3 52.0	37.5	39.	4 43	3.3 4	5.
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 7	71.1 78	3.7 2	2.2 5	5.1	50.0 5	<i>i</i> 3.6	58.2 52	2.2 42	2.4 43.	.5 53.1	1 39.0) 40.9	5 44	4.4 4	6.
(1) Alpha Easter: Coefficient of absorption relati																																			

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%

Pro	ject Name: Arlingt	ton & \	/an				rev. (Da	te)											
AM	Peak Hour and P	V Peak	(Hour				<u> </u>						1		If Peak Hour = 6				
															If Peak Hour = 7	% of ADT, Scali	ng Factor = 14.2	86	
	Intersection: 5						1						1		If Peak Hour = 8 If Peak Hour = 9	% of ADT, Scali	ng Factor = 12.5		
	Van Buren Boulev	ard and	d Project	Drivewa	ay No. 3										If Peak Hour = 9	% of ADT, Scali	ng Factor = 11.1	11	
															If Peak Hour = 1	0% of ADT, Sca	ling Factor = 10		
					Van Bu	ren Bo	ulevard										ADT		
					Southbound										Road	Van Burer	Boulevard	Project Driv	reway No. 3
						right	through	left							Leg	North of	South of	East of	West of
					Future (Year 202	0	1,326	0							Cross Street	Project Driv	veway No. 3	Van Buren	Boulevard
					Future (Year 202	0	1,903	0							Future (Year 202	23,792.0	23,632.0	464.0	0.0
					Future (Year 202	0	1,348	0							Future (Year 202	27,448.0	22,912.0	496.0	0.0
					Future (Year 202	0	1,952	0							Future (Year 202	24,416.0	24,352.0	672.0	0.0
					Project-Only AM		22	0							Future (Year 202	28,656.0	28,696.0	904.0	0.0
					Project-Only PM	0	49	0											
	Eastbound								Westbound										
			through							<u>right</u>	throug								
с.	Future (Year 202	0	0	0					Future (Year 202		0	0							
۶	Future (Year 202	0	0	0					Future (Year 202		0	0							
a∕	Future (Year 202	0	0	0		Ν			Future (Year 202		0	0							
Driveway	Future (Year 202	0	0	0	W		E		Future (Year 202		0	0							
Ž	Project-Only AM	0	0	0		S			Project-Only AM		0	0							
ā	Project-Only PM	0	0	0					Project-Only PM	17	0	0	_						
6													_						
Project													_						
٩					N														
					Northbound	le ft	the way under				_		-	-					
-							through 1.609	right 19			-								
-					Future (Year 202 Future (Year 202	0	1,609	25			-	_	+						
-					Future (Year 202	-	1,491	38			-	-							
\vdash					Future (Year 202	0	1576	- 38 - 59			+	-	+	-				+	
-					Project-Only AM		49	19			+	-	+	-				+	
-					Project-Only PM		49 85	34			1		+	+					
-					Fillect-Only Pill	U	00	34	P		1		+	+					
							+				1		+						
										1			-	+					
\vdash							+						+						
							1					-							
-							+					-	+						
L							1				1				1		1	L	

