

# Rich-Haven Specific Plan-2022 Amendment

NOISE AND VIBRATION ANALYSIS
CITY OF ONTARIO

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14822-04 Noise Study



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## **LIST OF ABBREVIATED TERMS**

Reference

ADT Average Daily Traffic

ANSI American National Standards Institute

Calveno California Vehicle Noise

CEQA California Environmental Quality Act
CNEL Community Noise Equivalent Level

dBA A-weighted decibels

FHWA Federal Highway Administration
FTA Federal Transit Administration

INCE Institute of Noise Control Engineering

Leq Equivalent continuous (average) sound level
 Lmax Maximum level measured over the time interval
 Lmin Minimum level measured over the time interval

mph Miles per hour

OPR Office of Planning and Research

PPV Peak Particle Velocity

Project Rich-Haven Specific Plan-2022 Amendment REMEL Reference Energy Mean Emission Level

RMS Root-mean-square VdB Vibration Decibels



## **EXECUTIVE SUMMARY**

Urban Crossroads, Inc. has prepared this noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the proposed Rich-Haven Specific Plan-2022 Amendment development ("Project"). The proposed Project includes the development of a single 168,759 square foot warehouse building. This study has been prepared to satisfy applicable City of Ontario standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

The results of this Rich-Haven Specific Plan-2022 Amendment Noise and Vibration Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures.

**TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS** 

Amalusia	Report	Significance Findings		
Analysis	Section	Unmitigated	Mitigated	
Off-Site Traffic Noise	7	Less Than Significant	-	
On-Site Traffic Noise	8	Less Than Significant	-	
Operational Noise	10	Less Than Significant	-	
Construction Noise	11	Less Than Significant	-	
Construction Vibration	] 11	Less Than Significant	-	



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## 1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Rich-Haven Specific Plan-2022 Amendment ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for transportation related CNEL traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term stationary-source operational noise and short-term construction noise and vibration impacts.

### 1.1 BACKGROUND AND PROJECT DESCRIPTION

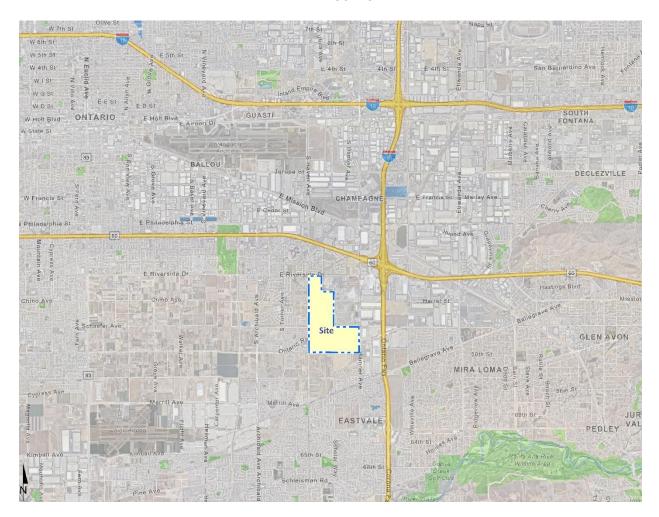
The Rich-Haven Specific Plan (RHSP) was approved by the City of Ontario in 2015, with subsequent Specific Plan Amendments approved in 2016, 2018, and 2021. The current (2021) Rich-Haven Specific Plan ("2021 Specific Plan") comprises approximately 584 acres located west of Interstate 15 (I-15), and south of State Route 60 (SR-60). The 2021 Specific Plan Area lies within the 8,200-acre Ontario Ranch area, bounded generally by Riverside Drive to the north, "Old" East Edison Avenue [alignment] to the south, Mill Creek Avenue and Hamner Avenue to the east, and Haven Avenue to the west. The location and boundaries of the 2022 RHSP Specific Plan Amendment evaluated herein coincide with the location and boundaries in the 2021 Specific Plan. Location of the Project is presented at Exhibit 1-A.

The 2021 Specific Plan entitlements allow for development of up to 7,194 dwelling units (all residential types), up to 990,902 square feet of commercial/office space, up to 1,183,525 square feet of light industrial uses, approximately 27 acres of public parkland, and approximately 20 acres of Southern California Edison (SCE) Parcel open space and SCE Easements. The 2022 RHSP Specific Plan Amendment (2022 Specific Plan Amendment, Project) evaluated in here proposes a new amendment of the RHSP as described herein.

Under the proposed 2022 RHSP Specific Plan Amendment, the Specific Plan Area would be developed with up to 7,194 dwelling units, up to 925,002 square feet of commercial space, and up to 2,767,148 square feet of light industrial uses. Other existing RHSP land uses, e.g., public parkland, Southern California Edison (SCE) Parcel open space and SCE Easements would not be substantively affected under the 2022 RHSP Specific Plan Amendment. This EIR evaluates potential environmental impacts of entire buildout of the Specific Plan Area that would result from the 2022 RHSP Specific Plan Amendment. In summary, the proposed 2022 Specific Plan Amendment would result in the following primary revisions to the 2021 Specific Plan:

- Total residential development within the Specific Plan Area would be maintained at 7,194 dwelling units. Residential units and residential densities would however be reassigned within the Specific Plan Area.
- Total commercial development would be reduced by approximately 65,900 square feet, an approximate 6.7 percent reduction in the 2021 Specific Plan commercial entitlements.





**EXHIBIT 1-A: LOCATION MAP** 

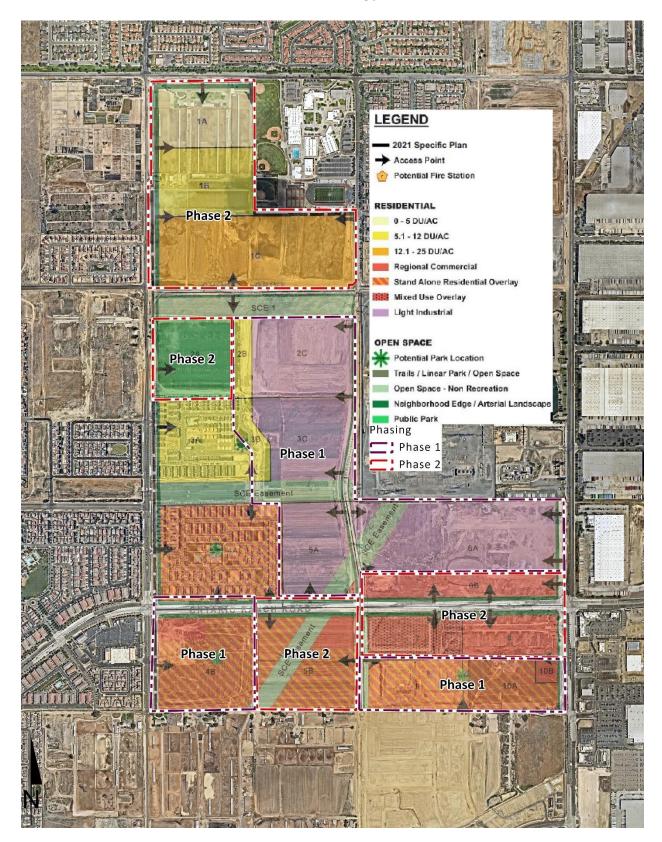
• Total light industrial development would be increased by approximately 1,583,623 square feet, an approximate 134 percent increase from the 2021 Specific Plan Amendment.

Note that portions of Planning Areas 3A and 4A within the Project site have been developed. Planning Areas 2, 3, 4A, 5C, 6, 10, and portions of 7, 8, and 9 are anticipated to be developed as part of the first phase with an anticipated Opening Year of 2024. Project Buildout and of Phase 2 is anticipated in Year 2027. Project Planning Areas and Phases are illustrated at Exhibit 1-B.

The on-site Project-related noise sources are expected to include: loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, truck movements and park activities. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site.



**EXHIBIT 1-B: LAND USE PLAN** 





#### 1.2 RECOMMENDED CONDITIONS OF APPROVAL

As substantiated in this analysis, all Project-source noise and vibration impacts would be less-than-significant. The following measures would further reduce Project noise impacts. To ensure that Project noise impacts remain at levels that would be less-than-significant, it is recommended that the following noise abatement measures be incorporated as Project Conditions of Approval

- **1.2.1:** Prior to Grading Permit issuance, the Applicant shall demonstrate that the project complies with the following:
  - All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the Noise Control Officer;
  - During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers to the satisfaction of the City Planner; and
  - During construction and to the satisfaction of the City Planner, stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors during construction activities.
- **1.2.2:** Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between the hours of 10:00 p.m. and 7:00 a.m. during is prohibited. The City Planner may approve additional hours when it can be found that such additional hours will not generate additional disturbance, or that mitigation measures will ensure compatibility with nearby residential areas.
- **1.2.3:** Prior to the construction of residential development along Riverside Drive, Haven Avenue, Mill Creek Avenue, Edison Avenue, and Milliken Avenue, an acoustical noise analysis should be prepared prior to the submittal of final tentative tract maps to ensure that exterior and interior noise levels are met. The acoustical analysis shall demonstrate that the buildings have been designed to limit interior noise levels to 45 dBA CNEL and exterior noise (backyards and habitable balconies and patios) to less than 65 dBA CNEL. Individual developments shall, to the extent feasible, implement site-planning techniques.
- **1.2.4:** Prior to final development plan approval, on a project-by-project basis and to the discretion of the Ontario Planning Department, subsequent noise studies shall be prepared, which demonstrates the site placement of stationary noise sources would not exceed criteria established in the City of Ontario Municipal Code. The analysis shall verify that loading dock facilities, rooftop equipment, trash compactors and other stationary noise sources are adequately shielded and/or located at an adequate distance from residential areas in order to comply with the City's noise standards.
- **1.2.5:** Prior to Building Permit issuance and to the satisfaction of the Ontario Planning Department, the Project Applicants, on a project-by-project basis, shall demonstrate compliance with the following with respect to mechanical equipment:
  - Mechanical equipment shall include specifications of quiet equipment;



- Mechanical equipment shall be properly selected and installed, and shall include sound attenuation packages;
- To the extent possible, mechanical equipment shall be oriented away from the nearest noise sensitive receptors; and
- The need for sound attenuation measures, and design of, such measures shall be determined as part of the final engineering design on a project-by-project basis.
- **1.2.6:** Where a commercial zone abuts a residential zone or residential use, all deliveries of goods and supplies; trash pick-up, including the use of parking lot trash sweepers; and the operation of machinery or mechanical equipment which emits noise levels in excess of 65 dBA, as measured from the closest property line to the equipment, shall only be allowed between the hours of 7:00 a.m. and 10:00 p.m., unless otherwise specified in an approved conditional use permit or other discretionary approval.
- **1.2.7**: Prior to final development plan approval, on a project-by-project basis, a subsequent noise analysis shall be prepared, to the satisfaction of the Ontario Planning Department, which demonstrates that all feasible sound attenuation has been incorporated into the parking areas (i.e., landscaping and brushed driving surfaces), such that noise from parking area has been minimized to the greatest extent practicable.



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## **2 FUNDAMENTALS**

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). Aweighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

**EXHIBIT 2-A: TYPICAL NOISE LEVELS** 

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140		
NEAR JET ENGINE		130	INTOLERABLE OR	
		120	DEAFENING	HEARING LOSS
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100		
GAS LAWN MOWER AT 1m (3 ft)		90	VERY NOISY	
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80	VERT HOLST	SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60	1000	INTERI ERENCE
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		DISTURBANCE
QUIET SUBURBAN NIGHTTIME	LIBRARY	30		
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20	FAINT	
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	NO EFFECT
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0	VERT FAINT	

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

#### 2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA



at approximately 1,000 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

#### 2.2 Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most used metric is the equivalent level ( $L_{eq}$ ). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in Aweighted decibels (dBA). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time-of-day corrections require the addition of 5 decibels to dBA L<sub>eq</sub> sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L<sub>eq</sub> sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when noise can become more intrusive. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Ontario relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

#### 2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

#### 2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

#### 2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually



sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

#### 2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

#### 2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby residents. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of-sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The Federal Highway Administration (FHWA) does not consider the planting of vegetation to be a noise abatement measure. (5)

#### 2.4 Noise Control

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

## 2.5 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must block the line-of-sight path of sound from the noise source.



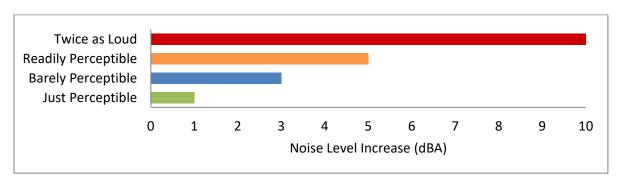
#### 2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

## 2.7 COMMUNITY RESPONSE TO NOISE

Approximately sixteen percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints may occur. Twenty to thirty percent of the population will not complain even in very severe noise environments. (7 pp. 8-6) Thus, a variety of reactions can be expected from people exposed to any given noise environment.

Surveys have shown that community response to noise varies from no reaction to vigorous action for newly introduced noises averaging from 10 dB below existing to 25 dB above existing. (8) According to research originally published in the Noise Effects Handbook (7), the percentage of high annoyance ranges from approximately 0 percent at 45 dB or less, 10 percent are highly annoyed around 60 dB, and increases rapidly to approximately 70 percent being highly annoyed at approximately 85 dB or greater. Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. A change of 3 dBA is considered barely perceptible, and changes of 5 dBA are considered readily perceptible. (4)



**EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION** 

### 2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Impact Assessment Manual* (8), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment and/or activities.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. 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 is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.



Velocity Typical Sources Level\* (50 ft from source) Human/Structural Response 100 Threshold, minor cosmetic damage Blasting from construction projects fragile buildings Bulldozers and other heavy tracked construction equipment Difficulty with tasks such as 90 reading a VDT screen Commuter rail, upper range 80 Residential annoyance, infrequent Rapid transit, upper range events (e.g. commuter rail) Commuter rail, typical Residential annoyance, frequent Bus or truck over bump events (e.g. rapid transit) Rapid transit, typical Limit for vibration sensitive equipment. Approx. threshold for Bus or truck, typical human perception of vibration 60 Typical background vibration 50

**EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION** 

\* RMS Vibration Velocity Level in VdB relative to 10-6 inches/second

Source: Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual.



## 3 REGULATORY SETTING

The federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

## 3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (9) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

#### 3.2 CITY OF ONTARIO GENERAL PLAN NOISE ELEMENT

The City of Ontario General Plan (Policy Plan) identifies several policies to minimize the impacts of excessive noise levels throughout the community. Policy Plan Section S4, Noise Hazards, establishes a goal of maintaining an environment where noise does not adversely affect the public's health, safety, and welfare. (10) To satisfy this goal, the Policy Plan identifies seven policies related to: noise mitigation; coordination with transportation authorities; noise mitigation; truck traffic; roadway design; airport noise compatibility and rail noise mitigation. The noise criteria identified on Table 5-13-3 of The Ontario Plan 2050 Final Supplemental Environmental Impact Report (FSEIR) (11) provide guidelines to evaluate land use compatibility within various noise environments. Table 5-13-3 is reproduced here as Exhibit 3-A Ontario Noise Level Exposure and Land Use Compatibility Guidelines.



EXHIBIT 3-A: ONTARIO NOISE LEVEL EXPOSURE AND LAND USE COMPATIBILITY GUIDELINES

Land Use Categories		Community Noise Equivalent Level (CNEL)			
Category	Uses	Clearly Acceptable <sup>1</sup>	Normally Acceptable <sup>2</sup>	Normally Unacceptable <sup>3</sup>	Clearly Unacceptable⁴
	Single Family/Duplex	<60	60-65	65-70	70-85
Decidential/Ledging	Multifamily	<60	60-65	65-75	75-85
Residential/Lodging	Mobile Homes	<60	60-65	-	65-85
	Hotel/Motel	<65	65-70	70-80	80-85
	Schools/Hospitals	<60	60-65	65-70	70-85
Public/Institutional	Churches/Libraries	<60	60-65	65-70	70-85
	Auditoriums/Concert Halls	<55	55-60	60-70	70-85
Camananaial	Offices	<65	65-75	75-80	80-85
Commercial	Retail	<70	70-75	75-80	80-85
Industrial	Manufacturing	<70	70-75	75-85	-
industrial	Warehousing	<70	70-80	80-85	-
	Parks/Playgrounds	<65	65-70	70-75	75-85
	Golf Course/Riding Stables	<65	65-70	70-75	75-85
	Outdoor Spectator Sports	<60	60-65	65-70	
Recreational/Open Space	Outdoor Music Shells/Amphitheaters	-	<60	60-65	65-85
	Livestock/Wildlife Preserves	<70	-	70-75	75-85
	Crop Agriculture	<55-85	-	-	-

Source: Ontario 2010.

Source: The Ontario Plan 2050 Draft SEIR (Table 5.13-3).

#### 3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Rich-Haven Specific Plan-2022 Amendment, stationary-source (operational) noise levels are evaluated against standards established under a City's Municipal Code. The City of Ontario requires that noise from new stationary sources in the City comply with the City's Noise Ordinance, which limits the acceptable noise at the property line of the impacted property, to reduce nuisances to sensitive land uses. Compliance with the City's Noise Ordinance would result in noise levels that are acceptable to the City and would result in less than significant noise impacts from stationary sources. The City of Ontario Municipal Code, Title 5, Chapter 29 noise standards are included in Appendix 3.1.

Section 5-29.04(a) identifies the allowable daytime and nighttime ambient exterior noise standards for each land use type. For Manufacturing and Industrial land uses (Noise Zone V), such as the Project, ambient exterior noise levels may not exceed 70 dBA  $L_{eq}$ . For residential land uses (Noise Zone I), ambient exterior noise levels may not exceed 65 dBA  $L_{eq}$  during the daytime hours (7:00 a.m. to 10:00 p.m.) and may not exceed 45 dBA  $L_{eq}$  during the nighttime hours (10:00



No special noise insulation required, assuming buildings of normal conventional construction.

<sup>&</sup>lt;sup>2</sup> Acoustical reports will be required for major new residential construction. Conventional construction with closed windows and fresh air supply systems of air conditions will normally suffice.

<sup>3</sup> New construction should be discouraged. Noise/aviation easements required for all new construction. If new construction does proceed, a detailed analysis of noise reduction requirements must be made, and necessary noise insulation features included.

<sup>4</sup> No new construction should be permitted.

p.m. to 7:00 a.m.) (12). The lower noise level standard shall apply on the boundary between two (2) different noise zones. If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard. The maximum acceptable Project-related operational noise levels received at off-site land uses in the City of Ontario are identified on Table 3-1.

**TABLE 3-1: OPERATIONAL NOISE STANDARDS** 

		Exterior Noise L	evels (dBA Leq) <sup>2</sup>
Noise Zone	Land Use	Daytime (7am-10pm)	Nighttime (10pm-7am)
I Single-Family Residential		65	45
II	Multi-Family Residential	65	50
III	Commercial	65	60
IV	Residential Mixed-Use	70	70
V	Manufacturing and Industrial	70	70

<sup>&</sup>lt;sup>1</sup> Source: Section 5-29.04 of the City of Ontario Municipal Code (Appendix 3.1).

## 3.4 Construction Noise Standards

The City of Ontario has set restrictions to control noise impacts associated with construction. Section 5-29.09 of the Municipal Code states: No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m. (12) While the City establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels at potentially affected receiver locations for CEQA analysis purposes.

Construction noise would be considered significant if construction activities occurring outside of the hours specified (7:00 AM and 6:00 PM weekdays and 9:00 AM to 6:00 PM weekends, excluding federal holidays) or if construction activities substantially elevate the ambient noise environment at noise-sensitive uses for a substantial period. It is assumed that the Modified Project construction activities would comply with the City's hour of activity restrictions, thereby precluding construction activities during noise-sensitive time periods. However, neither the City of Ontario General Plan Noise Element or Municipal Codes establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or permanent increase in ambient noise levels*. Therefore, a numerical construction threshold based on Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* is used for analysis of daytime construction impacts. The FTA considers a daytime exterior construction noise level of 80 dBA Leq as a reasonable threshold for noise sensitive land use. (8 p. 179)



<sup>&</sup>lt;sup>2</sup> L<sub>eq</sub> represents a steady state sound level containing the same total energy as a time varying signal over a given period.