											Traff	ic Volu	mes						F	Ref. Ei	nergy L	.evels	Dist	Ld				Le				Ln			
					n Dist. from		Barrier		leMix																										
ROADWAY NAME		Median			Center to			Medium				Eve	Night N	/Td H	Td N	MTe ⊦	ITe M	MTn F	iTn A	۹ I	MT I	HT	Adj	A	MT	ΗT	Tota	A	MT	HT	Tota	IA	MT	HT	Tota
Segment	Land Use Lane	s Width	Volume	(mph)	Receptor	actor (1	dB(A)	Trucks	Trucks	CNEL																									
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	#####	¥ #####	##### 3	374 '	148	22	5	32	13	69.3	77.6	82.1	0.6	69.9	61.3	61.8	3 71.0	0 66.9	53.7	51.7	67.2	2 53.	7 51.	9 52	2.6 57.
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.	62.4	4 71.6	6 67.5	54.4	52.3	67.8	3 54.3	3 52.	5 53	3.2 58.3
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	9 71.	1 67.0	53.9	51.8	67.3	3 53.	3 52.	0 52	2.7 57.
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.	62.6	6 71.8	B 67.7	54.5	52.5	68.0	54.	5 52.	7 53	3.4 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.	61.8	3 71.0	0 66.8	53.7	51.6	67.3	2 53	7 51	8 52	2.6 57.
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												2.4 57.4
Future (Year 2023) plus Project AM Peak	, a second second second second second second second second second second second second second second second s	Ő	24,352	45	60	ő	Ő	1.8%	0.7%	70.3		4 #####	#####	383 '	152	22	5	33	14	69.3	77.6														2.7 57.0
Future (Year 2023) plus Project PM Peak		0	28,696	45	60	ñ	0	1.8%	0.7%	71.0		4 #####				26	6	39			77.6				62.										3.4 58.
			20,000	.0	00	°,	0	1.070	0.1 /0	1.10				102		20	•	00		00.0		02.1	0.0		02.			0.11	01.0	02.0			. 02.		
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	22	47.0	41.	45.9	5 50.1	1 44.1	34.3	35.3	45.0	30.	9 32	4 36	5.3 38.
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	3 50.4	4 44.3	34.6	35.6	45.3	3 31.	2 32.	7 36	5.6 38.
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	22	48.6	43	5 47.	1 51.7	7 45.7	35.9	37.0	46.6	5 32	5 34	0 37	7.9 40.
Future (Year 2023) plus Project PM Peak	2	0	904	25	30	0	0	1.8%	0.7%	52.5	702			14	6	1	0	1																	9.2 41.
· (·	-	-				-	-		•••••				•		-		-									0.		0 11.0	01.2					0 00	
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	#####	* ####	¥ ####	# ####	# ####	#####	* #####	ŧ ####	¥ ####	# ###	# ##	## ###
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	ō	0	0	0	0	0	0	0	59.4	71.1	78.7	2.2	#####	ŧ ####	# ####	# ####	# ####	#####	+ #####	ŧ ####	¥ ####	# ####	# ##	
Future (Year 2023) plus Project PM Peak	2	0	0	25	30	0	0	1.8%		#NUM	1 0	0	0	0	0	0	0	0	0	59.4		78.7	2.2		ŧ ####	# ####	# ####	# ####	#####	* #####	ŧ ####	¥ ####	# ####	# ##	
(1) Alpha Eactor: Coefficient of absorption relatin						5						0	-	-	-	-	-	-	-																

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%

Proi	ect Name: Arling	ton &	Van				rev. (Da	ite)										
AM I	Peak Hour and F	M Peal	k Hour					,						If Peak Hour = 69	% of ADT, Scali	ng Factor = 16.6	57	
														If Peak Hour = 79	% of ADT, Scali	ng Factor = 14.2	36	
	Intersection:	3					1	l			1			If Peak Hour = 8°	% of ADT. Scali	ng Factor = 12.5		
	Project Driveway	No. 4 a	nd Jacks	on Stree	et									If Peak Hour = 99	% of ADT, Scali	ng Factor = 11.1	11	
	· · · · · ·													If Peak Hour = 10				
					Project	Drivewa	ay No. 4									ADT		
					Southbound		T.							Road	Project Driv	veway No. 4	Jackso	n Street
						right	through	left						Leg	North of	South of	East of	West of
					Future (Year 202	20	0	15						Cross Street	Jackso	n Street	Project Driv	eway No. 4
					Future (Year 202	87	0	37						Future (Year 202	688.0	0.0	5,280.0	5,456.0
					Future (Year 202	49	0	22						Future (Year 202	1,608.0	0.0	6,864.0	7,288.0
					Future (Year 202		0	54						Future (Year 202	1,056.0	0.0	5,416.0	5,688.0
					Project-Only AM	29	0	7						Future (Year 202	2,392.0	0.0	7,136.0	7,800.0
					Project-Only PM		0	17							,		,	,
					, , ,		1	İ					1					
	Eastbound								Westbound									
		left	through	right						right	through	left						
ğ	Future (Year 202	34	282	0					Future (Year 202	17	346	0						
	Future (Year 202	40	418	0					Future (Year 202	37	366	0						
	Future (Year 202	34	282	0		Ν			Future (Year 202	27	346	0						
Jackson	Future (Year 202	40	418	0	W		E		Future (Year 202	54	366	0						
l Ÿ [Project-Only AM	0	0	0		S			Project-Only AM	10	0	0						
ğ	Project-Only PM	0	0	0					Project-Only PM	17	0	0						
IT																		
					Northbound													
						left	through	right										
					Future (Year 202		0	0										
					Future (Year 202	0	0	0										
					Future (Year 202		0	0										
					Future (Year 202		0	0]									
					Project-Only AM		0	0										
					Project-Only PM	0	0	0										
													1					