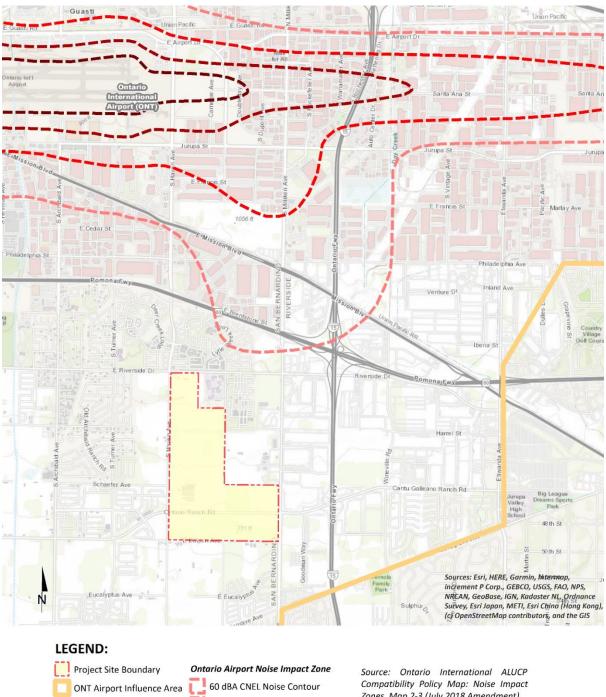
### 3.5 VIBRATION STANDARDS

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. (8) To analyze vibration impacts originating from the operation and construction of Rich-Haven Specific Plan-2022 Amendment, vibration-generating activities are appropriately evaluated against standards established under a City's Municipal Code, if such standards exist. However, the City of Ontario does not identify specific vibration level limits. Therefore, for analysis purposes, the Caltrans *Transportation and Construction Vibration Guidance Manual*, (13 p. 38) Table 19, vibration damage are used in this noise study to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

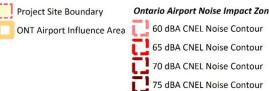
## 3.6 AIRPORT LAND USE COMPATIBILITY

The Project site is located approximately 2.4 miles south of the Ontario International Airport (ONT). This places the Project site within the ONT Airport Influence Area according to Policy Map 2-1 of the *Ontario International Airport Land Use Compatibility Plan (ONT ALUCP)*. The ONT ALUCP was amended July 2018 to promote compatibility between airport and the land uses that surround it (14). Since the Project site is located within the ONT Airport Influence Area, the Project is subject to the Noise Criteria established on Table 2-3 in the ONT ALUCP. As shown on Exhibit 3-B, the Project site is located within the ONT Airport Influence Area but outside the 60 dBA CNEL airport noise impact zone consistent with Policy Map 2-3. According to Table 2-3 of the ONT ALUCP, the Rich-Haven Specific Plan-2022 Amendment, residential, commercial, light industrial and community facilities land uses located outside the 60 dBA CNEL, are considered normally compatible land use. For normally compatible land use, either the activities associated with the land use are inherently noisy or standard construction methods will sufficiently attenuate exterior noise to an acceptable indoor community noise equivalent level (CNEL).





**EXHIBIT 3-B: ONT FUTURE AIRPORT NOISE CONTOURS** 



Zones, Map 2-3 (July 2018 Amendment)



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## 4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

- A. 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?
- B. Generation of excessive ground-borne vibration or ground-borne noise levels?
- C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

## 4.1 Noise Level Increases (Threshold A)

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes that there is no single noise increase that renders the noise impact significant. (16) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called ambient environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged.

#### 4.1.1 Noise-Sensitive Receivers

The Federal Interagency Committee on Noise (FICON) (17) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (Leq).

As previously stated, the approach used in this noise study recognizes that there is no single noise increase that renders the noise impact significant, based on a 2008 California Court of Appeal ruling on Gray v. County of Madera. (16) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a readily perceptible 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels



range from 60 to 65 dBA, a 3 dBA barely perceptible noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or readily perceptible, 3 dBA or barely perceptible, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (4 p. 9) and Caltrans (18 p. 2\_48).

## 4.1.2 Non-Noise-Sensitive Receivers

The Ontario Noise Level Exposure and Land Use Compatibility Guidelines were used to establish the satisfactory noise levels of significance for the non-noise-sensitive land uses in the Project study area. As previously shown on Exhibit 3-A, the normally acceptable exterior noise level for non-noise-sensitive general industrial land uses is 75 dBA CNEL. Noise levels greater than 75 dBA CNEL are considered normally unacceptable. (10)

To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive general industrial land uses, a *barely perceptible* 3 dBA criteria is used. When the without Project noise levels are greater than the *normally acceptable* 75 dBA CNEL land use compatibility criteria, a *barely perceptible* 3 dBA or greater noise level increase is considered a significant impact since the noise level criteria is already exceeded. The noise level increases used to determine significant impacts for non-noise-sensitive land uses is generally consistent with the FICON noise level increase thresholds for noise-sensitive land uses but instead rely on *Ontario Noise Level Exposure and Land Use Compatibility Guidelines normally acceptable* 75 dBA CNEL exterior noise level criteria for non-noise sensitive general industrial land uses.

## 4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, the vibration impacts originating from the construction of the Rich-Haven Specific Plan-2022 Amendment, vibration-generating activities are appropriately evaluated using the Caltrans vibration damage thresholds to assess potential temporary construction-related impacts at adjacent building locations. The nearest noise sensitive buildings adjacent to the Project site can best be described as "older residential structures" with a maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec).

## 4.3 CEQA GUIDELINES NOT FURTHER ANALYZED (THRESHOLD C)

CEQA Noise Threshold C applies when there are nearby public and private airports and/or air strips and focuses on land use compatibility of the Project to nearby airports and airstrips. The closest airport which would require additional noise analysis under CEQA guideline C is the



Ontario International Airport. As previously indicated in Section 3.6, the Project site is located within the ONT Airport Influence Area but is located outside the 60 dBA CNEL airport noise impact zone. Therefore, airport noise impacts are considered *less than significant*, and no further noise analysis is provided under Guideline C.

## 4.4 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increases.

**TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY** 

		6 199 (1)	Significan	ce Criteria
Analysis	Land Use	Condition(s)	Daytime	Nighttime
		if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL F	roject increase
	Noise- Sensitive <sup>1</sup>	if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL F	roject increase
Off-Site	Sensitive	if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
	Non-Noise Sensitive <sup>2</sup>	if ambient is > 75 dBA CNEL	≥ 3 dBA CNEL Project increase	
	Residential	Exterior Noise Level Limit <sup>3</sup>	55 dBA L <sub>eq</sub>	45 dBA L <sub>eq</sub>
Operational		if ambient is $<$ 60 dBA $L_{eq}$	≥ 5 dBA L <sub>eq</sub> Project increase	
Operational	Noise- Sensitive <sup>1</sup>	if ambient is 60 - 65 dBA L <sub>eq</sub>	≥ 3 dBA L <sub>eq</sub> Project increase	
		if ambient is > 65 dBA L <sub>eq</sub>	≥ 1.5 dBA L <sub>eq</sub> Project increase	
Construction	Noise-	Noise Level Threshold <sup>4</sup>	80 dBA L <sub>eq</sub>	70 dBA L <sub>eq</sub>
Construction	Sensitive	Vibration Level Threshold⁵	0.3 PPV (in/sec)	n/a

<sup>&</sup>lt;sup>1</sup> FICON, 1992.



<sup>&</sup>lt;sup>2</sup> Table 5-13-3 of The Ontario Plan 2050 Final Supplemental Environmental Impact Report (FSEIR) (Exhibit 3-A)

<sup>&</sup>lt;sup>3</sup> City of Ontario Municipal Code Section 5-29.09(a)(Appendix 3.2)

<sup>&</sup>lt;sup>4</sup> Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

<sup>&</sup>lt;sup>5</sup> Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19.

<sup>&</sup>quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m. "n/a" = construction activities are not planned during the nighttime hours; "PPV" = peak particle velocity.

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## 5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at eight locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Friday, September 30, 2022. Appendix 5.1 includes study area photos.

#### 5.1 Measurement Procedure and Criteria

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (19)

#### **5.2** Noise Measurement Locations

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (2) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (8)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (8) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels



and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

#### **5.3** Noise Measurement Results

The noise measurements presented below focus on the average or equivalent sound levels ( $L_{eq}$ ). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location.

**TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS** 

Location <sup>1</sup>	Description	Energy Average Noise Level (dBA L <sub>eq</sub> ) <sup>2</sup>		
		Daytime	Nighttime	
L1	Located near the northwest corner of the Project Site near the Colony High School Football Field	56.0	55.6	
L2	Located east of the Project Site just south of the existing residence at 3271 S Quincy Way.	48.9	48.4	
L3	Located within the Rich Haven Specific Plan north of Ontario Ranch Road.	69.1	64.0	
L4	Located south of the Project Site near the existing residence at 10823 Edison Avenue.	56.3	52.1	
L5	Located within the Rich Haven Specific Plan near the existing residence at 3965 S Sunrise Avenue.	63.1	55.1	
L6	Located west of the Project Site near the existing residence at 3860 S Oasis Paseo	68.8	62.4	
L7	Located west of the Project Site near the existing residence at 3393 Clover Place	65.4	60.2	
L8	Located north of the Project Site near the existing residence at 2943 S Alder Creek Drive.	68.5	64.3	

<sup>&</sup>lt;sup>1</sup> See Exhibit 5-A for the noise level measurement locations.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L<sub>1</sub>, L<sub>2</sub>, L<sub>5</sub>, L<sub>8</sub>, L<sub>25</sub>, L<sub>50</sub>, L<sub>90</sub>, L<sub>95</sub>, and L<sub>99</sub> percentile noise levels observed during the daytime and nighttime periods.



<sup>&</sup>lt;sup>2</sup> Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2.

<sup>&</sup>quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

RIVERSIDE DR 1A I Bus 1B Marini dinamini di Marini dinamini di 10 CHINO DR SCE 1 2B 2C 803 Substation SCE Easement **LEGEND:** 

**EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS** 



Site Boundary 🛕 Measurement Locations

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## 6 TRAFFIC NOISE METHODS AND PROCEDURES

The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with City of Ontario *Noise Level Exposure and Land Use Compatibility Guidelines* (see Exhibit 3-A), all transportation related noise levels are presented in terms of the 24-hour CNEL's.

#### 6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (20) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (21) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (22)

#### 6.1.1 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 18 off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Ontario General Plan and Circulation Element, and the posted vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on *Rich-Haven Specific Plan-2022 Amendment Traffic Analysis*, prepared by Urban Crossroads, Inc. for the following traffic scenarios. (23)

- Existing 2022 Traffic Conditions
- Existing Plus Project 2022 Traffic Conditions
- Opening Year Cumulative (OYC) 2027 Without Project
- Opening Year Cumulative (OYC) 2027 With Project
- Horizon Year (HY) 2050 Without Project
- Horizon Year (HY) 2050 With Project



The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes from the Project traffic study.

**TABLE 6-1: OFF-SITE ROADWAY PARAMETERS** 

ID	Roadway	Segment	Classification <sup>1</sup>	Receiving Land Use <sup>2</sup>	Distance from Centerline to Receiving Land Use (Feet) <sup>3</sup>	Vehicle Speed (mph)
1	Archibald Av.	n/o Ontario Ranch Rd.	Principal Arterial	Sensitive	60'	55
2	Haven Av.	n/o Riverside Dr.	Principal Arterial	Sensitive	60'	55
3	Haven Av.	s/o Riverside Dr.	Principal Arterial	Sensitive	50'	50
4	Haven Av.	n/o Ontario Ranch Rd.	Principal Arterial	Sensitive	50'	50
5	Mill Creek Av.	s/o Chino Av.	Collector	Sensitive	44'	45
6	Milliken Av.	n/o Riverside Dr.	Principal Arterial	Non-Sensitive	60'	55
7	Milliken Av.	s/o Riverside Dr.	Principal Arterial	Non-Sensitive	60'	55
8	Hamner Av.	s/o Chino Av.	Principal Arterial	Non-Sensitive	60'	55
9	Hamner Av.	s/o Ontario Ranch Rd.	Principal Arterial	Non-Sensitive	60'	55
10	Riverside Dr.	w/o Haven Av.	Minor Arterial	Sensitive	60'	50
11	Riverside Dr.	w/o Milliken Av.	Minor Arterial	Sensitive	60'	50
12	Chino Av.	e/o Archibald Av.	Collector	Sensitive	44'	40
13	Ontario Ranch Rd.	w/o Archibald Av.	Principal Arterial	Sensitive	84'	55
14	Ontario Ranch Rd.	e/o Archibald Av.	Principal Arterial	Sensitive	84'	55
15	Ontario Ranch Rd.	w/o Haven Av.	Principal Arterial	Sensitive	84'	55
16	Ontario Ranch Rd.	e/o Haven Av.	Principal Arterial	Sensitive	84'	55
17	Ontario Ranch Rd.	w/o Hamner Av.	Principal Arterial	Non-Sensitive	84'	55
18	Ontario Ranch Rd.	e/o Hamner Av.	Principal Arterial	Non-Sensitive	84'	55

 $<sup>^{\</sup>rm 1}$  City of Ontario General Plan Circulation Element.

To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix.



<sup>&</sup>lt;sup>2</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

<sup>&</sup>lt;sup>3</sup> Distance to receiving land use is based upon the right-of-way distances.

**TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES** 

			Average Daily Traffic Volumes <sup>1</sup>						
ID	Roadway	Segment	Existing	(2022)	OYC (2027)		HY (2050)		
	·		Without Project	With Project	Without Project	With Project	Without Project	With Project	
1	Archibald Av.	n/o Ontario Ranch Rd.	21,909	26,968	26,337	31,396	37,904	42,963	
2	Haven Av.	n/o Riverside Dr.	18,527	34,509	26,968	42,951	33,655	49,637	
3	Haven Av.	s/o Riverside Dr.	10,432	28,244	20,983	38,795	28,411	46,224	
4	Haven Av.	n/o Ontario Ranch Rd.	13,491	40,050	18,453	45,012	24,005	50,564	
5	Mill Creek Av.	s/o Chino Av.	2,866	9,207	3,164	9,505	7,391	13,732	
6	Milliken Av.	n/o Riverside Dr.	19,818	33,876	22,416	36,475	53,343	67,401	
7	Milliken Av.	s/o Riverside Dr.	18,436	28,604	21,431	31,599	41,531	51,699	
8	Hamner Av.	s/o Chino Av.	18,514	28,300	20,979	30,765	42,863	52,650	
9	Hamner Av.	s/o Ontario Ranch Rd.	26,376	34,332	29,827	37,783	31,170	39,126	
10	Riverside Dr.	w/o Haven Av.	15,880	17,898	18,998	21,016	32,988	35,006	
11	Riverside Dr.	w/o Milliken Av.	9,308	16,275	13,501	20,468	36,188	43,155	
12	Chino Av.	e/o Archibald Av.	5,409	8,054	9,529	12,173	11,003	13,647	
13	Ontario Ranch Rd.	w/o Archibald Av.	13,582	20,888	16,875	24,182	18,501	25,807	
14	Ontario Ranch Rd.	e/o Archibald Av.	16,280	33,653	19,855	37,228	19,774	37,147	
15	Ontario Ranch Rd.	w/o Haven Av.	18,294	39,277	22,078	43,061	52,058	73,041	
16	Ontario Ranch Rd.	e/o Haven Av.	23,755	49,864	27,304	53,412	41,417	67,526	
17	Ontario Ranch Rd.	w/o Hamner Av.	22,522	54,967	33,350	65,795	45,327	77,772	
18	Ontario Ranch Rd.	e/o Hamner Av.	27,822	51,979	38,968	63,124	50,098	74,255	

<sup>&</sup>lt;sup>1</sup> Rich Haven Specific Plan Traffic Analysis, Urban Crossroads, Inc.

Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project truck trip distribution percentages documented in the Rich-Haven Specific Plan-2022 Amendment Traffic Analysis.

**TABLE 6-3: TIME OF DAY VEHICLE SPLITS** 

Vahiala Tura		Total of Time of		
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
Autos	70.72%	11.77%	17.51%	100.00%
Medium Trucks	82.20%	3.49%	14.31%	100.00%
Heavy Trucks	70.82%	6.23%	22.95%	100.00%

<sup>&</sup>lt;sup>1</sup> Based on an existing vehicle count taken on Ontario Ranch Road west of Hamner Avenue (Rich Haven Specific Plan Traffic Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth. "Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.



Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-7 show the vehicle mixes used for the with Project traffic scenarios.

**TABLE 6-4: WITHOUT PROJECT VEHICLE MIX** 

Classification		Total		
Classification	Autos	Medium Trucks	Heavy Trucks	Total
All Segments	86.53%	2.42%	11.05%	100.00%

Based on an existing vehicle count taken on Ontario Ranch Road west of Hamner Avenue (Rich Haven Specific Plan Traffic Analysis, Urban Crossroads, Inc.) Vehicle mix percentage values rounded to the nearest one-hundredth.

Due to the added Project truck trips, the increase in Project traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.

TABLE 6-5: EXISTING (2022) WITH PROJECT VEHICLE MIX

				With P	roject <sup>1</sup>	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>
1	Archibald Av.	n/o Ontario Ranch Rd.	89.06%	1.97%	8.97%	100.00%
2	Haven Av.	n/o Riverside Dr.	92.77%	1.30%	5.93%	100.00%
3	Haven Av.	s/o Riverside Dr.	95.03%	0.89%	4.08%	100.00%
4	Haven Av.	n/o Ontario Ranch Rd.	95.46%	0.82%	3.72%	100.00%
5	Mill Creek Av.	s/o Chino Av.	95.81%	0.75%	3.44%	100.00%
6	Milliken Av.	n/o Riverside Dr.	91.28%	1.55%	7.17%	100.00%
7	Milliken Av.	s/o Riverside Dr.	90.32%	1.72%	7.96%	100.00%
8	Hamner Av.	s/o Chino Av.	90.18%	1.74%	8.08%	100.00%
9	Hamner Av.	s/o Ontario Ranch Rd.	89.65%	1.86%	8.49%	100.00%
10	Riverside Dr.	w/o Haven Av.	88.05%	2.15%	9.80%	100.00%
11	Riverside Dr.	w/o Milliken Av.	92.30%	1.38%	6.32%	100.00%
12	Chino Av.	e/o Archibald Av.	90.95%	1.63%	7.42%	100.00%
13	Ontario Ranch Rd.	w/o Archibald Av.	90.42%	1.70%	7.87%	100.00%
14	Ontario Ranch Rd.	e/o Archibald Av.	92.98%	1.25%	5.77%	100.00%
15	Ontario Ranch Rd.	w/o Haven Av.	93.29%	1.20%	5.51%	100.00%
16	Ontario Ranch Rd.	e/o Haven Av.	93.24%	1.21%	5.55%	100.00%
17	Ontario Ranch Rd.	w/o Hamner Av.	93.13%	1.21%	5.66%	100.00%
18	Ontario Ranch Rd.	e/o Hamner Av.	91.47%	1.51%	7.02%	100.00%

 $<sup>^{\</sup>rm 1}\,\text{Total}$  of vehicle mix percentage values rounded to the nearest one-hundredth.



TABLE 6-6: OYC (2027) WITH PROJECT VEHICLE MIX

				With P	roject <sup>1</sup>	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>
1	Archibald Av.	n/o Ontario Ranch Rd.	88.70%	2.03%	9.27%	100.00%
2	Haven Av.	n/o Riverside Dr.	91.54%	1.52%	6.94%	100.00%
3	Haven Av.	s/o Riverside Dr.	92.72%	1.31%	5.97%	100.00%
4	Haven Av.	n/o Ontario Ranch Rd.	94.48%	0.99%	4.53%	100.00%
5	Mill Creek Av.	s/o Chino Av.	95.52%	0.81%	3.68%	100.00%
6	Milliken Av.	n/o Riverside Dr.	90.94%	1.61%	7.45%	100.00%
7	Milliken Av.	s/o Riverside Dr.	89.96%	1.79%	8.25%	100.00%
8	Hamner Av.	s/o Chino Av.	89.89%	1.80%	8.31%	100.00%
9	Hamner Av.	s/o Ontario Ranch Rd.	89.37%	1.91%	8.72%	100.00%
10	Riverside Dr.	w/o Haven Av.	87.83%	2.19%	9.99%	100.00%
11	Riverside Dr.	w/o Milliken Av.	91.12%	1.60%	7.29%	100.00%
12	Chino Av.	e/o Archibald Av.	89.46%	1.89%	8.65%	100.00%
13	Ontario Ranch Rd.	w/o Archibald Av.	89.89%	1.80%	8.31%	100.00%
14	Ontario Ranch Rd.	e/o Archibald Av.	92.36%	1.36%	6.28%	100.00%
15	Ontario Ranch Rd.	w/o Haven Av.	92.70%	1.30%	6.00%	100.00%
16	Ontario Ranch Rd.	e/o Haven Av.	92.79%	1.29%	5.92%	100.00%
17	Ontario Ranch Rd.	w/o Hamner Av.	92.04%	1.41%	6.55%	100.00%
18	Ontario Ranch Rd.	e/o Hamner Av.	90.60%	1.67%	7.73%	100.00%

<sup>&</sup>lt;sup>1</sup> Total of vehicle mix percentage values rounded to the nearest one-hundredth.



TABLE 6-7: HY (2050) WITH PROJECT VEHICLE MIX

				With P	roject <sup>1</sup>	
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>
1	Archibald Av.	n/o Ontario Ranch Rd.	88.12%	2.14%	9.75%	100.00%
2	Haven Av.	n/o Riverside Dr.	90.87%	1.64%	7.49%	100.00%
3	Haven Av.	s/o Riverside Dr.	91.72%	1.49%	6.79%	100.00%
4	Haven Av.	n/o Ontario Ranch Rd.	93.61%	1.15%	5.24%	100.00%
5	Mill Creek Av.	s/o Chino Av.	92.75%	1.30%	5.95%	100.00%
6	Milliken Av.	n/o Riverside Dr.	88.92%	1.98%	9.10%	100.00%
7	Milliken Av.	s/o Riverside Dr.	88.63%	2.03%	9.34%	100.00%
8	Hamner Av.	s/o Chino Av.	88.49%	2.06%	9.45%	100.00%
9	Hamner Av.	s/o Ontario Ranch Rd.	89.27%	1.93%	8.80%	100.00%
10	Riverside Dr.	w/o Haven Av.	87.31%	2.28%	10.41%	100.00%
11	Riverside Dr.	w/o Milliken Av.	88.71%	2.03%	9.26%	100.00%
12	Chino Av.	e/o Archibald Av.	89.14%	1.95%	8.91%	100.00%
13	Ontario Ranch Rd.	w/o Archibald Av.	89.68%	1.84%	8.48%	100.00%
14	Ontario Ranch Rd.	e/o Archibald Av.	92.37%	1.36%	6.27%	100.00%
15	Ontario Ranch Rd.	w/o Haven Av.	90.17%	1.76%	8.07%	100.00%
16	Ontario Ranch Rd.	e/o Haven Av.	91.49%	1.52%	6.99%	100.00%
17	Ontario Ranch Rd.	w/o Hamner Av.	91.20%	1.56%	7.24%	100.00%
18	Ontario Ranch Rd.	e/o Hamner Av.	89.99%	1.78%	8.23%	100.00%

<sup>&</sup>lt;sup>1</sup> Total of vehicle mix percentage values rounded to the nearest one-hundredth.



# 7 OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *Rich-Haven Specific Plan-2022 Amendment Traffic Analysis* prepared by Urban Crossroads, Inc. (23) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway.

## 7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels.

In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-6 present a summary of the exterior traffic noise levels for each traffic condition. Appendix 7.1 includes the traffic noise level contours worksheets for each traffic condition.

TABLE 7-1: EXISTING (2022) WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
וט	Road		Land Use <sup>1</sup>	Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Archibald Av.	n/o Ontario Ranch Rd.	Sensitive	79.3	251	542	1167
2	Haven Av.	n/o Riverside Dr.	Sensitive	78.6	225	484	1043
3	Haven Av.	s/o Riverside Dr.	Sensitive	76.2	130	281	605
4	Haven Av.	n/o Ontario Ranch Rd.	Sensitive	77.4	155	333	718
5	Mill Creek Av.	s/o Chino Av.	Sensitive	69.7	RW	90	195
6	Milliken Av.	n/o Riverside Dr.	Non-Sensitive	78.9	235	507	1091
7	Milliken Av.	s/o Riverside Dr.	Non-Sensitive	78.6	224	483	1040
8	Hamner Av.	s/o Chino Av.	Non-Sensitive	78.6	225	484	1043
9	Hamner Av.	s/o Ontario Ranch Rd.	Non-Sensitive	80.1	284	613	1320
10	Riverside Dr.	w/o Haven Av.	Sensitive	77.2	182	391	843
11	Riverside Dr.	w/o Milliken Av.	Sensitive	74.9	127	274	590
12	Chino Av.	e/o Archibald Av.	Sensitive	71.1	52	112	240
13	Ontario Ranch Rd.	w/o Archibald Av.	Sensitive	79.1	340	733	1578
14	Ontario Ranch Rd.	e/o Archibald Av.	Sensitive	79.9	384	827	1781
15	Ontario Ranch Rd.	w/o Haven Av.	Sensitive	80.4	415	894	1925



ID	Road	Segment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
			Land Use <sup>1</sup>	Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
16	Ontario Ranch Rd.	e/o Haven Av.	Sensitive	81.5	494	1064	2291
17	Ontario Ranch Rd.	w/o Hamner Av.	Non-Sensitive	81.3	476	1026	2211
18	Ontario Ranch Rd.	e/o Hamner Av.	Non-Sensitive	82.2	549	1182	2546

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

TABLE 7-2: EXISTING (2022) WITH PROJECT CONTOURS

15	Road	Segment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID	Koad		Land Use <sup>1</sup>	Land Use (dBA)²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Archibald Av.	n/o Ontario Ranch Rd.	Sensitive	79.5	259	559	1204
2	Haven Av.	n/o Riverside Dr.	Sensitive	79.3	251	541	1166
3	Haven Av.	s/o Riverside Dr.	Sensitive	77.5	157	339	729
4	Haven Av.	n/o Ontario Ranch Rd.	Sensitive	78.7	191	412	887
5	Mill Creek Av.	s/o Chino Av.	Sensitive	71.1	52	112	241
6	Milliken Av.	n/o Riverside Dr.	Non-Sensitive	79.8	271	583	1257
7	Milliken Av.	s/o Riverside Dr.	Non-Sensitive	79.4	254	548	1180
8	Hamner Av.	s/o Chino Av.	Non-Sensitive	79.4	254	548	1180
9	Hamner Av.	s/o Ontario Ranch Rd.	Non-Sensitive	80.4	296	639	1376
10	Riverside Dr.	w/o Haven Av.	Sensitive	77.3	185	398	857
11	Riverside Dr.	w/o Milliken Av.	Sensitive	75.5	139	300	645
12	Chino Av.	e/o Archibald Av.	Sensitive	71.4	54	117	252
13	Ontario Ranch Rd.	w/o Archibald Av.	Sensitive	79.9	382	822	1771
14	Ontario Ranch Rd.	e/o Archibald Av.	Sensitive	81.0	454	978	2108
15	Ontario Ranch Rd.	w/o Haven Av.	Sensitive	81.5	493	1063	2290
16	Ontario Ranch Rd.	e/o Haven Av.	Sensitive	82.6	580	1250	2693
17	Ontario Ranch Rd.	w/o Hamner Av.	Non-Sensitive	83.1	624	1345	2897
18	Ontario Ranch Rd.	e/o Hamner Av.	Non-Sensitive	83.5	663	1429	3079

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.



 $<sup>^{2}</sup>$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

<sup>&</sup>lt;sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: OYC (2027) WITHOUT PROJECT CONTOURS

	Pond	Sagment	Receiving Land Use <sup>1</sup>	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID	Road	Segment		Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Archibald Av.	n/o Ontario Ranch Rd.	Sensitive	80.1	284	612	1319
2	Haven Av.	n/o Riverside Dr.	Sensitive	80.2	289	622	1340
3	Haven Av.	s/o Riverside Dr.	Sensitive	79.3	208	447	963
4	Haven Av.	n/o Ontario Ranch Rd.	Sensitive	78.7	191	410	884
5	Mill Creek Av.	s/o Chino Av.	Sensitive	70.1	45	97	208
6	Milliken Av.	n/o Riverside Dr.	Non-Sensitive	79.4	255	550	1185
7	Milliken Av.	s/o Riverside Dr.	Non-Sensitive	79.2	248	534	1150
8	Hamner Av.	s/o Chino Av.	Non-Sensitive	79.1	244	526	1133
9	Hamner Av.	s/o Ontario Ranch Rd.	Non-Sensitive	80.7	309	665	1433
10	Riverside Dr.	w/o Haven Av.	Sensitive	78.0	205	441	950
11	Riverside Dr.	w/o Milliken Av.	Sensitive	76.5	163	351	757
12	Chino Av.	e/o Archibald Av.	Sensitive	73.5	76	163	350
13	Ontario Ranch Rd.	w/o Archibald Av.	Sensitive	80.1	393	847	1824
14	Ontario Ranch Rd.	e/o Archibald Av.	Sensitive	80.8	438	944	2033
15	Ontario Ranch Rd.	w/o Haven Av.	Sensitive	81.2	470	1013	2182
16	Ontario Ranch Rd.	e/o Haven Av.	Sensitive	82.1	542	1167	2514
17	Ontario Ranch Rd.	w/o Hamner Av.	Non-Sensitive	83.0	619	1333	2873
18	Ontario Ranch Rd.	e/o Hamner Av.	Non-Sensitive	83.7	687	1479	3187

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

TABLE 7-4: OYC (2027) WITH PROJECT CONTOURS

ID	Road	Segment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
וט			Land Use <sup>1</sup>	Land Use (dBA)²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Archibald Av.	n/o Ontario Ranch Rd.	Sensitive	80.3	292	629	1355
2	Haven Av.	n/o Riverside Dr.	Sensitive	80.7	312	673	1450
3	Haven Av.	s/o Riverside Dr.	Sensitive	79.9	229	494	1065
4	Haven Av.	n/o Ontario Ranch Rd.	Sensitive	79.8	224	482	1039
5	Mill Creek Av.	s/o Chino Av.	Sensitive	71.4	55	117	253
6	Milliken Av.	n/o Riverside Dr.	Non-Sensitive	80.3	290	624	1344
7	Milliken Av.	s/o Riverside Dr.	Non-Sensitive	80.0	277	596	1284
8	Hamner Av.	s/o Chino Av.	Non-Sensitive	79.9	273	587	1265
9	Hamner Av.	s/o Ontario Ranch Rd.	Non-Sensitive	80.9	320	690	1486



 $<sup>^{\</sup>rm 2}$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

ID.	Road	Segment	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID			Land Use <sup>1</sup>	Land Use (dBA)²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
10	Riverside Dr.	w/o Haven Av.	Sensitive	78.1	207	447	963
11	Riverside Dr.	w/o Milliken Av.	Sensitive	76.9	174	374	805
12	Chino Av.	e/o Archibald Av.	Sensitive	73.7	78	167	360
13	Ontario Ranch Rd.	w/o Archibald Av.	Sensitive	80.7	432	930	2004
14	Ontario Ranch Rd.	e/o Archibald Av.	Sensitive	81.7	504	1087	2341
15	Ontario Ranch Rd.	w/o Haven Av.	Sensitive	82.2	544	1173	2527
16	Ontario Ranch Rd.	e/o Haven Av.	Sensitive	83.1	625	1346	2900
17	Ontario Ranch Rd.	w/o Hamner Av.	Non-Sensitive	84.3	751	1619	3488
18	Ontario Ranch Rd.	e/o Hamner Av.	Non-Sensitive	84.6	791	1703	3669

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

TABLE 7-5: HY (2050) WITHOUT PROJECT CONTOURS

9	Road	Commont	Receiving	CNEL at Receiving	Distance to Contour from Centerline (Feet)		
ID	Koad	Segment	Land Use <sup>1</sup>	Land Use (dBA)²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Archibald Av.	n/o Ontario Ranch Rd.	Sensitive	81.7	362	780	1681
2	Haven Av.	n/o Riverside Dr.	Sensitive	81.2	335	721	1553
3	Haven Av.	s/o Riverside Dr.	Sensitive	80.6	254	547	1179
4	Haven Av.	n/o Ontario Ranch Rd.	Sensitive	79.9	227	489	1054
5	Mill Creek Av.	s/o Chino Av.	Sensitive	73.8	79	170	366
6	Milliken Av.	n/o Riverside Dr.	Non-Sensitive	83.2	455	980	2112
7	Milliken Av.	s/o Riverside Dr.	Non-Sensitive	82.1	385	829	1787
8	Hamner Av.	s/o Chino Av.	Non-Sensitive	82.2	393	847	1825
9	Hamner Av.	s/o Ontario Ranch Rd.	Non-Sensitive	80.9	318	685	1476
10	Riverside Dr.	w/o Haven Av.	Sensitive	80.4	296	637	1372
11	Riverside Dr.	w/o Milliken Av.	Sensitive	80.8	314	678	1460
12	Chino Av.	e/o Archibald Av.	Sensitive	74.1	83	179	386
13	Ontario Ranch Rd.	w/o Archibald Av.	Sensitive	80.5	418	900	1940
14	Ontario Ranch Rd.	e/o Archibald Av.	Sensitive	80.7	437	941	2028
15	Ontario Ranch Rd.	w/o Haven Av.	Sensitive	84.9	833	1794	3866
16	Ontario Ranch Rd.	e/o Haven Av.	Sensitive	84.0	715	1541	3319
17	Ontario Ranch Rd.	w/o Hamner Av.	Non-Sensitive	84.3	759	1636	3525
18	Ontario Ranch Rd.	e/o Hamner Av.	Non-Sensitive	84.8	812	1749	3768

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.



 $<sup>^{\</sup>rm 2}$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

 $<sup>^{\</sup>rm 2}$  The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-6: HY (2050) WITH PROJECT CONTOURS

5	Dand	Commant	Receiving	CNEL at Receiving		e to Conto nterline (Fe	
ID	Road	Segment	Land Use <sup>1</sup>	Land Use (dBA)²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Archibald Av.	n/o Ontario Ranch Rd.	Sensitive	81.8	369	795	1713
2	Haven Av.	n/o Riverside Dr.	Sensitive	81.6	357	768	1655
3	Haven Av.	s/o Riverside Dr.	Sensitive	81.1	274	590	1271
4	Haven Av.	n/o Ontario Ranch Rd.	Sensitive	80.7	258	556	1197
5	Mill Creek Av.	s/o Chino Av.	Sensitive	74.4	86	186	401
6	Milliken Av.	n/o Riverside Dr.	Non-Sensitive	83.6	481	1037	2233
7	Milliken Av.	s/o Riverside Dr.	Non-Sensitive	82.5	408	880	1896
8	Hamner Av.	s/o Chino Av.	Non-Sensitive	82.6	416	896	1931
9	Hamner Av.	s/o Ontario Ranch Rd.	Non-Sensitive	81.1	329	709	1528
10	Riverside Dr.	w/o Haven Av.	Sensitive	80.4	298	642	1383
11	Riverside Dr.	w/o Milliken Av.	Sensitive	80.9	322	694	1495
12	Chino Av.	e/o Archibald Av.	Sensitive	74.3	85	183	395
13	Ontario Ranch Rd.	w/o Archibald Av.	Sensitive	81.0	456	982	2115
14	Ontario Ranch Rd.	e/o Archibald Av.	Sensitive	81.7	503	1084	2336
15	Ontario Ranch Rd.	w/o Haven Av.	Sensitive	85.4	890	1917	4130
16	Ontario Ranch Rd.	e/o Haven Av.	Sensitive	84.6	788	1698	3659
17	Ontario Ranch Rd.	w/o Hamner Av.	Non-Sensitive	85.3	880	1897	4087
18	Ontario Ranch Rd.	e/o Hamner Av.	Non-Sensitive	85.5	908	1956	4215

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

# 7.2 Existing (2022) Project Traffic Noise Level Increases

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report for informational purposes and to fully analyze all the existing traffic scenarios identified in the Traffic Analysis prepared by Urban Crossroads, Inc. However, the analysis of existing off-site traffic noise levels plus traffic noise generated by the proposed Project scenario will not actually occur since the Project would not be fully constructed and operational until Year 2027 conditions. Table 7-1 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels range from 69.7 to 82.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions ranging from 71.1 to 83.5 dBA CNEL. Table 7-7 shows that the Project off-site traffic noise level increases range from 0.1 to 1.8 dBA CNEL on the study area roadway segments. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience less than significant noise level increases on receiving land uses due to the Project-related traffic.



<sup>&</sup>lt;sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of the receiving adjacent land use.

<sup>&</sup>quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-7: EXISTING (2022) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	ID Road	Segment	Receiving		EL at Receiv	Incremental Noise Level Increase Threshold <sup>3</sup>		
		J	Land Use <sup>1</sup>	No Project	With Project	Project Addition	Limit	Exceeded?
1	Archibald Av.	n/o Ontario Ranch Rd.	Sensitive	79.3	79.5	0.2	1.5	No
2	Haven Av.	n/o Riverside Dr.	Sensitive	78.6	79.3	0.7	1.5	No
3	Haven Av.	s/o Riverside Dr.	Sensitive	76.2	77.5	1.3	1.5	No
4	Haven Av.	n/o Ontario Ranch Rd.	Sensitive	77.4	78.7	1.3	1.5	No
5	Mill Creek Av.	s/o Chino Av.	Sensitive	69.7	71.1	1.4	1.5	No
6	Milliken Av.	n/o Riverside Dr.	Non-Sensitive	78.9	79.8	0.9	3.0	No
7	Milliken Av.	s/o Riverside Dr.	Non-Sensitive	78.6	79.4	0.8	3.0	No
8	Hamner Av.	s/o Chino Av.	Non-Sensitive	78.6	79.4	0.8	3.0	No
9	Hamner Av.	s/o Ontario Ranch Rd.	Non-Sensitive	80.1	80.4	0.3	3.0	No
10	Riverside Dr.	w/o Haven Av.	Sensitive	77.2	77.3	0.1	1.5	No
11	Riverside Dr.	w/o Milliken Av.	Sensitive	74.9	75.5	0.6	1.5	No
12	Chino Av.	e/o Archibald Av.	Sensitive	71.1	71.4	0.3	1.5	No
13	Ontario Ranch Rd.	w/o Archibald Av.	Sensitive	79.1	79.9	0.8	1.5	No
14	Ontario Ranch Rd.	e/o Archibald Av.	Sensitive	79.9	81.0	1.1	1.5	No
15	Ontario Ranch Rd.	w/o Haven Av.	Sensitive	80.4	81.5	1.1	1.5	No
16	Ontario Ranch Rd.	e/o Haven Av.	Sensitive	81.5	82.6	1.1	1.5	No
17	Ontario Ranch Rd.	w/o Hamner Av.	Non-Sensitive	81.3	83.1	1.8	3.0	No
18	Ontario Ranch Rd.	e/o Hamner Av.	Non-Sensitive	82.2	83.5	1.3	3.0	No

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

# 7.3 OYC (2027) TRAFFIC NOISE LEVEL INCREASES

Table 7-3 presents the OYC without Project conditions CNEL noise levels. The OYC without Project exterior noise levels range from 70.1 to 83.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows that the OYC with Project conditions will range from 71.4 to 84.6 dBA CNEL. Table 7-8 shows that the Project off-site traffic noise level increases range from 0.1 to 1.3 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.



<sup>&</sup>lt;sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>&</sup>lt;sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

TABLE 7-8: OYC (2027) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	ID Road	Segment	Receiving		EL at Receiv nd Use (dB/	Incremental Noise Level Increase Threshold <sup>3</sup>		
			Land Use <sup>1</sup>	No Project	With Project	Project Addition	Limit	Exceeded?
1	Archibald Av.	n/o Ontario Ranch Rd.	Sensitive	80.1	80.3	0.2	1.5	No
2	Haven Av.	n/o Riverside Dr.	Sensitive	80.2	80.7	0.5	1.5	No
3	Haven Av.	s/o Riverside Dr.	Sensitive	79.3	79.9	0.6	1.5	No
4	Haven Av.	n/o Ontario Ranch Rd.	Sensitive	78.7	79.8	1.1	1.5	No
5	Mill Creek Av.	s/o Chino Av.	Sensitive	70.1	71.4	1.3	1.5	No
6	Milliken Av.	n/o Riverside Dr.	Non-Sensitive	79.4	80.3	0.9	3.0	No
7	Milliken Av.	s/o Riverside Dr.	Non-Sensitive	79.2	80.0	0.8	3.0	No
8	Hamner Av.	s/o Chino Av.	Non-Sensitive	79.1	79.9	0.8	3.0	No
9	Hamner Av.	s/o Ontario Ranch Rd.	Non-Sensitive	80.7	80.9	0.2	3.0	No
10	Riverside Dr.	w/o Haven Av.	Sensitive	78.0	78.1	0.1	1.5	No
11	Riverside Dr.	w/o Milliken Av.	Sensitive	76.5	76.9	0.4	1.5	No
12	Chino Av.	e/o Archibald Av.	Sensitive	73.5	73.7	0.2	1.5	No
13	Ontario Ranch Rd.	w/o Archibald Av.	Sensitive	80.1	80.7	0.6	1.5	No
14	Ontario Ranch Rd.	e/o Archibald Av.	Sensitive	80.8	81.7	0.9	1.5	No
15	Ontario Ranch Rd.	w/o Haven Av.	Sensitive	81.2	82.2	1.0	1.5	No
16	Ontario Ranch Rd.	e/o Haven Av.	Sensitive	82.1	83.1	1.0	1.5	No
17	Ontario Ranch Rd.	w/o Hamner Av.	Non-Sensitive	83.0	84.3	1.3	3.0	No
18	Ontario Ranch Rd.	e/o Hamner Av.	Non-Sensitive	83.7	84.6	0.9	3.0	No

<sup>&</sup>lt;sup>1</sup> Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

# 7.4 HY (2050) TRAFFIC NOISE LEVEL INCREASES

Table 7-5 presents the HY without Project conditions CNEL noise levels. The HY without Project exterior noise levels range from 73.8 to 84.9 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows that the HY with Project conditions will range from 74.3 to 85.5 dBA CNEL. Table 7-8 shows that the Project off-site traffic noise level increases range from 0.0 to 1.0 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-1, land uses adjacent to the study area roadway segments would experience *less than significant* noise level increases on receiving land uses due to the Project-related traffic.



<sup>&</sup>lt;sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>&</sup>lt;sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

TABLE 7-9: HY (2050) WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	ID Road	Segment	Receiving		EL at Receiv	Incremental Noise Level Increase Threshold <sup>3</sup>		
		J	Land Use <sup>1</sup>	No Project	With Project	Project Addition	Limit	Exceeded?
1	Archibald Av.	n/o Ontario Ranch Rd.	Sensitive	81.7	81.8	0.1	1.5	No
2	Haven Av.	n/o Riverside Dr.	Sensitive	81.2	81.6	0.4	1.5	No
3	Haven Av.	s/o Riverside Dr.	Sensitive	80.6	81.1	0.5	1.5	No
4	Haven Av.	n/o Ontario Ranch Rd.	Sensitive	79.9	80.7	0.8	1.5	No
5	Mill Creek Av.	s/o Chino Av.	Sensitive	73.8	74.4	0.6	1.5	No
6	Milliken Av.	n/o Riverside Dr.	Non-Sensitive	83.2	83.6	0.4	3.0	No
7	Milliken Av.	s/o Riverside Dr.	Non-Sensitive	82.1	82.5	0.4	3.0	No
8	Hamner Av.	s/o Chino Av.	Non-Sensitive	82.2	82.6	0.4	3.0	No
9	Hamner Av.	s/o Ontario Ranch Rd.	Non-Sensitive	80.9	81.1	0.2	3.0	No
10	Riverside Dr.	w/o Haven Av.	Sensitive	80.4	80.4	0.0	1.5	No
11	Riverside Dr.	w/o Milliken Av.	Sensitive	80.8	80.9	0.1	1.5	No
12	Chino Av.	e/o Archibald Av.	Sensitive	74.1	74.3	0.2	1.5	No
13	Ontario Ranch Rd.	w/o Archibald Av.	Sensitive	80.5	81.0	0.5	1.5	No
14	Ontario Ranch Rd.	e/o Archibald Av.	Sensitive	80.7	81.7	1.0	1.5	No
15	Ontario Ranch Rd.	w/o Haven Av.	Sensitive	84.9	85.4	0.5	1.5	No
16	Ontario Ranch Rd.	e/o Haven Av.	Sensitive	84.0	84.6	0.6	1.5	No
17	Ontario Ranch Rd.	w/o Hamner Av.	Non-Sensitive	84.3	85.3	1.0	3.0	No
18	Ontario Ranch Rd.	e/o Hamner Av.	Non-Sensitive	84.8	85.5	0.7	3.0	No

<sup>&</sup>lt;sup>1</sup>Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.