												Traffic	Volur	nes						Ref. E	Energy L	.evel:	Dist I	Ld			Le	э			Ln			
					Design	Dist. from		Barrier	Vehid	leMix											0,													
ROADWAY NAME		M	/ledian	ADT	Speed	Center to A	Ipha	Attn.	Medium	Heavy	dB(A)	Day E	ve	Night N	ITd HT	d M	Te HTe	e MTn	HTn	Α	MT I	ΗT	Adj A	A	MT F	HT	Total A	M	T HT	Tota	A Is	MT	HT	Total
Segment	Land Use Lan	ies V	Nidth	Volume	(mph)	Receptor Fac	tor (1	dB(A)	Trucks	Trucks	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	4 ^	1 0	1	0	59.4	71.1	78.7	2.2	48.7	43.6	47.2	51.8 4	5.8 30	6.0 37.	.1 46.	7 32.6	34.1	1 38.0	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 1	0 '	1 0	2	1	59.4	71.1	78.7		52.4	47.3	50.9	55.5 4	9.5 39	9.7 40.	.7 50.4	4 36.3	\$ 37.8	3 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	1 0	1	1	59.4	71.1	78.7	2.2	50.6	45.4	49.1	53.6 4	7.6 3	7.9 38	.9 48.0	8 34.4	i 36.0) <u>39</u> ,4	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 1	5 2	20	3	1	59.4	71.1	78.7	2.2	54.2	49.0	52.6	57.2 5	1.2 4	1.4 42	.5 52.	1 38.0	J 39.5	5 43.4	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	######	##### 3	######	##### ##	### ##	### ###	## ####	# ####	ŧ #####	# ####	# #####
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	######	##### 3	######	##### ##	### ##	### ###	## ####	# ####	ŧ #####	# ####	# #####
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	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	######	##### ;	######	##### ##	### ##	### ###	## ####	# ####	ŧ #####	# ####	# #####
Jackson Street e/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 3	3 5	51	7	3	59.4	71.1	78.7	4.4	59.7	54.6	58.2	62.8 5	6.8 4	7.0 48	.0 57.	7 43.6	45.1	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 4	3 6	61	9	4	59.4	71.1	78.7	4.4	60.9	55.7	59.3	63.9 5	7.9 48	8.1 49	.2 58.8	8 44.7	7 46.3	3 50.1	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 3	4 5	51	7	3	59.4	71.1	78.7	4.4	59.8	54.7	58.3	62.9 5	6.9 4	7.1 48	.2 57.	8 43.7	45.2	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 4	5 6	61	10	4	59.4	71.1	78.7	4.4	61.0	55.9	59.5	64.1 5	8.1 4	8.3 49	.3 59.0	0 44.5) 46.4	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 3	4 5	51	7	3	59.4	71.1	78.7	4.4	59.9	54.7	58.3	62.9 5	6.9 4	7.1 48	.2 57.8	8 43.7	45.3	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 4	5 7	71	10	4	59.4	71.1	78.7	4.4	61.1	56.0	59.6	64.2 5	8.2 48	8.4 49	.4 59.	1 45.0	46.5	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 3	5 5	51	8	3	59.4	71.1	78.7	4.4	60.1	54.9	58.5	63.1 5	7.1 4	7.3 48	.4 58.	0 43.9	45.4	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 4	9 7	72	11	4	59.4	71.1	78.7	4.4	61.4	56.3	59.9	64.5 5	8.5 4	8.7 49.	.7 59.	4 45.3	3 46.8	3 50.	7 53.0
	-																																	

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

Receiver	Fl	Ldn/dB(A)	Leq,d/dB(A)	Leq,n/dB(A)	Time slice 63Hz	dB(A)	125Hz dB(A)	250Hz dE	8(A) 500Hz	dB(A) 1	1kHz dB(A) 2	2kHz dB(A)	4kHz dB(A)	8kHz dB(A)	16kHz dB(A)
Site 1	G	25.6	27.6		Ldn Leq,d Leq,n	14.8 16.9	7.3 9.3		.5.4 .7.4	18.8 20.8	20.5 22.6	19.6 21.7			-84.6 -82.6
Site 2	G	28.6	30.6		Ldn Leq,d Leq,n	18.2 20.3	6 8		13 15	17.5 19.5	24.2 26.2	24.4 26.5	15 17		-96 -94
Site 3	G	13.5	15.5		Ldn Leq,d Leq,n	8 10.1	-2.1 -0.1		6.6 8.6	4.2 6.3	5.4 7.5	6.4 8.4	-5.9 -3.8		
Site 4	G				Ldn Leq,d Leq,n										
Site 5	G	13.4	15.5		Ldn Leq,d Leq,n	5.9 7.9	-3.9 -1.9		5.1 7.1	6.8 8.8	8.1 10.1	5.2 7.2			