 $<sup>^2</sup>$  The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

<sup>&</sup>lt;sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?

# 8 ON-SITE TRAFFIC NOISE ANALYSIS

As outlined in Section 7, noise levels at the roadways bordering the proposed project along Haven Avenue, Mill Creek Avenue, Hamner Avenue, Riverside Drive, Chino Avenue and Ontario Ranch Road would have noise levels above 65 dBA. Therefore, on-site residential land uses located along these roadways would require additional noise attenuation to ensure that noise levels comply with the City's exterior and interior noise standards of 65 dBA CNEL and 45 dBA CNEL.

As the development phasing would be implemented through the approval of tentative tract maps and development permits, the proposed project would be required to implement noise abatement measure 1.2.4, which requires that an acoustical analysis be required for residential units upon submittal final site design plans. Noise abatement measure 1.2.4 includes providing attenuation measures such as soundwalls or increasing the distance between habitable spaces and roadways. With compliance with noise abatement measures, impacts from roadways noise to on-site residential homes would be *less than significant*.



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# 9 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 9-A, were identified as representative locations for analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

To describe the potential off-site Project noise levels, eight receiver locations in the vicinity of the Project site were identified. The selection of receiver locations is based on FHWA guidelines and is consistent with additional guidance provided by Caltrans and the FTA, as previously described in Section 5.2. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

- R1: Location R1 represents the Colony High School Football Stadium, approximately 76 feet north of the Project site. Receiver R1 is placed in the bleachers just north of Planning Area (PA) 1. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing noise sensitive residence at 3271 S Quincy Way, approximately 219 feet east of the Project site. Receiver R2 is placed in the private outdoor living areas facing the Project site. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents an on-site receiver location within the planned PA7 residential mixed use overlay area. Receiver R3 is placed approximately 460 feet south of the light industrial use within PA 6A. A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R4: Location R4 represents the existing noise sensitive residence at 10823 Edison Avenue, approximately 94 feet south of the Project site. Since there are no private outdoor living areas (backyard) facing the Project site, receiver R4 is placed at the building's façade. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.



- R8 RIVERSIDE DR 1A Colony (Algl) School I TYME 1B **B**M Joseph , co. 10 R CHINO DR SCE 1 CHANGN ANT 2B 2C 893 Substation SCE Easement 150 R6 ONTARIO RANGURD R3 ₹**0**R4

**EXHIBIT 9-A: RECEIVER LOCATIONS** 





- R5: Location R5 represents the existing on-site noise sensitive residence at 3959 S Sunrise Avenue within the standalone residential overlay (PA4). Receiver R5 is placed in the private outdoor living areas facing the light industrial use within PA5A. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents the existing noise sensitive residence at 3455 Pine Ridge Loop, approximately 150 feet west of the Project site. Receiver R6 is placed in the private outdoor living areas facing the Project site. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.
- R7: Location R7 represents the existing noise sensitive residence at 3379 S Myrtle Drive, approximately 156 feet west of the Project site. Receiver R7 is placed in the private outdoor living areas facing the Project site. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment.
- R8: Location R8 represents the existing noise sensitive residence at 2943 S Alder Creek Drive, approximately 189 feet north of the Project site. Receiver R8 is placed in the private outdoor living areas facing the Project site. A 24-hour noise measurement was taken near this location, L8, to describe the existing ambient noise environment.



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# 10 OPERATIONAL NOISE ANALYSIS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 9, resulting from the operation of the proposed Rich-Haven Specific Plan-2022 Amendment Project. It is expected that the primary noise source activities will be related to the light industrial and commercial land uses within planning areas 2C, 3C, 5A, 6A, 6B, 8 and 10B. The residential planning areas within the Rich-Haven Specific Plan-2022 Amendment are considered a noise-sensitive receiving land use. Therefore, no potential operational noise impacts for the residential land use are analyzed in the noise study. Exhibit 10-A identifies the noise source locations used to assess the operational noise levels.

## **10.1** OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical of daytime and nighttime activities at the Project site. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. The on-site Project-related noise sources are expected to include: loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, truck movements and park activities.

#### 10.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 10-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, truck movements and park activities all operating at the same time. These sources of noise activity will likely vary throughout the day.

#### **10.2.1 MEASUREMENT PROCEDURES**

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precisions sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (19)



RIVERSIDE DR Colony (Algl) School 18 CHINO DR 893 Substation **LEGEND:** Site Boundary ●● Truck Movements △ Loading Dock Activity Park Activities

**EXHIBIT 10-A: OPERATIONAL NOISE SOURCE LOCATIONS** 



**TABLE 10-1: REFERENCE NOISE LEVEL MEASUREMENTS** 

Noise Source <sup>1</sup>	Noise Source	Min./ Hour <sup>2</sup>		Reference Noise Level	Sound Power
Noise Source	Height (Feet)	Day	Night	(dBA L <sub>eq</sub> ) @ 50 Feet	Level (dBA)³
Loading Dock Activity	8'	60	60	62.8	103.4
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Trash Enclosure Activity	5'	60	30	57.3	89.0
Parking Lot Vehicle Movements	5'	60	60	52.6	81.1
Truck Movements	8'	60	60	59.8	93.2
Park Activities	5'	60'	0'	52.9	81.4

<sup>&</sup>lt;sup>1</sup> As measured by Urban Crossroads, Inc.

## 10.2.2 LOADING DOCK ACTIVITY

Noise sources at loading docks located with the Light Industrial may include maneuvering and idling trucks, truck refrigeration units, forklifts, banging and clanging of equipment (i.e., hand carts and roll-up doors), noise from public address systems, and voices of truck drivers and employees. The project proposes commercial uses, as described above that may contain loading docks. The reference loading dock activities are intended to describe the typical operational noise source levels associated with the Project. This includes truck idling, deliveries, backup alarms, unloading/loading, docking including a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background forklift operations.

At a uniform reference distance of 50 feet, Urban Crossroads collected a reference noise level of 62.8 dBA L<sub>eq</sub>. The loading dock activity noise level measurement was taken over a fifteen-minute period and represents multiple noise sources taken from the center of activity. The reference noise level measurement includes employees unloading a docked truck container included the squeaking of the truck's shocks when weight was removed from the truck, employees playing music over a radio, as well as a forklift horn and backup alarm. In addition, during the noise level measurement a truck entered the loading dock area and proceeded to reverse and dock in a nearby loading bay, adding truck engine, idling, air brakes noise, in addition to on-going idling of an already docked truck. Loading dock activity is estimated during all the daytime, evening, and nighttime hours.

Noise generated by loading docks could exceed the City's 65 dBA noise standard for residential and/or other sensitive noise receivers. Loading dock noise impacts are considered *less than significant* following compliance with the provisions of Ontario Municipal Code as specified in noise abatement measure 1.3.6, which would reduce noise impacts from loading docks to *less than significant* levels.



<sup>&</sup>lt;sup>2</sup> Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site. "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

<sup>&</sup>lt;sup>3</sup> Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calculated using the CadnaA noise model at the reference distance to the noise source. Numbers may vary due to size differences between point and area noise sources.

#### 10.2.3 ROOF-TOP AIR CONDITIONING UNITS

Mechanical equipment, such as generators, trash compactors, heating, ventilation and air conditioning (HVAC) units would be included as part of the proposed improvements. Mechanical equipment would be utilized in commercial as well as institutional areas. The noise level measurements describe a single mechanical roof-top air conditioning unit. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At the uniform reference distance of 50 feet, the reference noise levels are 57.2 dBA  $L_{\rm eq}$ . Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for and average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project buildings.

Noise generated from mechanical equipment could impact residential uses and other sensitive receivers within the project vicinity by exceeding the City's 65 dBA noise standard. However, the proposed project would be subject to the provisions of Ontario Municipal Code, which requires that noise levels emitted from such equipment not exceed 65 dBA at any property line within a residential zone, residential use, or other noise-sensitive use. Noise levels from mechanical equipment would be further minimized with implementation of mitigation requiring the orientation of equipment away from any sensitive receivers, proper selection of equipment, and installation of equipment with proper acoustical shielding; refer to noise abatement measure 1.2.5. With implementation of noise abatement measure 1.2.5 and compliance with Ontario Municipal Code provisions, potential impacts from mechanical equipment are considered *less than significant*.

## 10.2.5 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, and trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project Site. The measured reference noise level at the uniform 50-foot reference distance is 57.3 dBA L<sub>eq</sub> for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for the Project's proposed building.

#### 10.2.6 PARKING LOT ACTIVITY

The commercial and institutional uses proposed by the project would include designated parking areas. Traffic associated with parking lots is not of sufficient volume to exceed community noise standards that are based on a time averaged scale such as the CNEL scale. However, the instantaneous maximum sound levels generated by a car door slamming, an engine starting up, and car passing by may be an annoyance to adjacent sensitive receivers. Noise abatement



measure 1.2.7 has been recommended requiring that subsequent noise analyses be prepared for future uses, as determined necessary by the City of Ontario, which demonstrate that all feasible sound attenuation has been incorporated into proposed parking areas (i.e., landscaping and brushed driving surfaces), so that noise from the parking areas has been minimized to the greatest extent practicable. Following mitigation, noise generated by parking lots is not expected to exceed the 65 dBA noise standard and a *less than significant impact* would occur in this regard. Also, it should be noted that noise attenuation from existing walls and intervening vegetation and topography would further lessen potential impacts.

To describe the on-site parking lot activity, a long-term 29-hour reference noise level measurement was collected in the center of activity within the staff parking lot of an Amazon warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 52.6 dBA L<sub>eq</sub>. Parking activities are expected to take place during the full hour (60 minutes) throughout the daytime and evening hours. The parking lot noise levels are mainly due cars pulling in and out of parking spaces in combination with car doors opening and closing.

#### **10.2.7 TRUCK MOVEMENTS**

It is anticipated that truck deliveries would occur at the proposed commercial uses and industrial land uses. Noise generated by delivery trucks on the project site could exceed the City's 65 dBA noise standard and a significant impact could occur unless mitigated. Delivery truck noise impacts would be minimized through compliance with the provisions of Ontario Municipal Code, as specified in noise abatement measure 1.2.6, which includes limitations on hours of operation when a commercial zone abuts a residential zone or residential use, would reduce noise impacts from trucks to less than significant levels.

The truck movements reference noise level measurement was collected over a period of 1 hour and 28 minutes and represents multiple heavy trucks entering and exiting the outdoor loading dock area producing a reference noise level of 59.8 dBA  $L_{eq}$  at 50 feet. The noise sources included at this measurement location account for trucks entering and existing the Project driveways and maneuvering in and out of the outdoor loading dock activity area.

#### 10.2.8 PARK ACTIVITIES

The project proposes parks that would include both active and passive uses. The parks would include picnic areas, basketball courts, tot lots, football, soccer, or softball facilities. Activities at the park could expose surrounding receivers to noise impacts from events at these facilities. Since the residential land use would be located at a minimum of 50 feet from the proposed park facilities, noise generated from people utilizing the park would not exceed the City's 65 dBA noise standard. Furthermore, potential park activities would be limited to operation during daytime hours. Impacts in this regard are considered less than significant.

To represent the potential noise level impacts associated with the Project's Park activities, a reference noise level measurement was collected at the Founders Park in the unincorporated community of Ladera Ranch in the County of Orange. The reference noise levels collected at the



Founders Park are expected to reflect the noise level activities within the open space-recreation land use areas of the Project site, since the reference noise level measurement includes girls' youth soccer games, coaches shouting instructions, and parents speaking on cell phones at five feet from the noise level measurement location, and background noise levels from kids playing on swing sets and people cheering and clapping at 50 feet from the noise level measurement location. Using the uniform reference distance of 50 feet, the reference park activity noise level is 49.4 dBA Leq. The playground activities are estimated to occur for 60 minutes during the peak hour conditions.

# 10.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict outdoor noise levels.

Using the ISO 9613-2 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level ( $L_w$ ) to describe individual noise sources. While sound pressure levels (e.g.,  $L_{eq}$ ) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels ( $L_w$ ) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the CadnaA noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 10.1 includes the detailed noise model inputs used to estimate the Project operational noise levels presented in this section.

#### **10.4** Project Operational Noise Levels

Using the reference noise levels to represent the proposed Project operations that include loading dock activity, roof-top air conditioning units, trash enclosure activity, parking lot vehicle movements, truck movements and park activities, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the sensitive receiver locations. Table 10-2 shows the Project operational noise levels during the daytime hours of 7:00



a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 33.1 to 45.8 dBA  $L_{eq}$ .

**TABLE 10-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS** 

Noise Source <sup>1</sup>	Operational Noise Levels by Receiver Location (dBA Leq)								
Noise Source	R1	R2	R3	R4	R5	R6	R7	R8	
Loading Dock Activity	44.6	44.4	40.6	41.7	39.3	38.6	34.1	32.3	
Roof-Top Air Conditioning Units	29.2	30.0	42.0	32.6	36.1	30.3	28.7	21.9	
Trash Enclosure Activity	24.1	24.5	37.5	27.2	20.4	21.3	17.8	16.0	
Parking Lot Vehicle Movements	27.3	29.2	36.8	29.2	37.4	26.7	25.9	19.8	
Truck Movements	27.2	28.6	27.8	30.1	30.4	23.3	20.9	17.6	
Park Activities	24.6	22.6	26.1	23.5	28.5	28.8	31.5	20.5	
Total (All Noise Sources)	44.9	44.8	45.8	42.8	42.9	39.6	35.9	33.1	

<sup>&</sup>lt;sup>1</sup> See Exhibit 10-A for the noise source locations. CadnaA noise model calculations are included in Appendix 10.1.

Table 10-3 shows the Project operational noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 32.9 to 44.8 dBA  $L_{eq}$ . The differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 10-1 and Appendix 10.1.

**TABLE 10-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS** 

Noise Source <sup>1</sup>	Operational Noise Levels by Receiver Location (dBA Leq)								
Noise Source	R1	R2	R3	R4	R5	R6	R7	R8	
Loading Dock Activity	44.6	44.4	40.6	41.7	39.3	38.6	34.1	32.3	
Roof-Top Air Conditioning Units	26.8	27.5	39.6	30.2	33.7	27.9	26.3	19.5	
Trash Enclosure Activity	20.1	20.5	33.5	23.2	16.4	17.3	13.9	12.1	
Parking Lot Vehicle Movements	27.3	29.2	36.8	29.2	37.4	26.7	25.9	19.8	
Truck Movements	27.2	28.6	27.8	30.1	30.4	23.3	20.9	17.6	
Park Activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total (All Noise Sources)	44.8	44.7	44.5	42.5	42.4	39.3	35.5	32.9	

 $<sup>^{1}</sup>$  See Exhibit 10-A for the noise source locations. CadnaA noise model calculations are included in Appendix 10.1.

## 10.5 Project Operational Noise Level Compliance

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Ontario exterior noise level standards at nearby noise-sensitive receiver locations. Table 10-4 shows the operational noise levels associated with Rich-Haven Specific Plan-2022 Amendment Project will satisfy the City of Ontario 70 dBA Leq daytime and 65 dBA Leq nighttime exterior noise level standards at the



nearest receiver locations. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations.

**TABLE 10-4: OPERATIONAL NOISE LEVEL COMPLIANCE** 

Receiver Location <sup>1</sup>	Project Operational Noise Levels (dBA Leq) <sup>2</sup>		110100 =010	l Standards Leq) <sup>3</sup>	Noise Level Standards Exceeded? <sup>4</sup>		
Location	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	
R1	44.9	44.8	65.0	45.0	No	No	
R2	44.8	44.7	65.0	45.0	No	No	
R3	45.8	44.5	65.0	45.0	No	No	
R4	42.8	42.5	65.0	45.0	No	No	
R5	42.9	42.4	65.0	45.0	No	No	
R6	39.6	39.3	65.0	45.0	No	No	
R7	35.9	35.5	65.0	45.0	No	No	
R8	33.1	32.9	65.0	45.0	No	No	

<sup>&</sup>lt;sup>1</sup> See Exhibit 9-A for the receiver locations.

# 10.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (2) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10log_{10}[10^{SPL1/10} + 10^{SPL2/10} + ... 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. As indicated on Table 10-5, the Project will generate a daytime noise level increase ranging from 0.0 to 1.4 dBA  $L_{eq}$  operational noise level increase at the nearest receiver locations. Table 10-6 shows that the Project will generate a nighttime operational noise level increase ranging from 0.0 to 1.6 dBA  $L_{eq}$  at the nearest receiver locations.

The Project-related operational noise level increases will satisfy the operational noise level increase significance criteria presented on Table 4-1. Therefore, the incremental Project operational noise level increase is considered *less than significant* at all receiver locations.



<sup>&</sup>lt;sup>2</sup> Proposed Project operational noise level calculations are included in Appendix 10-1.

<sup>&</sup>lt;sup>3</sup> Section 5-29.04 of the City of Ontario Municipal Code (Appendix 3.1).

<sup>&</sup>lt;sup>4</sup> Do the estimated Project operational noise source activities exceed the noise level standards?

<sup>&</sup>quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 10-5: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient <sup>5</sup>	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	44.9	L1	56.0	56.3	0.3	5.0	No
R2	44.8	L2	48.9	50.3	1.4	5.0	No
R3	45.8	L3	69.1	69.1	0.0	1.5	No
R4	42.8	L4	56.3	56.5	0.2	5.0	No
R5	42.9	L5	63.1	63.1	0.0	5.0	No
R6	39.6	L6	68.8	68.8	0.0	1.5	No
R7	35.9	L7	65.4	65.4	0.0	1.5	No
R8	33.1	L8	68.5	68.5	0.0	1.5	No

<sup>&</sup>lt;sup>1</sup> See Exhibit 9-A for the receiver locations.

**TABLE 10-6: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES** 

Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient <sup>5</sup>	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	44.9	L1	55.6	56.0	0.4	5.0	No
R2	44.8	L2	48.4	50.0	1.6	5.0	No
R3	45.8	L3	64.0	64.1	0.1	5.0	No
R4	42.8	L4	52.1	52.6	0.5	5.0	No
R5	42.9	L5	55.1	55.4	0.3	5.0	No
R6	39.6	L6	62.4	62.4	0.0	5.0	No
R7	35.9	L7	60.2	60.2	0.0	5.0	No
R8	33.1	L8	64.3	64.3	0.0	5.0	No

<sup>&</sup>lt;sup>1</sup> See Exhibit 9-A for the receiver locations.



<sup>&</sup>lt;sup>2</sup> Total Project daytime operational noise levels as shown on Table 10-2.

<sup>&</sup>lt;sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>&</sup>lt;sup>4</sup> Observed daytime ambient noise levels as shown on Table 5-1.

<sup>&</sup>lt;sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>&</sup>lt;sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>&</sup>lt;sup>7</sup> Significance increase criteria as shown on Table 4-1.

<sup>&</sup>lt;sup>2</sup> Total Project nighttime operational noise levels as shown on Table 10-3.

<sup>&</sup>lt;sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>&</sup>lt;sup>4</sup> Observed nighttime ambient noise levels as shown on Table 5-1.

<sup>&</sup>lt;sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>&</sup>lt;sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>&</sup>lt;sup>7</sup> Significance increase criteria as shown on Table 4-1.

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# 11 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 11-A shows the construction noise source locations in relation to the nearest sensitive receiver locations previously described in Section 9. The Project Conditions of Approval identified at Section 1.3, would minimize or eliminate a construction-source noise impacts. It is recommended that the City consider these noise abatement measures in their deliberations regarding the Project i

While the City establishes limits to the hours during which construction activity may take place, it does not identify specific noise level limits for construction noise levels at potentially affected receiver locations for CEQA analysis purposes. In addition, since neither the City of Ontario General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers for CEQA analysis purposes, a numerical construction threshold based on Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual is used for analysis of daytime construction impacts. The FTA considers a daytime exterior construction noise level of 80 dBA Leq as a reasonable threshold for noise sensitive residential land use (8 p. 179).

## 11.1 CONSTRUCTION NOISE LEVELS

The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed during that stage. As a result of the equipment mix, each stage has its own noise characteristics; some stages have higher continuous noise levels than others, and some have higher impact noise levels than others. The Project construction activities are expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

#### 11.2 Construction Reference Noise Levels

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (24) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.



RIVERSIDE DR 18 @R1 R2 CHINO DR 150 R6 R3 \$ RA **LEGEND:** 

**EXHIBIT 11-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS** 



Construction Activity • Receiver Locations • Distance from receiver to Project site boundary (in feet)

# 11.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Consistent with FTA guidance for general construction noise assessment, Table 11-1 presents the combined noise levels for the loudest construction equipment, assuming they operate at the same time. As shown on Table 11-2, the construction noise levels are expected to range from 46.5 to 63.8 dBA Leq at the nearby receiver locations. Appendix 11.1 includes the detailed CadnaA construction noise model inputs.

**TABLE 11-1: CONSTRUCTION REFERENCE NOISE LEVELS** 

Construction Stage	Reference Construction Activity	Reference Noise Level @ 50 Feet (dBA L <sub>eq</sub> ) <sup>1</sup>	Combined Noise Level (dBA L <sub>eq</sub> ) <sup>2</sup>	Combined Sound Power Level (PWL) <sup>3</sup>	
	Demolition Equipment	82			
Demolition	Backhoes	74	83	115	
	Hauling Trucks	72			
	Crawler Tractors	78			
Site Preparation	Hauling Trucks	72	80	112	
rreparation	Rubber Tired Dozers	75			
	Graders	81			
Grading	Excavators	77	83	115	
	Compactors	76			
5 11 11	Cranes	73			
Building Construction	Tractors	80	81	113	
Construction	Welders	70			
	Pavers	74			
Paving	Paving Equipment	82	83	115	
	Rollers	73			
	Cranes	73			
Architectural Coating	Air Compressors	74	77	109	
Coating	Generator Sets	70			

<sup>&</sup>lt;sup>1</sup> FHWA Roadway Construction Noise Model (RCNM).



<sup>&</sup>lt;sup>2</sup> Represents the combined noise level for all equipment assuming they operate at the same time consistent with FTA Transit Noise and Vibration Impact Assessment guidance.

<sup>&</sup>lt;sup>3</sup> Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings. Sound power levels calibrated using the CadnaA noise model at the reference distance to the noise source.

**TABLE 11-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY** 

Receiver Location <sup>1</sup>	Construction Noise Levels (dBA L <sub>eq</sub> )							
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels <sup>2</sup>		
R1	53.0	56.0	54.0	56.0	50.0	56.0		
R2	50.3	53.3	51.3	53.3	47.3	53.3		
R3	60.7	63.7	61.7	63.7	57.7	63.7		
R4	52.8	55.8	53.8	55.8	49.8	55.8		
R5	60.8	63.8	61.8	63.8	57.8	63.8		
R6	52.1	55.1	53.1	55.1	49.1	55.1		
R7	51.8	54.8	52.8	54.8	48.8	54.8		
R8	49.5	52.5	50.5	52.5	46.5	52.5		

<sup>&</sup>lt;sup>1</sup> Noise receiver locations are shown on Exhibit 11-A.

### 11.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA  $L_{eq}$  is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA  $L_{eq}$  significance threshold during Project construction activities as shown on Table 11-3. With the implementation of mitigation measures N-1 and N-2, construction noise impacts would be *less than significant*.

**TABLE 11-3: CONSTRUCTION NOISE LEVEL COMPLIANCE** 

	Construction Noise Levels (dBA L <sub>eq</sub> )					
Receiver Location <sup>1</sup>	Highest Construction Noise Levels <sup>2</sup>	Threshold <sup>3</sup>	Threshold Exceeded? <sup>4</sup>			
R1	56.0	80	No			
R2	53.3	80	No			
R3	63.7	80	No			
R4	55.8	80	No			
R5	63.8	80	No			
R6	55.1	80	No			
R7	54.8	80	No			
R8	52.5	80	No			

<sup>&</sup>lt;sup>1</sup> Noise receiver locations are shown on Exhibit 11-A.

<sup>&</sup>lt;sup>4</sup> Do the estimated Project construction noise levels exceed the construction noise level threshold?



<sup>&</sup>lt;sup>2</sup> Construction noise level calculations based on distance from the construction activity, which is measured from the Project site boundary to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 11.1.

 $<sup>^2</sup>$  Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 11-2.

<sup>&</sup>lt;sup>3</sup> Construction noise level thresholds as shown on Table 4-1.

## 11.6 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Ground vibration levels associated with various types of construction equipment are summarized on Table 11-4. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential for human response (annoyance) and building damage using the following vibration assessment methods defined by the FTA. To describe the vibration impacts the FTA provides the following equation:  $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$ 

TABLE 11-4: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet		
Small bulldozer	0.003		
Jackhammer	0.035		
Loaded Trucks	0.076		
Large bulldozer	0.089		
Vibratory Roller	0.210		

Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Table 11-5 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 30 to 219 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.003 to 0.068 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec), the typical Project construction vibration levels will fall below the building damage thresholds at all the noise sensitive receiver locations.

It is not anticipated that short-term construction operations or long-term operations for the proposed project would result in excessive groundborne vibration or ground borne noise levels. Vibration producing construction equipment such as pile drivers is not typically used for the type of residential homes and commercial buildings that would be developed as part of the Rich-Haven Specific Plan. Although the proposed project would include the use of heavy-duty construction equipment, vibration impacts that would be generated would not damage structures within the project vicinity. In addition, long-term operation at residential units typically would not produce excessive ground vibration. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.



**TABLE 11-5: PROJECT CONSTRUCTION VIBRATION LEVELS** 

Receiver <sup>1</sup>	to Const. Activity (Feet) <sup>2</sup>	Typical Construction Vibration Levels PPV (in/sec) <sup>3</sup>					Thresholds	Thresholds
		Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Highest Vibration Level	PPV (in/sec) <sup>4</sup>	Exceeded? <sup>5</sup>
R1	76'	0.001	0.007	0.014	0.017	0.017	0.3	No
R2	219'	0.000	0.001	0.003	0.003	0.003	0.3	No
R3	30'	0.002	0.027	0.058	0.068	0.068	0.3	No
R4	94'	0.000	0.005	0.010	0.012	0.012	0.3	No
R5	30'	0.002	0.027	0.058	0.068	0.068	0.3	No
R6	150'	0.000	0.002	0.005	0.006	0.006	0.3	No
R7	156'	0.000	0.002	0.005	0.006	0.006	0.3	No
R8	189'	0.000	0.002	0.004	0.004	0.004	0.3	No

<sup>&</sup>lt;sup>1</sup> Receiver locations are shown on Exhibit 11-A.



 $<sup>^{\</sup>rm 2}$  Distance from receiver location to Project construction boundary (Project site boundary).

<sup>&</sup>lt;sup>3</sup> Based on the Vibration Source Levels of Construction Equipment (Table 11-4).

<sup>&</sup>lt;sup>4</sup> Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19.

<sup>&</sup>lt;sup>5</sup> Does the peak vibration exceed the acceptable vibration thresholds?

<sup>&</sup>quot;PPV" = Peak Particle Velocity

# 12 REFERENCES

- 1. **State of California.** California Environmental Quality Act, Environmental Checklist Form Appendix G. 2021.
- 2. California Department of Transportation Environmental Program. *Technical Noise Supplement A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA: s.n., September 2013.
- 3. Environmental Protection Agency Office of Noise Abatement and Control. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. March 1974. EPA/ONAC 550/9/74-004.
- 4. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch. Highway Traffic Noise Analysis and Abatement Policy and Guidance. December 2011.
- 5. **U.S. Department of Transportation Federal Highway Administration.** *Highway Noise Barrier Design Handbook*. 2001.
- 6. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
- 7. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
- 8. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
- 9. **Office of Planning and Research.** *State of California General Plan Guidlines.* October 2019.
- 10. City of Ontario. Policy Plan Safety Element, S4, Noise Hazards. August 2022.
- 11. **The City of Ontario.** *The Ontario Plan 2050 Final Supplemental Environmental Impact Report (FSEIR).* August 2022.
- 12. City of Ontario. Municipal Code, Chapter 29, Section 5- Noise.
- 13. **California Department of Transportation.** *Transportation and Construction Vibration Guidance Manual.* April 2020.
- 14. City of Ontario. Ontario International Airport Land Use Compatibility Plan. July 2018.
- 15. State of California. California Environmental Quality Act, Appendix G. 2018.
- 16. California Court of Appeal. *Gray v. County of Madera, F053661.* 167 Cal.App.4th 1099; Cal.Rptr.3d, October 2008.
- 17. **Federal Interagency Committee on Noise.** Federal Agency Review of Selected Airport Noise Analysis Issues. August 1992.
- 18. California Department of Transportation. Technical Noise Supplement. November 2009.
- 19. American National Standards Institute (ANSI). Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.
- 20. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.



- 21. California Department of Transportation Environmental Program, Office of Environmental Engineering. Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction. September 1995. TAN 95-03.
- 22. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
- 23. **Urban Crossroads.** Rich Haven Specific Plan. October 2022.
- 24. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning. FHWA Roadway Construction Noise Model. January, 2006.



## 13 CERTIFICATIONS

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Rich-Haven Specific Plan-2022 Amendment Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 584-3148.

Bill Lawson, P.E., INCE Principal URBAN CROSSROADS, INC. 260 E. Baker Street, Suite 200 Costa Mesa, CA 92626 (949) 336-5979 blawson@urbanxroads.com



### **EDUCATION**

Master of Science in Civil and Environmental Engineering California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning California Polytechnic State University, San Luis Obispo • June, 1992

#### **PROFESSIONAL REGISTRATIONS**

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009

AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012

PTP – Professional Transportation Planner • May, 2007 – May, 2013

INCE – Institute of Noise Control Engineering • March, 2004

#### **PROFESSIONAL AFFILIATIONS**

ASA – Acoustical Society of America ITE – Institute of Transportation Engineers

#### **PROFESSIONAL CERTIFICATIONS**

Certified Acoustical Consultant – County of Orange • February, 2011 FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013



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# **APPENDIX 3.1:**

**CITY OF ONTARIO DEVELOPMENT CODE** 



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### **CHAPTER 29: NOISE**

5-29.01	Declaration of findings and policy
5-29.02	Definitions
5-29.03	Designated noise zones
5-29.04	Exterior noise standards
5-29.05	Interior noise standards
5-29.06	Exemptions
5-29.07	Loud and disturbing noise
5-29.08	Real property maintenance noise regulations
5-29.09	Construction activity noise regulations
5-29.10	Other public agency exceptions
5-29.11 provisions	Schools, day care centers, churches, libraries, museums, health care institutions; Special
5-29.12	Sound amplifying equipment
5-29.13	Amplified sound
5-29.14	Motor vehicles
5-29.15	Noise level measurement
5-29.16	Prima facie violation
5-29.17	Penalty
5-29.18	Enforcement and administration
5-29.19	City Manager waiver
5-29.20	Noise abatement program

#### Sec. 5-29.01. Declaration of findings and policy.

It is hereby found and declared that:

- (a) The making and creation of excessive, unnecessary or unusually loud noises within the limits of the City is a condition that has existed for some time, however, the extent and volume of such noises is increasing;
- (b) The making, creation or maintenance of such excessive, unnecessary, unnatural or unusually loud noises that are prolonged, unusual and unnatural in their time, place and use affect and are a detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the City; and
- (c) The necessity in the public interest for the provisions and prohibitions hereinafter contained and enacted, is declared as a matter of legislative determination and public policy, and it is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, comfort, convenience, safety, welfare and prosperity and the peace and quiet of the residents of the City.

(§ 2, Ord. 2888, eff. March 6, 2008)

## Sec. 5-29.02. Definitions.

As used in this chapter, specific words and phrases are defined as follows:

- (a) "Ambient noise level" shall mean the all-encompassing noise level associated with a given environment and is a composite of sounds from all sources, excluding the alleged offensive noise or excessive sound, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.
- (b) "Applicable (noise) zone" shall mean the noise zone category based on the actual use of the property, provided that the actual use is a legal use in the City.
- (c) "A-weighted sound level" shall mean the sound pressure level in decibels (dBAs) as measured with a sound level meter using the A-weighted filter network (scale) at slow response and at a pressure of twenty (20) micropascals. The A-weighted filter de-emphasizes the very low and a very high frequency component of sound in a manner similar to the response of the human ear, and is a numerical method of rating human judgment of loudness.
- (d) "Decibel (dBA)" shall mean a unit for measuring the amplitude of a sound, equal to twenty (20) times the logarithm to the base ten (10) of the ratio of pressure of the sound measured to the reference pressure of twenty (20) micropascals.

- (e) "Equivalent sound or noise level (Leq)" shall mean the International Electrotechnical Commission (IEC) 60804 Standard for measurement, or the most recent revision thereof, for the sound level corresponding to a steady state noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level or the energy average noise level during the sample period. The measurement period for the purposes of this chapter is fifteen (15) minutes.
- (f) "Impulsive noise" shall mean a noise of short duration usually less than one (1) second and of high intensity, with an abrupt onset and rapid decay. Such objectionable noises may also be repetitive.
- (g) "Intrusive noise" shall mean that noise that intrudes over and above the ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence and tonal information content, as well as the prevailing ambient noise level.
  - (h) "Maintenance" shall mean the upkeep, repair or preservation of existing property or structures.
- (i) "Noise" shall mean any unwanted sound or sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing or is otherwise annoying.
- (j) "Noise level (sound level)" shall mean the weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum. For purposes of this chapter, all noise levels (sound levels) shall be A-weighted sound pressure level.
- (k) "Noise (sound) level meter" shall mean an instrument, including a microphone, an amplifier, an output meter and frequency weighting networks for the measurement and determination of noise and sound levels. For the purposes of this chapter, the sound level meter must meet the International Electrotechnical Commission (IEC) 60651 and 60804 Standards, or the most recent revisions thereof, for Type 1 sound level meters or an instrument and the associated recording and analyzing equipment that will provide equivalent data.

(§ 2, Ord. 2888, eff. March 6, 2008)

#### Sec. 5-29.03. Designated noise zones.

The properties hereinafter described shall be assigned to the following noise zones:

Noise Zone I:	All single-family residential properties;	
Noise Zone II:	All multi-family residential properties and mobile home parks;	
Noise Zone III:	All commercial property;	
Noise Zone IV:	The residential portion of mixed use properties;	
Noise Zone V:	All manufacturing or industrial properties and all other uses.	

The actual use of the property, and not necessarily its zoning designation, shall be the determining factor in establishing whether a property is in Noise Zone I, II, III, IV or V, provided that the actual use is a legal use within the applicable zone.

(§ 2, Ord. 2888, eff. March 6, 2008)

### Sec. 5-29.04. Exterior noise standards.

(a) The following exterior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Exterior Noise Level (1)		Allowed Equivalent Noise Level, Leq. (2)	
Noise Zone	Type of Land Use	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
I	Single-Family Residential	65 dBA	45 dBA
II	Multi-Family Residential, Mobile Home Parks	65 dBA	50 dBA
III	Commercial Property	65 dBA	60 dBA
IV	Residential Portion of Mixed Use	70 dBA	70 dBA
V	Manufacturing and Industrial, Other Uses	70 dBA	70 dBA

If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

- (2) Measurements for compliance are made on the affected property pursuant to §5-29.15.
- (b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:
  - (1) The noise standard for the applicable zone for any fifteen-minute (15) period; and
- (2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).
- (c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
- (d) The Noise Zone IV standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use, if the noise originates from that commercial property or use.
- (e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.
- (§ 2, Ord. 2888, eff. March 6, 2008)

### Sec. 5-29.05. Interior noise standards.

(a) The following interior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Interior Noise Level (1)		Allowed Equivalent Noise Level, Leq. (2)	
Noise Zone	Type of Land Use	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
1	Single-Family Residential	45 dBA	40 dBA
11	Multi-Family Residential, Mobile Home Parks	45 dBA	40 dBA
IV	Residential Portion of Mixed Use	45 dBA	40 dBA

- (1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.
- (2) Measurements for compliance are made on the affected property pursuant to §5-29.15.
- (b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:
  - (1) The noise standard for the applicable zone for any fifteen-minute (15) period;
- (2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).
- (c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
- (d) The Noise Zone IV standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property or use, if the noise originates from that commercial property or use.
- (e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.
- (§ 2, Ord. 2888, eff. March 6, 2008)

#### Sec. 5-29.06. Exemptions.

The following activities shall be exempted from the provisions of this chapter:

- (a) Any activity conducted on public property, or on private property with the consent of the owner, by any public entity or its officers, employees, representatives, agents, subcontractors, permittees, licensees or lessees that the public entity has authorized are exempt from the provisions of this chapter. This includes, without limitation, sporting and recreational activities that are sponsored, co-sponsored, permitted or allowed by the City or any school district within the City's jurisdictional boundaries. This also includes, without limitation, occasional outdoor gatherings, public dances, shows or sporting and entertainment events, provided such events are conducted pursuant to an approval, authorization, contract, lease, permit or sublease by the appropriate public entity, specifically the planning commission or City Council;
  - (b) Occasional outdoor gatherings, public dances, show, sporting and entertainment events, provided said events are

conducted pursuant to a permit or license issued by the appropriate jurisdiction relative to the staging of said events;

- (c) Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicle, work or warning alarm or bell, provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within forty-five (45) minutes in any hour of its being activated:
- (d) Noise sources associated with construction, repair, remodeling, demolition or grading of any real property. Such activities shall instead be subject to the provisions of § 5-29.09;
- (e) Noise sources associated with construction, repair, remodeling, demolition or grading of public rights-of-way or during authorized seismic surveys;
  - (f) All mechanical devices, apparatus or equipment associated with agriculture operations provided that:
    - (1) Operations do not take place between 8:00 p.m. and 7:00 a.m.;
- (2) Such operations and equipment are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions; or
- (3) Such operations and equipment are associated with agricultural pest control through pesticide application, provided the application is made in accordance with permits issued by or regulations enforced by the California Department of Agriculture;
- (g) Noise sources associated with the maintenance of real property. Such activities shall instead be subject to the provisions of § 5-29.08;
  - (h) Any activity to the extent regulation thereof has been preempted by state or federal law;
- (i) Any noise sources associated with people and/or music associated with a party at a residential property. Such noise shall be subject to the provisions of OMC § 5-29.07;
- (j) Any noise source emanating from an ice cream truck within the City. Such noise shall be subject to the provisions of OMC § 4-18.04;
- (k) Any noise sources associated with barking dogs or other intermittent noises made by animals on any properly within the City. Such noise shall be subject to the provisions of OMC Chapter 1, Title 6;
- (I) Noise sources related to uses approved by a permit or development agreement adopted prior to the date of adoption of this chapter and that contains acoustic or noise standard conditions of approval. This exemption shall only be applicable during the effective period of the City-approved permit or development agreement.
- (§ 2, Ord. 2888, eff. March 6, 2008)

### Sec. 5-29.07. Loud and disturbing noise.

- (a) It is unlawful for any person or property owner within the City to make, cause or allow to be made any loud, excessive, impulsive or intrusive noise, disturbance or commotion that disturbs the peace or quiet of any area or that causes discomfort or annoyance to any reasonable person of normal sensitivities in the area, after a Police or Code Enforcement Officer has first requested that the person or property owner cease and desist from making such noise. The types of loud, disturbing, excessive, impulsive or intrusive noise may include, but shall not be limited to, yelling, shouting, hooting, whistling, singing, playing a musical instrument, or emitting or transmitting any loud music or noise from any mechanical or electrical sound making or sound-amplifying device.
- (b) The factors, standards, and conditions that may be considered in determining whether a violation of the provisions of this section has been committed, included, but not limited to, the following:
  - (1) The level of the noise;
  - (2) The level and intensity of the background (ambient) noise, if any;
  - (3) The proximity of the noise to residential or commercial sleeping areas;
  - (4) The nature and zoning of the area within which the noise emanates;
  - (5) The density of inhabitation of the area within which the noise emanates;
  - (6) The time of day and night the noise occurs;
  - (7) The duration of the noise;
  - (8) Whether the noise is constant, recurrent or intermittent;
  - (9) Whether the noise is produced by a commercial or noncommercial activity; and
- (10) Whether the use is lawful under the provisions of Title 5 of this Code and whether the noise is one that could reasonably be expected from the activity or allowed use.
- (§ 2, Ord. 2888, eff. March 6, 2008)

### Sec. 5-29.08. Real property maintenance noise regulations.

- (a) No person, while engaged in maintenance of real property, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, except between the hours of 8:00 a.m. and 6:00 p.m.
- (b) Trimming or pruning that requires the use of chainsaws or mulching machines shall only be allowed between the hours of 8:00 a.m. and 6:00 p.m. on a weekday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturday or Sunday.
- (c) The use of electrical or gasoline powered blowers, such as commonly used by gardeners or other persons for cleaning lawns, yards, driveways, gutters and other property shall only be allowed between the hours of 8:00 a.m. and 6:00 p.m. on a weekday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturday or Sunday.
- (d) No landowner, gardener, property maintenance service, contractor, subcontractor or employer shall permit or allow any person or persons working under his or her direction or control to operate any tool, equipment or machine in violation of the provisions of this section.
  - (e) Exceptions. The provisions of this section shall not apply to the following:
    - (1) Emergency property maintenance required by the building official;
- (2) The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:
- (i) The City Manager or department head determines that the maintenance, repair or improvement is immediately necessary to maintain public service,
- (ii) The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or
- (iii) The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes maintenance during hours of the day that would otherwise be prohibited pursuant to this section; and
  - (3) Any maintenance that complies with the noise limits specified in §5-29.04.
- (§ 2, Ord. 2888, eff. March 6, 2008)

#### Sec. 5-29.09. Construction activity noise regulations.

- (a) No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.
- (b) No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.
  - (c) Exceptions.
- (1) The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the City Manager or his or her designee;
- (2) The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:
- (i) The City Manager or a department head determines that the maintenance, repair or improvement is immediately necessary to maintain public services,
- (ii) The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or
- (iii) The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section; and
  - (3) Any construction that complies with the noise limits specified in §§5-29.04 or 5-29.05.
- (§ 2, Ord. 2888, eff. March 6, 2008)

#### Sec. 5-29.10. Other public agency exceptions.

The provisions of this chapter shall not be construed to prohibit any work at different hours by or under the direction of any other public agency or public or private utility companies in cases of necessity or emergency.

#### Sec. 5-29.11. Schools, day care centers, churches, libraries, museums, health care institutions; Special provisions.

It is unlawful for any person to create any noise that causes the outdoor noise level at any school, day care center, hospital or similar health care institution, church, library or museum while the same is in use, to exceed the noise standards specified in § 5-29.04 prescribed for the assigned Noise Zone I.

(§ 2, Ord. 2888, eff. March 6, 2008)

### Sec. 5-29.12. Sound amplifying equipment.

Loudspeakers, sound amplifiers, public address systems or similar devices used to amplify sounds shall be subject to the provisions of § 5-29.13. Such sound amplifying equipment shall not be construed to include electronic devices, including but not limited to, radios, tape players, tape recorders, compact disc players, MP3 players, electric keyboards, music synthesizers, record players or televisions, which are designed and operated for personal use, or used entirely within a building and are not designed or used to convey the human voice, music or any other sound to an audience outside such building, or which are used in vehicles and heard only by occupants of the vehicle in which installed.

(§ 2, Ord. 2888, eff. March 6, 2008)

#### Sec. 5-29.13. Amplified sound.

- (a) The City Council enacts the following legislation for the sole purpose of securing and promoting the public health, comfort, safety and welfare for its citizenry. While recognizing that the use of sound amplifying equipment may be entitled to certain protection by the constitutional rights of freedom of speech and assembly, the City Council finds that in order to protect the public safety and the correlative rights of the citizens of this community to privacy and freedom from public nuisance of loud and unnecessary noise, reasonable regulation of the time, place and manner of the use of amplifying equipment is necessary. In no event shall approval or authorization required herein be withheld by reason of the constitutionally protected content of any material proposed to be broadcast through amplifying equipment.
- (b) It is unlawful for any person, other than personnel of law enforcement or governmental agencies, to install, use or operate a loudspeaker or sound amplifying device in a fixed or movable position or mounted upon any vehicle within the City for the purpose of giving instructions, directions, talks, addresses or lectures to any persons or assemblages of persons in or upon any street, alley, sidewalk, park, place or public property without a permit to do so from the Police Chief or his or her designee. Notwithstanding any other provision of this chapter, the provisions of this section shall also apply to the use of sound amplifying equipment upon public or private property when used in connection with outdoor or indoor public or private events, whether or not admission is charged or food or beverages are sold, when such activity is to be attended by more than one hundred (100) persons and the noise emanating from the event will be audible at the property plane, or in the case of a street dance or concert on the nearest residential property. Those activities listed in § 5-29.06(a) are exempt from the requirements of this section.
  - (c) The Police Chief or his or her designee is authorized to approve and issue permits under this section.
- (d) An application for a permit required by this section shall be filed with the Police Chief at least sixteen (16) days and no more than one hundred twenty (120) days prior to the date on which the sound amplifying equipment is intended to be used. Applications for events covered by the First Amendment of the United States Constitution are exempt from the time requirements of this section if it is shown that circumstances require a shorter filing period and the event will not constitute an unsafe condition. The application shall contain the following information:
  - (1) The name, address and telephone number of both the owner and the user of the sound amplifying equipment;
  - (2) The license number, if a sound truck is to be used;
  - (3) A general description of the sound amplifying equipment which is to be used;
  - (4) Whether sound amplifying equipment will be used for commercial or noncommercial purpose;
- (5) The dates and times upon and within which, and the streets or property over or upon which, the equipment is proposed to be operated;
- (6) The name or names of one (1) or more persons who will be present during the conduct of any activities for which registration is sought and who will have authority to reduce the volume of any sound amplifying equipment during the course of the activities if required pursuant to this chapter and, otherwise, to insure compliance with the provisions of this chapter;
- (7) A statement by the applicant that he or she is willing and able to comply with the provisions of this chapter and the conditions of the permit; and
- (8) A sketch of the area or facilities within which the activities are to be conducted, with approximate dimensions and illustration of the location and orientation of all sound-amplifying equipment.
  - (e) The Police Chief shall deny the permit application or revoke any permit if the chief finds any of the following:
    - (1) The application contains materially false or intentionally misleading information;
    - (2) The use of sound amplifying equipment at an event of activity proposed will be located in or upon a premises,

building or structure that is hazardous to the health or safety of the employees or patrons of the premises, business, activity, or event, or the general public, under the standards established by the Uniform Building or Fire Codes, or other applicable codes, as set forth in OMC Titles 4 and 8:

- (3) The use of sound amplifying equipment at an event or activity proposed in or upon a premises, building or structure that lacks adequate on-site parking for participants attending the proposed event or activity under the applicable standards set forth in OMC Title 9:
- (4) The conditions of any motor vehicle movement are such that, in his or her opinion, the use of the equipment would constitute an unreasonable interference with traffic safety;
- (5) The conditions of pedestrian movement are such that the use of the equipment would constitute a detriment to traffic safety;
- (6) The application submitted by the applicant reveals that the applicant would violate the provisions of this section or any other provision of federal, state and/or local law;
- (7) The applicant is unwilling or unable to comply with the provisions of this chapter or any conditions imposed upon any permit issued;
- (8) There had already been a permitted event at the intended location, or within a two hundred (200) yard radius of the intended location and the prior permitted event was located on residentially zoned property or on a street, alley, public parking lot or neighborhood park within three (3) months prior to the intended event. Community parks are exempt from this subsection (8); or
- (9) The applicant or location has had previous violations within the past calendar year, and in the judgment of the Police Chief, issuance would be contrary to the intent of this section.
- (f) In determining whether the use of the equipment would constitute an unreasonable interference with or detriment to traffic safety, the Police Chief shall consider, but shall not necessarily be limited to:
  - (1) The volumes, patterns and speed of vehicular and pedestrian traffic in the proposed area of use;
  - (2) The relationship of the proposed use of equipment and potential impacts upon traffic patterns;
- (3) Availability of sufficient room for the operation of the equipment without significantly interfering with the traffic patterns;
- (4) Proximity to schools, playgrounds and similar facilities where use of such equipment might attract children into traffic patterns; or
- (5) Proximity to busy intersections or other potentially hazardous conditions where use of such equipment might constitute a hazard by reason of its tendency to distract drivers of vehicles or pedestrians.
  - (g) Issuance or denial.
- (1) If the application is approved, the Police Chief shall return an approved copy of the application to the applicant and shall issue a permit. The permit shall constitute permission for the use of the sound amplifying equipment as requested.
  - (2) Any application filed shall be either approved or disapproved within five (5) days of the filing thereof.
- (3) If the application is disapproved, the Police Chief shall return a disapproved copy forthwith to the applicant with a written statement on the reason for disapproval.
- (i) Any person aggrieved by a decision of the Police Chief or his or her designee may file an appeal to the City Manager. A complete and proper appeal shall be filed with the City Clerk within ten (10) calendar days of the action that is the subject of the appeal. If the applicant fails to file an appeal within the ten (10) day filing period provided herein, denial shall take effect immediately upon expiration of such filing period. All appeals shall be in writing and shall contain the following information: (a) name(s) of the person filing the appeal, (b) a brief statement in ordinary and concise language of the relief sought, and (c) the signatures of all parties named as appellants and their mailing addresses. After receiving the appeal, the City Clerk shall immediately forward the matter to the City Manager for handling.
- (ii) The City Manager shall, upon receipt of the appeal, set the matter for hearing before the City Manager or a hearing officer. Any hearing officer shall be a licensed attorney or recognized mediator designated by the City Manager. The hearing shall be set for not more than ten (10) calendar days after the receipt of the appeal unless a longer time is requested or consented to by the appellant. Notice of such hearing shall be given in writing and mailed at least five (5) calendar days prior to the date of the hearing, by U.S. mail, with a proof of service attached, addressed to the address listed on the permit application, or the written appeal if different from the permit application. The notice shall state the grounds of the complaint or reason for the denial and shall state the time and place where such hearing will be held.
- (iii) The City Manager or hearing officer shall, within ten (10) calendar days following the conclusion of the hearing, make a written finding and decision, which shall be delivered to the City and the appellant by first class mail. Notwithstanding any provision in this Code, the decision of the City Manager or hearing officer shall be the final administrative decision of the City. Any party dissatisfied with the decision of the City Manager or hearing officer may seek review of such decision under the provisions of Code Civil Procedure, §§ 1094.5 and 1094.8, as amended from time to time.

- (h) In addition to any other provisions of this Code, the use of sound-amplifying equipment and sound trucks in the City shall be subject to the following regulations:
  - (1) The only sounds permitted are music and human speech;
  - (2) Sound shall not be emitted within one hundred (100) yards of hospitals, churches, schools and City Hall;
- (3) The volume of sound shall be controlled so that it will not be audible for a distance in excess of one hundred (100) feet from the sound amplifying equipment or sound truck, and so that the volume is not unreasonably loud, raucous, jarring, disturbing or a nuisance to persons within the range of allowed audibility; or
  - (4) The sound amplifying equipment or sound truck shall not be used between the hours of 8:00 p.m. and 8:00 a.m.

(§ 2, Ord. 2888, eff. March 6, 2008)

#### Sec. 5-29.14. Motor vehicles.

The use of any motor vehicle in such a condition as to create excessive, impulsive or intrusive noises is prohibited. The discharge into the open air of the exhaust of any internal combustion engine, stationary or mounted on wheels, motorboat or motor vehicle, including motor cycle, whether or not discharged through a muffler or other similar device, which discharge creates excessive, unusual, impulsive or intrusive noise is prohibited. Motor vehicles shall comply with the noise regulations of the California Vehicle Code.

(§ 2, Ord. 2888, eff. March 6, 2008)

#### Sec. 5-29.15. Noise level measurement.

- (a) The location selected for measuring exterior noise levels in a residential area shall be at any part of a private yard, patio, deck or balcony normally used for human activity and identified by the owner or, if occupied by someone other than the owner, the occupant of the affected property as suspected of exceeding the noise level standard. This location may be the closest point in the private yard or patio, or on the deck or balcony, to the noise source, but should not be located in nonhuman activity areas such as trash container storage areas, planter beds, above or contacting a property line fence, or other areas not normally used as part of the yard, patio, deck or balcony. The location selected for measuring exterior noise levels in a nonresidential area shall be at the closest point to the noise source. The measurement microphone height shall be five (5) feet above finish elevation or, in the case of a deck or balcony, the measurement microphone height shall be five (5) feet above the finished floor level.
- (b) The location selected for measuring interior noise levels shall be made within the affected residential unit. The measurements shall be made at a point at least four (4) feet from the wall, ceiling or floor, or within the frame of a window opening, nearest the noise source. The measurements shall be made with windows in an open position.
- (c) Any decibel measurement made pursuant to the provisions of this chapter shall be measured in decibels (dBAs) as measured with a sound level meter using the A-weighted sound pressure level.

(§ 2, Ord. 2888, eff. March 6, 2008)

#### Sec. 5-29.16. Prima facie violation.

Any noise exceeding the noise level standard as specified in §§5-29.04 and 5-29.05, shall be deemed to be prima facie evidence of a violation of the provisions of this chapter.

(§ 2, Ord. 2888, eff. March 6, 2008)

### Sec. 5-29.17. Penalty.

- (a) Any person who negligently or knowingly violates any provision of this chapter shall be guilty of an infraction and upon conviction shall be punishable by a fine specified in OMC § 1-2.01. Each day a violation occurs shall constitute a separate offense and shall be punishable as such.
- (b) Any person who negligently or knowingly violates any provision of this chapter may also be subject to fine(s) specified in the administrative citation schedule of fines set forth in OMC § 1-5.04. The manner of issuing administrative citations shall comply with all the procedures specified in OMC Chapter 5, Title 1.
- (c) As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provisions of this chapter, which operation or maintenance causes or creates sound levels exceeding the allowable standards as specified in this chapter, shall be deemed and is declared to be a public nuisance and may be subject to abatement by a restraining order or injunction issued by a court of competent jurisdiction.
- (d) Any violation of this chapter is declared to be a public nuisance and may be abated in accordance with law. The expense of enforcing this chapter is declared to be public nuisance and may be by resolution of the City Council declared to be a lien and special assessment against the property on which such nuisance is maintained, and any such charge shall also be a personal obligation of the property owner.

(§ 2, Ord. 2888, eff. March 6, 2008)

- (a) It shall be the responsibility of Police or Code Enforcement Officers to enforce the provisions of this chapter and to perform all other functions required by this chapter. Such duties shall include, but not be limited to investigating potential violations, issuing warning notices and citations, and providing evidence to the City prosecutor for legal action.
- (b) For violations of § 5-29.07, Police or Code Enforcement Officers shall obtain a declaration under penalty of perjury from two (2) declarants living in separate households within a sixty (60) day period stating in detail all of the following:
- (1) That the declarant is a resident of a residential neighborhood located within two hundred (200) yards of the noise source; and
- (2) Within the past month declarant has heard noise for substantially long periods to the extreme annoyance of the declarant.
- (3) Declarations from two (2) declarants are required to prove a violation of §5-29.07, but are not required to prove that a person has violated any other provision of this chapter.

(§ 2, Ord. 2888, eff. March 6, 2008)

### Sec. 5-29.19. City Manager waiver.

The City Manager is authorized to grant a temporary waiver to the provisions of this chapter for a period of time necessary to correct the violations of this chapter, if such temporary waiver would be in the public interest and there is no feasible and prudent alternative to the activity, or the method of conducting the activity, for which the temporary waiver is sought. This time period may include a commitment to a program that includes placing necessary orders and entering into necessary contracts within thirty (30) days for repair or installation.

(§ 2, Ord. 2888, eff. March 6, 2008)

#### Sec. 5-29.20. Noise abatement program.

- (a) In circumstances where adopted community-wide noise standards and policies prove impractical in controlling noise generated from a specific source, the City Council may establish a noise abatement program that recognizes the characteristics of the noise source and affected property and that incorporates specialized mitigation measures.
- (b) Noise abatement programs shall set forth in detail the approved terms, conditions and requirements for achieving maximum compliance with noise standards and policies. Said terms, conditions and requirements may include, but shall not be limited to, limitations, restrictions, or prohibitions on operating hours, location of operations, and the types of equipment.

(§ 2, Ord. 2888, eff. March 6, 2008)

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**APPENDIX 5.1:** 

**STUDY AREA PHOTOS** 



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14822\_L1\_A 1.North 34, 0' 52.160000"117, 34' 1.810000"



14822\_L1\_A 3.East 34, 0' 52.050000"117, 34' 1.700000"



14822\_L1\_A 2.South 34, 0' 52.010000"117, 34' 1.700000"



14822\_L1\_A 4.West 34, 0' 51.970000"117, 34' 1.780000"



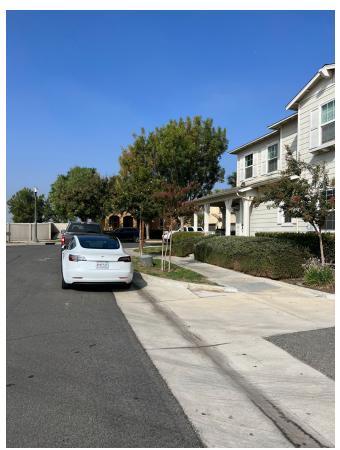
14822\_L2\_E 1.North 34, 0' 47.870000"117, 33' 58.180000"



14822\_L2\_E 3.East 34, 0' 47.930000"117, 33' 58.160000"



14822\_L2\_E 2.South 34, 0' 47.900000"117, 33' 58.160000"



14822\_L2\_E 4.West 34, 0' 47.940000"117, 33' 58.160000"



14822\_L3\_H 1.North 34, 0' 3.560000"117, 33' 58.930000"



14822\_L3\_H 3.East 34, 0' 3.560000"117, 33' 58.930000"



14822\_L3\_H 2.South 34, 0' 3.560000"117, 33' 58.900000"



14822\_L3\_H 4.West 34, 0' 3.520000"117, 33' 58.930000"



14822\_L4\_l 1.North 33, 59' 49.970000"117, 34' 8.100000"



14822\_L4\_I 3.East 33, 59' 49.990000"117, 34' 7.910000"



14822\_L4\_I 2.South 33, 59' 49.990000"117, 34' 8.100000"



14822\_L4\_I 4.West 33, 59' 49.970000"117, 34' 7.990000"



14822\_L5\_G 1.North 34, 0' 6.940000"117, 34' 15.620000"



14822\_L5\_G 3.East 34, 0' 6.830000"117, 34' 15.600000"



14822\_L5\_G 2.South 34, 0' 6.850000"117, 34' 15.620000"



14822\_L5\_G 4.West 34, 0' 6.800000"117, 34' 15.680000"



14822\_L6\_S 1.North 34, 0' 14.360000"117, 34' 32.710000"



14822\_L6\_S 3.East 34, 0' 14.250000"117, 34' 32.630000"



14822\_L6\_S 2.South 34, 0' 14.250000"117, 34' 32.650000"



14822\_L6\_S 4.West 34, 0' 14.240000"117, 34' 32.710000"



14822\_L7\_X 1.North 34, 0' 42.380000"117, 34' 33.750000"



14822\_L7\_X 3.East 34, 0' 42.370000"117, 34' 33.640000"



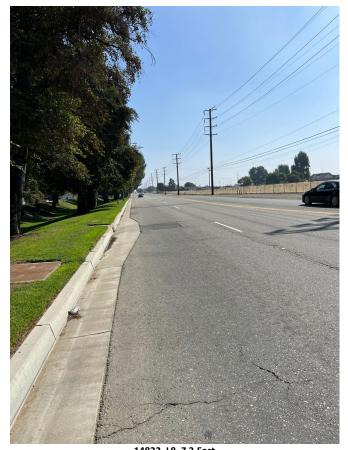
14822\_L7\_X 2.South 34, 0' 42.340000"117, 34' 33.750000"



14822\_L7\_X 4.West 34, 0' 42.410000"117, 34' 33.670000"



14822\_L8\_Z 1.North 34, 1' 8.990000"117, 34' 31.010000"



14822\_L8\_Z 3.East 34, 1' 8.970000"117, 34' 31.010000"



14822\_L8\_Z 2.South 34, 1' 8.970000"117, 34' 31.010000"



14822\_L8\_Z 4.West 34, 1' 8.910000"117, 34' 31.090000"

# APPENDIX 5.2:

**NOISE LEVEL MEASUREMENT WORKSHEETS** 



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#### 24-Hour Noise Level Measurement Summary Date: Friday, September 30, 2022 Location: L1 - Located near the northwest corner of the Project Site near Meter: Piccolo II JN: 14822 Project: Rich Haven SP Source: the Colony High School Football Field Analyst: B. Lawson Hourly L ea dBA Readings (unadjusted) 80.0 75.0 70.0 65.0 **1** 60.0 55.0 50.0 9 51.8 45.0 40.0 55. 35.0 2 6 7 8 10 13 17 21 23 0 1 3 4 5 9 11 12 14 15 16 18 19 20 22 **Hour Beginning** L2% L5% L95% Adj. L <sub>eq</sub> L min L1% L8% L25% L50% L90% L99% Adj. Timeframe Hour $L_{eq}$ L max $L_{eq}$ 55.8 60.0 59.1 10.0 57.3 61.7 61.5 61.2 57.2 56.7 56.2 56.0 55.9 57.3 67.3 1 56.5 59.5 55.2 59.3 59.1 58.5 57.8 56.7 55.6 55.5 55.3 10.0 66.5 56.1 56.5 2 56.4 66.5 46.9 65.0 63.7 62.4 61.4 58.3 49.0 47.5 47.3 47.1 56.4 10.0 66.4 3 51.6 55.9 49.9 55.7 55.3 54.5 53.4 50.2 61.6 Night 51.7 51.0 50.4 50.0 51.6 10.0 4 47.3 55.9 37.4 55.5 55.0 53.7 52.3 48.3 43.0 38.0 37.8 37.5 10.0 57.3 47.3 5 55.2 67.3 38.7 66.8 66.0 62.6 59.8 54.0 46.1 39.6 39.2 38.8 55.2 10.0 65.2 6 58.8 64.6 55.6 64.4 64.1 63.2 62.5 59.1 57.1 56.1 56.0 55.8 58.8 10.0 68.8 53.2 63.9 40.3 63.5 62.8 60.9 59.3 51.4 45.5 41.3 40.9 40.4 53.2 0.0 53.2 8 53.2 63.0 43.8 62.7 62.0 59.8 57.8 52.7 49.3 45.2 44.5 44.0 53.2 0.0 53.2 9 65.3 59.4 54.6 43.5 65.0 64.3 61.9 53.4 49.2 45.1 44.5 43.7 54.6 0.0 54.6 10 58.3 65.4 50.0 65.1 64.6 63.1 61.8 58.9 52.0 50.2 0.0 58.3 57.1 51.3 58.3 11 39.9 62.8 62.1 59.4 40.7 51.5 63.1 56.6 49.0 43.9 40.4 40.0 51.5 0.0 51.5 12 58.9 67.1 48.9 66.7 66.2 64.2 62.5 59.1 57.3 53.7 51.4 49.1 58.9 0.0 58.9 13 55.8 65.9 49.2 65.4 64.6 61.7 59.4 54.9 53.0 50.2 49.9 49.4 55.8 0.0 55.8 Day 14 53.4 64.0 43.1 63.7 63.0 60.8 58.8 52.1 47.8 44.2 43.8 43.3 53.4 0.0 53.4 15 65.7 45.0 64.8 62.9 55.9 65.3 61.3 55.0 51.3 46.5 45.9 45.1 55.9 0.0 55.9 16 57.3 68.5 44.4 68.1 67.6 66.2 63.6 53.5 48.5 45.3 44.8 44.4 57.3 0.0 57.3 17 56.2 67.1 44.3 66.6 66.1 64.1 61.9 53.9 49.3 45.0 44.7 44.4 56.2 0.0 56.2 18 60.5 75.8 44.9 74.3 72.0 67.8 63.8 55.0 49.2 45.0 60.5 0.0 60.5 45.6 45.3 19 51.8 60.3 45.4 60.1 59.7 58.3 56.8 51.3 48.1 45.9 45.7 45.5 51.8 5.0 56.8 20 64.7 59.4 48.0 59.2 54.2 44.1 64.2 63.8 61.8 52.8 44.6 44.4 44.2 54.2 5.0 21 53.7 62.7 62.2 60.6 59.1 53.3 48.9 45.2 44.9 44.7 53.7 5.0 58.7 44.6 22 56.0 10.0 66.0 56.0 66.3 51.6 65.8 65.2 62.2 59.3 54.3 53.0 52.1 51.9 51.7 Night 23 52.3 62.9 46.5 62.6 61.9 59.2 56.5 50.5 48.5 47.1 46.9 46.7 52.3 10.0 62.3 L max L min L1% L2% L5% L8% L25% L50% L90% L95% L99% Leg (dBA) Timeframe Hour $L_{eq}$ 24-Hour Min 51.5 60.3 60.1 59.7 58.3 56.6 49.0 43.9 40.7 40.4 40.0 Daytime Nighttime **CNEL** Day 60.5 75.8 50.0 67.8 63.8 59.1 53.7 50.2 (7am-10pm) Max 74.3 72.0 57.3 51.4 (10pm-7am) 56.0 Average 65.1 62.2 60.1 53.8 49.8 46.0 44.9 **Energy Average** 55.6 **62.2** 56.0 Min 47.3 55.5 55.0 53.7 52.3 48.3 43.0 38.0 37.8 37.5 55.9 37.4 Night 58.8 67.3 55.8 66.8 66.0 63.2 62.5 59.1 57.1 56.2 56.0 55.9



58.0

54.4

51.2

49.2

49.0

48.7

Average:

61.8

61.3

59.6

55.6

#### 24-Hour Noise Level Measurement Summary Location: L2 - Located east of the Project Site just south of the existing Date: Friday, September 30, 2022 Meter: Piccolo II JN: 14822 Project: Rich Haven SP Source: residence at 3271 S Quincy Way. Analyst: B. Lawson Hourly L ea dBA Readings (unadjusted) Hourly Led (dBA) 40.0 80.0 65.0 65.0 65.0 65.0 75.0 75.0 75.0 75.0 75.0 75.0 38.0 48.1 48.4 35.0 2 6 7 8 17 23 0 3 4 5 9 10 11 12 13 14 15 16 18 19 20 21 22 1 **Hour Beginning** L2% L5% L95% Adj. L <sub>eq</sub> L min L1% L8% L25% L50% L90% L99% Adj. Timeframe Hour $L_{eq}$ L max $L_{eq}$ 55.3 54.5 53.9 10.0 56.9 46.9 37.4 55.1 55.0 45.4 39.1 37.6 37.5 37.4 46.9 1 39.7 47.7 37.0 47.2 46.7 44.5 42.4 39.3 37.3 37.2 37.1 10.0 49.7 38.2 39.7 2 38.0 38.9 37.4 38.8 38.7 38.5 38.4 38.2 37.9 37.6 37.5 37.4 38.0 10.0 48.0 3 40.6 45.9 39.0 45.7 45.4 44.3 43.1 40.1 39.2 39.1 50.6 Night 39.6 39.1 40.6 10.0 4 41.6 46.4 39.7 46.2 46.0 45.0 44.3 40.5 40.0 39.9 39.8 10.0 51.6 42.0 41.6 5 50.6 58.4 37.9 58.0 57.7 57.0 56.1 51.4 46.1 38.3 38.1 38.0 50.6 10.0 60.6 6 52.2 61.3 38.7 60.9 60.6 59.8 58.5 52.1 43.7 39.3 39.0 38.8 52.2 10.0 62.2 49.2 45.2 57.1 56.7 54.5 52.5 48.8 47.4 45.8 45.6 45.4 49.2 0.0 49.2 57.4 8 52.4 64.5 44.1 64.1 63.3 59.0 55.7 49.1 46.7 44.8 44.5 44.2 52.4 0.0 52.4 9 55.2 52.2 47.7 43.0 54.5 53.8 51.2 48.0 46.1 44.0 43.6 43.2 47.7 0.0 47.7 10 44.7 55.9 40.8 53.8 52.6 49.7 48.0 43.8 40.9 0.0 44.7 42.6 41.3 41.1 44.7 11 45.3 54.0 39.9 53.5 52.8 49.7 40.0 45.3 51.1 45.0 42.5 40.6 40.3 45.3 0.0 12 46.2 55.6 40.3 55.0 54.1 51.4 50.1 45.8 43.7 41.0 40.6 40.4 46.2 0.0 46.2 13 51.6 62.0 41.9 61.7 59.9 57.4 56.8 51.3 47.0 43.1 42.6 42.1 51.6 0.0 51.6 Day 14 44.8 54.1 40.2 53.2 52.0 49.4 48.1 44.7 43.1 41.2 40.9 40.4 44.8 0.0 44.8 15 48.1 58.1 57.2 41.1 56.4 53.9 52.4 48.2 44.4 41.9 41.6 41.2 48.1 0.0 48.1 16 47.7 56.6 42.4 56.1 55.4 53.3 51.7 47.4 45.2 43.1 42.9 42.5 47.7 0.0 47.7 17 47.0 56.1 41.6 55.4 54.8 53.0 51.4 46.4 44.3 42.1 41.9 41.6 47.0 0.0 47.0 18 50.5 57.9 45.0 57.5 57.0 55.6 54.0 50.9 48.9 46.0 45.1 50.5 0.0 50.5 45.5 19 48.4 56.8 43.4 56.0 55.3 54.0 52.4 48.3 46.3 43.9 43.7 43.5 48.4 5.0 53.4 20 58.9 44.0 57.8 54.7 50.5 48.7 50.1 56.7 53.3 46.0 45.6 44.2 50.1 5.0 55.1 50.9 55.9 21 50.9 58.2 56.7 55.4 51.5 48.3 44.0 43.8 43.4 5.0 22 53.2 47.5 10.0 59.4 49.4 56.2 46.5 55.8 55.1 51.6 49.6 48.1 47.4 47.0 49.4 Night 23 52.2 56.1 50.9 55.9 55.5 54.8 54.4 52.3 51.4 51.2 51.1 51.0 52.2 10.0 62.2 Leq (dBA) L max L min L1% L2% L5% L8% L25% L50% L90% L95% L99% Timeframe Hour $L_{eq}$ 24-Hour Min 44.7 54.0 39.9 53.2 52.0 49.4 48.0 43.8 42.5 40.6 40.3 40.0 Daytime Nighttime **CNEL** Day 52.4 64.5 59.0 56.8 48.9 46.0 45.6 (7am-10pm) Max 45.2 64.1 63.3 51.5 45.4 (10pm-7am) 48.9 Average 56.8 55.9 53.7 52.2 48.0 45.7 43.3 42.9 42.5 **Energy Average** 48.9 48.4 55.3 Min 38.0 38.8 38.7 38.5 38.4 38.2 37.9 37.3 37.2 37.1 38.9 37.0 Night



58.5

49.2

52.3

45.6

51.4

42.7

51.2

40.9

51.1

40.8

51.0

40.6

61.3

Average:

50.9

60.9

51.5

60.6

51.2

59.8

50.2

52.2

48.4

#### 24-Hour Noise Level Measurement Summary Location: L3 - Located within the Rich Haven Specific Plan north of Date: Friday, September 30, 2022 Meter: Piccolo II JN: 14822 Project: Rich Haven SP Source: Ontario Ranch Road. Analyst: B. Lawson Hourly L ea dBA Readings (unadjusted) 80.0 75.0 70.0 65.0 60.0 55.0 6 69 68 45.0 40.0 35.0 2 3 5 6 7 8 9 10 13 17 23 0 1 4 11 12 14 15 16 18 19 20 21 22 **Hour Beginning** L1% L2% L5% L8% L95% Adj. L <sub>eq</sub> Hour L min L25% L50% L90% L99% Adj. Timeframe $L_{eq}$ L max $L_{eq}$ 60.9 68.7 66.6 60.9 10.0 72.3 39.2 71.8 71.1 58.7 51.5 41.0 39.9 39.3 70.9 1 61.2 73.6 38.9 73.1 72.3 69.3 66.8 57.2 48.9 40.6 39.7 39.0 61.2 10.0 71.2 2 59.2 70.1 39.3 69.8 69.4 67.7 65.6 55.8 47.7 40.5 40.0 39.4 59.2 10.0 69.2 63.4 76.3 38.3 75.9 74.9 71.1 68.1 59.7 73.4 Night 3 50.4 39.8 39.0 38.4 63.4 10.0 63.0 73.7 41.6 73.4 72.9 70.9 69.1 53.6 43.7 42.9 10.0 73.0 4 61.4 41.8 63.0 5 65.7 76.0 43.9 75.7 75.3 73.2 71.4 65.2 57.8 46.6 45.3 44.1 65.7 10.0 75.7 6 66.7 76.3 47.4 76.0 75.5 73.5 72.0 67.3 60.3 50.5 48.8 47.5 66.7 10.0 76.7 67.7 77.1 50.2 76.9 76.4 74.4 72.9 68.0 62.5 53.4 51.9 50.4 0.0 67.7 67.7 8 68.5 77.2 52.1 77.0 76.6 75.0 74.0 69.3 64.2 55.3 53.9 52.4 68.5 0.0 68.5 9 77.7 53.1 77.5 77.1 75.1 73.8 68.8 69.6 65.0 56.4 54.9 53.4 68.8 0.0 68.8 10 68.8 76.9 52.9 76.6 76.3 74.6 73.4 70.1 55.0 0.0 68.8 65.7 56.7 53.3 68.8 11 69.5 77.2 52.1 76.5 74.9 76.9 74.1 71.0 66.8 56.6 54.6 52.5 69.5 0.0 69.5 12 69.5 76.8 55.8 76.6 76.2 74.8 74.0 70.8 67.2 59.1 57.4 56.0 69.5 0.0 69.5 13 69.3 77.0 53.5 76.8 76.4 74.8 73.9 70.5 66.7 58.0 55.8 53.8 69.3 0.0 69.3 Day 76.9 74.9 14 69.2 56.1 76.6 76.2 73.7 70.4 66.7 59.8 58.1 56.4 69.2 0.0 69.2 15 69.5 76.3 75.7 74.4 73.6 70.9 58.9 69.5 57.1 76.1 68.0 60.6 57.3 69.5 0.0 77.0 73.7 16 69.8 78.0 56.7 77.7 74.9 70.9 67.8 60.8 58.7 57.0 69.8 0.0 69.8 17 70.1 76.8 58.5 76.5 76.1 74.9 74.0 71.3 68.7 62.1 60.7 58.9 70.1 0.0 70.1 18 69.4 76.7 57.6 76.3 75.9 74.4 73.4 70.6 67.8 60.8 59.4 58.0 69.4 0.0 69.4 19 69.6 79.1 53.7 78.6 77.7 75.1 73.6 70.6 66.7 58.0 56.2 54.0 69.6 5.0 74.6 20 77.5 52.5 74.7 73.3 69.4 68.5 73.5 68.5 77.2 76.7 64.8 55.5 54.2 52.7 5.0 21 68.3 48.8 79.3 78.0 74.7 72.3 68.3 63.5 52.3 50.5 48.9 68.3 5.0 73.3 22 72.5 50.5 49.1 10.0 75.8 65.8 75.3 47.7 74.9 74.4 71.3 66.3 48.0 65.8 60.0 Night 23 64.7 74.4 45.9 74.1 73.8 71.9 70.3 64.7 58.3 48.9 47.3 46.1 64.7 10.0 74.7 L1% L2% L5% L8% L25% L50% L90% L95% Leg (dBA) Timeframe Hour $L_{eq}$ L max L min L99% 24-Hour Min 67.7 76.3 48.8 76.1 75.7 74.4 72.3 68.0 62.5 52.3 50.5 48.9 Daytime Nighttime **CNEL** Day 70.1 80.1 58.5 79.3 78.0 75.1 74.1 62.1 60.7 58.9 (7am-10pm) Max 71.3 68.7 (10pm-7am) **Energy Average** 69.1 Average 77.1 76.6 74.8 73.6 70.1 66.1 57.7 54.3 72.2 69.1 64.0 Min 59.2 69.8 69.4 67.7 65.6 55.8 47.7 39.8 39.0 38.4 70.1 38.3 Night Max 66.7 76.3 47.7 76.0 75.5 73.5 72.0 67.3 60.3 50.5 49.1 48.0 **Energy Average** 64.0 Average: 73.9 73.3 71.0 69.0 61.8 54.3 44.7 43.5 42.6



#### 24-Hour Noise Level Measurement Summary Date: Friday, September 30, 2022 Location: L4 - Located south of the Project Site near the existing Meter: Piccolo II JN: 14822 Project: Rich Haven SP Source: residence at 10823 Edison Avenue. Analyst: B. Lawson Hourly L ea dBA Readings (unadjusted) Hourly Led (dBA) 40.0 80.0 65.0 65.0 65.0 65.0 75.0 75.0 75.0 75.0 75.0 75.0 53.0 3 49.9 35.0 2 7 8 9 10 17 23 0 3 4 5 6 11 12 13 14 15 16 18 19 20 21 22 1 **Hour Beginning** L2% L5% Adj. L <sub>eq</sub> L min L1% L8% L25% L50% L90% L95% L99% Adj. Timeframe Hour $L_{eq}$ L max $L_{eq}$ 50.1 49.3 10.0 55.4 45.4 51.4 40.9 51.2 51.0 46.7 42.4 41.4 41.2 41.0 45.4 42.7 45.3 41.2 45.0 44.8 44.2 43.8 42.5 41.3 42.7 10.0 52.7 1 43.0 41.6 41.5 2 42.8 46.7 40.7 46.4 46.0 45.2 44.7 43.4 42.2 41.2 41.0 40.9 42.8 10.0 52.8 3 43.0 46.3 41.1 45.1 44.8 53.0 Night 46.0 45.7 43.5 42.6 41.6 41.4 41.2 43.0 10.0 4 44.3 48.8 42.0 48.4 48.0 47.1 46.5 43.8 42.6 42.4 10.0 54.3 44.7 42.1 44.3 5 53.0 62.6 45.3 62.2 61.6 59.4 57.5 53.3 49.4 45.9 45.6 45.4 53.0 10.0 63.0 6 59.9 72.1 49.8 71.7 70.7 66.9 63.8 57.4 53.9 50.7 50.4 50.0 59.9 10.0 69.9 59.2 71.2 49.9 70.7 70.0 66.8 56.0 52.7 50.6 50.3 50.0 59.2 0.0 59.2 63.4 8 57.0 70.0 47.9 69.5 68.5 64.1 60.6 52.5 50.0 48.6 48.4 48.0 57.0 0.0 57.0 9 70.7 46.2 69.1 57.4 70.1 65.4 61.4 51.4 48.7 46.9 46.7 46.4 57.4 0.0 57.4 10 59.8 71.5 48.4 71.0 70.3 67.3 64.1 58.0 49.8 49.3 48.7 0.0 59.8 54.1 59.8 11 57.1 70.7 43.9 68.4 57.1 69.7 64.9 61.7 51.9 48.2 45.1 44.6 44.1 57.1 0.0 12 70.6 59.1 71.7 44.4 71.3 67.7 64.2 53.3 48.8 45.4 45.1 44.5 59.1 0.0 59.1 13 54.7 66.1 43.3 65.9 65.2 62.5 59.9 52.0 47.4 44.3 43.9 43.5 54.7 0.0 54.7 14 Day 56.9 69.3 46.0 68.9 68.1 64.4 61.0 53.3 49.9 47.0 46.6 46.1 56.9 0.0 56.9 15 60.3 55.8 67.6 44.4 67.3 66.7 63.4 52.6 48.6 45.3 44.9 44.5 55.8 0.0 55.8 16 53.3 65.6 44.0 65.2 64.4 61.0 57.7 49.4 46.7 44.8 44.5 44.1 53.3 0.0 53.3 17 52.2 62.9 44.9 62.3 61.3 59.3 57.6 50.4 47.6 45.6 45.3 45.0 52.2 0.0 52.2 18 54.6 66.6 47.4 66.1 65.0 61.2 57.6 52.2 50.2 48.1 47.9 47.5 54.6 0.0 54.6 19 52.2 62.0 47.6 61.6 60.7 57.8 55.6 51.5 49.7 48.2 47.9 47.7 52.2 5.0 57.2 20 49.9 48.9 47.1 49.9 58.6 46.6 58.2 57.7 55.1 52.7 48.1 46.9 46.7 5.0 54.9 57.3 21 45.8 62.0 61.2 58.4 56.3 51.6 48.6 46.4 46.2 45.9 52.3 5.0 22 57.4 45.2 45.0 50.9 10.0 50.9 61.5 44.7 61.1 60.4 55.0 49.7 46.6 44.8 60.9 Night 23 45.4 52.4 42.7 52.2 51.7 49.9 48.3 45.0 44.0 43.1 43.0 42.8 45.4 10.0 55.4 L min L1% L2% L5% L8% L25% L50% L90% L95% Leg (dBA) Timeframe Hour $L_{eq}$ L max L99% 24-Hour Min 49.9 58.6 43.3 58.2 57.7 55.1 52.7 48.9 46.7 44.3 43.9 43.5 Daytime Nighttime **CNEL** Day 59.8 71.7 49.9 70.6 67.7 64.2 50.6 50.0 (7am-10pm) Max 71.3 58.0 54.1 50.3 (10pm-7am) 56.3 Average 66.7 65.8 62.6 59.6 52.3 49.3 46.9 46.2 **Energy Average** 56.3 52.1 **59.6** 42.7 45.0 44.8 44.2 43.8 43.0 42.2 41.2 41.0 40.9 Min 45.3 40.7 Night 59.9 72.1 71.7 70.7 66.9 63.8 57.4 53.9 50.7 50.4 50.0



50.4

47.4

45.3

43.7

43.5

43.3

Average:

53.8

53.3

51.7

52.1

#### 24-Hour Noise Level Measurement Summary Date: Friday, September 30, 2022 Location: L5 - Located within the Rich Haven Specific Plan near the Meter: Piccolo II JN: 14822 Project: Rich Haven SP Source: existing residence at 3965 S Sunrise Avenue. Analyst: B. Lawson Hourly L ea dBA Readings (unadjusted) 80.0 75.0 70.0 65.0 60.0 60.0 Hourly L 55.0 50.0 45.0 40.0 99 63 62. 59. 45.0 40.0 35.0 2 6 7 8 13 17 19 23 0 3 4 5 9 10 12 14 15 16 18 20 21 22 1 11 **Hour Beginning** L2% L5% Adj. L <sub>eq</sub> L min L1% L8% L25% L50% L90% L95% L99% Adj. Timeframe Hour $L_{eq}$ L max $L_{eq}$ 50.6 57.8 55.8 10.0 61.0 40.1 60.8 60.2 49.9 43.8 40.5 40.3 40.1 50.6 60.6 1 48.8 58.7 39.7 58.4 57.9 55.7 54.2 47.6 40.4 40.1 39.8 48.8 10.0 58.8 43.1 2 49.2 60.5 38.8 60.2 59.6 56.6 54.4 47.0 42.3 39.3 39.1 38.9 49.2 10.0 59.2 3 52.4 63.1 39.9 62.8 62.3 60.0 57.8 62.4 Night 51.0 45.5 40.9 40.4 40.0 52.4 10.0 4 56.2 67.2 41.9 66.8 66.2 63.8 61.6 55.0 48.9 42.9 42.4 42.0 56.2 10.0 66.2 5 56.3 66.5 41.4 66.1 65.6 63.4 61.9 55.6 50.3 43.5 42.3 41.6 56.3 10.0 66.3 6 58.9 69.2 44.1 68.9 68.3 66.2 64.5 58.1 53.7 46.3 45.3 44.3 58.9 10.0 68.9 59.3 70.3 45.9 69.1 64.2 58.3 54.2 48.1 47.2 46.1 59.3 0.0 59.3 70.0 66.2 8 61.3 71.9 48.1 71.4 70.7 68.1 66.2 60.9 56.5 50.3 49.4 48.4 61.3 0.0 61.3 9 60.8 70.4 49.2 70.0 69.2 65.2 66.7 61.0 57.6 51.6 50.6 49.5 60.8 0.0 60.8 10 60.5 70.4 45.2 70.1 69.5 67.3 65.6 60.2 48.4 60.5 0.0 60.5 56.0 46.6 45.4 11 63.2 73.5 51.8 73.1 72.5 67.8 69.8 62.4 59.4 53.7 52.9 52.1 63.2 0.0 63.2 12 72.1 62.3 72.4 49.2 71.4 69.0 67.1 61.9 57.9 52.0 50.7 49.5 62.3 0.0 62.3 13 60.5 70.6 48.8 70.3 69.7 67.5 65.3 59.7 56.5 50.7 49.9 49.1 60.5 0.0 60.5 14 Day 64.8 77.4 50.2 77.0 76.1 71.8 68.1 62.2 58.2 52.5 51.6 50.5 64.8 0.0 64.8 15 75.4 74.9 74.2 71.6 70.3 57.8 66.1 54.3 66.4 63.4 55.6 54.6 66.1 0.0 66.1 77.7 77.3 16 66.1 52.6 76.5 74.1 71.1 64.0 59.9 54.7 53.8 52.8 66.1 0.0 66.1 17 62.6 72.2 52.8 71.8 70.9 68.4 66.7 62.7 59.7 54.9 53.7 53.0 62.6 0.0 62.6 18 62.8 71.3 52.3 71.0 70.5 68.7 67.3 63.3 60.3 53.3 52.6 62.8 0.0 62.8 54.2 19 63.7 75.9 51.9 75.4 74.6 71.1 68.0 61.1 57.9 53.4 52.8 52.1 63.7 5.0 68.7 20 59.9 70.6 48.0 69.7 67.4 65.0 58.8 48.8 64.9 70.3 54.8 49.7 48.1 59.9 5.0 21 64.3 76.7 76.0 75.3 70.2 67.4 62.0 59.9 56.6 56.1 55.7 64.3 5.0 69.3 22 63.9 46.1 45.5 10.0 57.3 67.2 44.9 66.9 66.2 62.2 57.3 52.1 45.0 57.3 67.3 Night 23 54.5 65.4 41.6 65.1 64.5 61.9 59.6 53.5 48.1 42.4 42.0 41.7 54.5 10.0 64.5 L1% L2% L5% L8% L25% L50% L90% L95% L99% Leg (dBA) Timeframe Hour $L_{eq}$ L max L min 24-Hour Min 59.3 70.3 45.2 70.0 69.1 66.2 64.2 58.3 54.2 48.1 46.6 45.4 Daytime Nighttime **CNEL** Day 66.1 77.7 55.6 77.3 71.1 57.8 56.1 55.7 (7am-10pm) Max 76.5 74.1 66.4 63.4 (10pm-7am) 63.1 Average 72.7 72.0 69.2 67.0 61.7 58.2 52.6 51.5 50.6 **Energy Average** 64.8 63.1 55.1 48.8 58.4 57.9 55.7 54.2 47.0 42.3 39.3 39.1 38.9 Min 58.7 38.8 Night 58.9 69.2 44.9 68.9 68.3 66.2 64.5 58.1 53.7 46.3 45.5 45.0



59.1

52.8

47.5

42.5

41.9

41.5

Average:

64.0

63.4

61.0

55.1

#### 24-Hour Noise Level Measurement Summary Location: L6 - Located west of the Project Site near the existing residence Date: Friday, September 30, 2022 Meter: Piccolo II JN: 14822 Project: Rich Haven SP Source: at 3860 S Oasis Paseo Analyst: B. Lawson Hourly L eq dBA Readings (unadjusted) Hourly Leg (dBA) 40.0 40.0 40.0 40.0 40.0 69 45.0 40.0 35.0 2 3 5 6 7 8 9 10 13 17 22 23 0 4 11 12 14 15 16 18 19 20 21 1 **Hour Beginning** L2% L5% L95% Adj. L <sub>eq</sub> L min L1% L8% L25% L50% L90% L99% Adj. Timeframe Hour $L_{eq}$ L max $L_{eq}$ 65.2 62.9 40.4 10.0 57.3 69.1 39.5 68.6 67.9 54.3 47.1 39.9 39.5 57.3 67.3 1 52.5 64.6 38.2 64.2 63.7 60.7 58.0 47.1 40.9 38.7 38.5 38.3 10.0 62.5 52.5 2 54.8 67.4 37.2 66.8 66.3 63.3 60.3 48.7 41.6 37.8 37.5 37.3 54.8 10.0 64.8 3 53.7 66.2 37.0 65.1 62.0 59.3 37.7 63.7 Night 65.6 48.6 42.2 37.5 37.1 53.7 10.0 4 59.8 71.4 39.0 71.0 70.5 67.8 65.8 57.0 49.0 40.8 40.0 39.2 59.8 10.0 69.8 5 64.0 74.6 45.2 74.1 73.4 71.2 69.6 63.5 57.1 47.5 46.0 45.3 64.0 10.0 74.0 6 64.8 74.2 48.6 73.8 73.3 71.3 70.2 65.5 59.1 50.5 49.6 48.7 64.8 10.0 74.8 77.4 51.9 77.0 76.3 74.4 72.8 63.6 54.8 53.4 52.3 67.8 0.0 67.8 67.8 68.4 8 66.9 75.9 50.9 75.4 74.9 73.3 71.9 67.9 62.7 53.6 52.1 51.1 66.9 0.0 66.9 9 76.7 50.8 75.8 74.0 72.8 67.7 76.3 68.8 63.3 53.1 52.0 51.0 67.7 0.0 67.7 10 66.8 75.8 50.3 75.3 74.8 73.0 71.8 68.0 62.7 52.8 50.5 0.0 66.8 51.5 66.8 11 69.7 79.3 52.0 78.9 78.3 76.3 74.9 70.3 65.2 55.4 53.7 52.3 69.7 0.0 69.7 12 75.5 74.0 73.0 68.3 76.6 52.2 76.1 69.8 65.1 55.6 53.8 52.6 68.3 0.0 68.3 13 68.1 77.1 51.7 76.6 76.2 74.6 73.1 69.1 64.0 55.5 53.8 52.1 68.1 0.0 68.1 Day 14 77.1 69.1 78.1 53.3 77.6 75.1 73.6 70.0 65.9 56.7 54.8 53.5 69.1 0.0 69.1 15 68.9 78.0 55.4 76.9 74.5 73.4 69.8 56.9 68.9 68.9 77.6 66.1 58.0 55.6 0.0 77.8 77.1 16 69.1 54.9 77.4 75.1 73.6 70.0 66.0 58.0 56.3 55.1 69.1 0.0 69.1 17 69.2 80.3 56.0 79.6 78.5 75.8 73.7 69.1 64.9 58.1 57.0 56.2 69.2 0.0 69.2 18 69.5 81.2 55.4 80.5 79.2 76.3 74.0 68.6 57.6 55.6 69.5 0.0 69.5 64.5 56.6 19 68.1 75.9 54.4 75.5 75.1 73.9 72.9 69.4 65.2 57.0 55.6 54.6 68.1 5.0 73.1 20 83.4 83.0 82.2 79.2 75.4 69.5 71.4 53.0 64.1 55.6 54.3 53.2 71.4 5.0 76.4 21 69.6 79.1 78.8 78.2 76.6 75.3 69.8 63.1 54.0 52.7 51.8 69.6 5.0 74.6 22 48.1 73.7 72.4 51.1 49.6 10.0 76.6 66.6 76.6 76.1 75.6 66.6 48.4 66.6 60.6 Night 23 65.1 75.7 45.0 75.2 74.6 72.4 70.6 64.9 56.7 47.0 45.8 45.1 65.1 10.0 75.1 L1% L2% L5% L8% L25% L50% L90% L95% L99% Leg (dBA) Timeframe Hour $L_{eq}$ L max L min 24-Hour Min 66.8 75.8 50.3 75.3 74.8 73.0 71.8 67.9 62.7 52.8 51.5 50.5 Daytime Nighttime **CNEL** Day 83.4 56.0 82.2 79.2 75.4 70.3 58.1 57.0 56.2 (7am-10pm) Max 71.4 83.0 66.1 (10pm-7am) **Energy Average** 68.8 Average 77.7 77.1 75.1 73.5 69.2 64.4 55.7 54.3 53.2 68.8 62.4 71.4 Min 52.5 64.2 63.7 60.7 58.0 47.1 40.9 37.7 37.5 37.1 64.6 37.0 Night 66.6 76.6 48.6 76.1 75.6 73.7 72.4 66.6 60.6 51.1 49.6 48.7



65.5

57.4

50.5

43.5

42.7

42.1

Average:

70.6

70.0

67.5

62.4

#### 24-Hour Noise Level Measurement Summary Location: L7 - Located west of the Project Site near the existing residence Date: Friday, September 30, 2022 Meter: Piccolo II JN: 14822 Project: Rich Haven SP Source: at 3393 Clover Place Analyst: B. Lawson Hourly L eq dBA Readings (unadjusted) Hourly Led (dBA) 40.0 80.0 65.0 65.0 65.0 65.0 75.0 75.0 75.0 75.0 75.0 75.0 8.99 67 35.0 2 3 6 7 8 9 10 13 17 19 20 21 23 0 1 4 5 11 12 14 15 16 18 22 **Hour Beginning** L2% L5% L95% Adj. L <sub>eq</sub> L min L1% L8% L25% L50% L90% L99% Adj. Timeframe Hour $L_{eq}$ L max $L_{eq}$ 62.3 60.3 54.7 10.0 64.7 54.7 66.4 38.8 66.1 65.4 52.1 43.6 39.4 39.1 38.9 1 50.8 62.8 40.5 62.4 61.7 58.8 56.1 47.0 42.3 40.9 40.7 40.6 10.0 60.8 50.8 2 55.5 68.6 40.8 68.2 67.3 64.1 60.0 48.6 42.6 41.2 41.1 40.9 55.5 10.0 65.5 3 51.2 62.3 41.6 62.0 59.4 56.7 Night 61.6 47.9 43.2 42.1 42.0 41.7 51.2 10.0 61.2 4 58.0 69.0 41.6 68.7 68.1 66.2 64.2 48.4 42.6 42.1 58.0 10.0 68.0 55.8 41.8 5 63.0 73.3 46.6 73.0 72.6 70.3 68.4 62.7 56.2 47.8 47.1 46.7 63.0 10.0 73.0 6 63.6 71.3 52.8 71.0 70.6 69.3 68.3 65.0 60.6 54.2 53.6 52.9 63.6 10.0 73.6 65.8 74.6 53.8 74.3 73.9 72.2 62.8 56.5 55.0 53.9 65.8 0.0 65.8 70.5 66.2 8 66.4 78.9 53.0 78.0 76.6 71.6 69.6 65.5 61.8 55.5 54.4 53.3 66.4 0.0 66.4 9 73.9 73.1 69.3 64.3 48.8 73.6 71.1 64.8 59.5 51.2 50.1 49.0 64.3 0.0 64.3 10 63.4 72.1 48.5 71.9 71.3 69.3 67.9 64.4 59.9 50.9 49.6 48.7 0.0 63.4 63.4 11 74.2 46.2 73.7 72.7 70.1 63.7 68.2 64.2 59.5 49.6 48.1 46.6 63.7 0.0 63.7 12 70.2 69.5 67.9 62.2 45.2 70.0 66.7 63.7 59.5 48.8 46.9 45.5 62.2 0.0 62.2 13 65.9 78.1 52.5 77.2 76.1 72.8 69.5 64.6 61.1 55.1 53.9 52.8 65.9 0.0 65.9 Day 14 72.8 70.9 66.2 76.5 53.8 76.0 75.2 65.8 62.4 56.4 55.3 54.1 66.2 0.0 66.2 15 66.8 77.7 53.7 77.3 76.6 73.9 71.1 65.9 62.3 56.3 55.0 54.0 66.8 0.0 66.8 79.7 16 67.6 53.2 79.4 78.2 74.1 71.2 66.0 63.0 56.7 55.1 53.6 67.6 0.0 67.6 17 64.5 72.7 52.6 72.2 71.4 69.6 68.6 65.6 62.6 55.9 54.5 52.9 64.5 0.0 64.5 18 66.4 77.5 53.3 76.9 76.1 72.5 70.5 65.7 62.5 56.1 54.9 53.6 0.0 66.4 66.4 19 72.5 65.7 76.7 52.6 76.2 75.4 69.6 65.2 62.0 55.2 54.0 53.0 65.7 5.0 70.7 20 75.2 47.5 74.8 74.2 71.3 68.7 64.1 69.4 64.4 59.9 50.8 49.4 47.8 64.4 5.0 21 75.9 47.8 75.6 75.0 71.8 68.9 63.6 58.5 49.6 48.7 47.9 64.5 5.0 69.5 22 45.9 70.2 46.5 10.0 73.2 63.2 75.4 74.7 73.5 68.2 62.2 56.2 47.2 46.0 63.2 Night 23 61.7 72.4 43.8 72.0 71.4 69.2 67.0 61.3 54.9 45.3 44.6 44.0 61.7 10.0 71.7 L1% L2% L5% L8% L25% L50% L90% L95% L99% Leg (dBA) Timeframe Hour $L_{eq}$ L max L min 24-Hour 48.8 Min 62.2 70.2 45.2 70.0 69.5 67.9 66.7 63.6 58.5 46.9 45.5 Daytime Nighttime **CNEL** Day 67.6 79.7 79.4 78.2 56.7 (7am-10pm) Max 53.8 74.1 71.2 66.2 63.0 55.3 54.1 (10pm-7am) **Energy Average** 65.4 Average 75.1 74.4 71.6 69.4 65.0 61.2 53.6 51.1 60.2 65.4 68.4 Min 50.8 62.3 62.0 61.6 58.8 56.1 47.0 42.3 39.4 39.1 38.9 38.8 Night Max 63.6 75.4 52.8 74.7 73.5 70.3 68.4 65.0 60.6 54.2 53.6 52.9



63.2

55.8

49.8

44.5

44.1

43.7

Average:

68.7

68.0

65.5

60.2

#### 24-Hour Noise Level Measurement Summary Location: L8 - Located north of the Project Site near the existing Date: Friday, September 30, 2022 Meter: Piccolo II JN: 14822 Project: Rich Haven SP Source: residence at 2943 S Alder Creek Drive. Analyst: B. Lawson Hourly L ea dBA Readings (unadjusted) 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 2 5 6 7 8 9 13 17 21 22 23 0 1 3 4 10 11 12 14 15 16 18 19 20 **Hour Beginning** L2% L5% L95% Adj. L <sub>eq</sub> L min L1% L8% L25% L50% L90% L99% Adj. Timeframe Hour $L_{eq}$ L max $L_{eq}$ 59.2 69.5 66.8 64.4 10.0 69.2 70.5 47.0 70.2 57.4 51.8 48.0 47.6 47.1 59.2 57.1 68.4 44.4 68.1 67.6 65.2 62.7 54.2 49.0 45.1 44.6 10.0 67.1 1 45.6 57.1 2 56.5 68.3 42.5 68.0 67.5 64.8 62.0 52.1 47.9 43.5 43.0 42.6 56.5 10.0 66.5 59.8 70.8 45.2 70.5 70.0 67.9 65.6 69.8 Night 3 57.3 51.3 46.4 45.8 45.3 59.8 10.0 73.5 63.1 50.6 73.3 72.8 70.2 68.4 62.0 57.0 51.7 51.1 63.1 10.0 73.1 4 50.7 5 65.6 75.1 54.1 74.7 74.1 72.1 70.9 65.9 61.3 55.8 54.9 54.2 65.6 10.0 75.6 6 66.9 75.7 56.3 75.4 74.8 72.9 71.6 67.4 63.8 57.8 57.0 56.5 66.9 10.0 76.9 68.4 77.0 59.9 76.6 75.8 73.8 72.5 66.2 61.4 60.6 60.0 0.0 68.4 69.1 68.4 8 68.4 76.4 60.3 76.0 75.4 73.7 72.5 69.2 66.0 61.7 61.1 60.5 68.4 0.0 68.4 9 75.7 55.4 74.8 73.1 71.9 67.1 75.3 67.9 63.9 57.4 56.5 55.6 67.1 0.0 67.1 10 68.1 77.5 56.0 77.1 76.5 74.2 72.8 68.6 58.1 57.2 0.0 68.1 64.1 56.2 68.1 11 68.5 78.3 56.3 77.8 77.1 74.9 73.2 68.9 64.8 58.3 57.4 56.5 68.5 0.0 68.5 12 55.9 75.2 73.5 71.8 66.8 76.2 75.9 66.8 62.8 57.4 56.6 56.1 66.8 0.0 66.8 13 66.1 75.2 56.3 74.5 73.8 71.7 70.4 66.8 63.1 57.8 57.0 56.5 66.1 0.0 66.1 14 74.5 Day 68.5 77.7 57.7 77.3 76.8 73.2 68.6 65.2 59.6 58.8 57.9 68.5 0.0 68.5 15 67.9 76.6 60.4 75.2 72.7 71.5 76.1 68.3 66.1 62.0 61.3 60.6 67.9 0.0 67.9 77.5 73.1 16 68.7 78.8 58.5 78.3 75.0 68.4 65.3 60.2 59.4 58.7 68.7 0.0 68.7 17 71.7 84.5 59.3 83.9 82.9 76.9 75.0 69.6 65.8 60.9 60.1 59.4 71.7 0.0 71.7 18 69.6 81.1 58.5 80.7 79.8 76.4 73.4 68.4 60.0 59.4 58.7 69.6 0.0 69.6 65.2 19 68.2 79.0 57.3 78.5 77.7 75.1 72.6 67.3 63.7 58.7 58.1 57.5 68.2 5.0 73.2 20 82.1 80.6 79.2 71.9 73.5 68.5 55.2 75.4 66.4 62.1 56.9 56.1 55.4 68.5 5.0 21 68.0 78.5 78.1 77.6 75.8 73.8 66.1 55.8 55.0 54.5 68.0 5.0 73.0 61.4 22 74.1 55.2 10.0 65.2 75.0 53.5 74.7 71.7 70.1 54.4 53.7 65.2 75.2 65.2 60.7 Night 23 68.8 81.0 55.5 80.6 79.9 77.0 73.4 65.2 60.8 56.5 56.0 55.6 68.8 10.0 78.8 L1% L2% L5% L8% L25% L50% L90% L95% L99% Leg (dBA) Timeframe Hour $L_{eq}$ L max L min 24-Hour Min 66.1 75.2 54.3 74.5 73.8 71.7 70.4 66.1 61.4 55.8 55.0 54.5 Daytime Nighttime **CNEL** Day 84.5 60.4 83.9 82.9 76.9 75.0 62.0 60.6 (7am-10pm) Max 71.7 69.6 66.2 61.3 (10pm-7am) 68.5 Average 77.8 77.0 74.4 72.6 68.0 64.4 59.1 57.6 **Energy Average** 68.5 64.3 **72.1** 56.5 68.0 67.5 64.8 62.0 52.1 47.9 43.5 43.0 42.6 Min 68.3 42.5 Night 68.8 81.0 56.3 80.6 79.9 77.0 73.4 67.4 63.8 57.8 57.0 56.5



67.7

60.7

55.9

51.2

50.5

50.0

Average:

72.8

72.3

69.8

64.3

# **APPENDIX 7.1:**

**OFF-SITE TRAFFIC NOISE CONTOURS** 



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	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	TION N	IODEL (	9/12/2	021)		
	io: E ne: Archibald A nt: n/o Ontario						Name: lumber:		aven Spec	ific Plar	1
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	s	
				- 1	Site Con	aitions					
Average Daily	. ,	21,909 vehicle	es					Autos:			
	Percentage:	7.91%				dium Tr					
	lour Volume:	1,733 vehicle	S		He	avy Tru	cks (3+.	Axles):	15		
	hicle Speed:	55 mph			Vehicle i	Mix					
Near/Far La	ne Distance:	80 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Pa	rrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	5 2.42%
Barrier Type (0-V		0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Di		60.0 feet			Noise So			- /:- #	41		
Centerline Dist.	to Observer:	60.0 feet		Ľ	voise so				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height	(Above Pad):	5.0 feet				m Truck		297	0	·	4.00
-	ad Elevation:	0.0 feet			Heal	y Truck	s: 8.	004	Grade Ad	justmen	t: 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 45	.000			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 44	.803			
	Right View:	90.0 degree	es		Heav	y Truck	s: 44	822			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	71.78			0.5	8	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	82.40	-16.48		0.6	1	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-9.89		0.6	1	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	70	).2	68.9		67.2		64.	1	71.	5	71.9
Medium Trucks:	65	5.3	64.7		57.0		58.	4	66.	1	66.3
Heavy Trucks:			74.6		70.1		71.	-	78.0	-	78.2
Vehicle Noise:	77	7.2	76.0		72.0		72.	D	79.	1	79.3
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70 (	dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:		243		523	-	1,127	_	2,429
		C	NEL:		251		542		1.167		2.514

	FHWA-RE	0-77-108 HIGH	WAY	NOISE P	REDI	CTION IV	IODEL (	9/12/2	021)		
Scenario Road Name Road Segment	: Archibald A						Name: lumber:		aven Spec	cific Plan	1
SITE S	PECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	S	
Highway Data				Si	te Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily T Peak Hour F Peak Ho	. ,	26,337 vehicle 7.91% 2,083 vehicle				edium Tr eavy Tru	ucks (2	,	15		
Veh	icle Speed:	55 mph		Ve	hicle	Miv					
Near/Far Lan	e Distance:	80 feet		-		icleType		Dav	Evening	Night	Daily
Site Data							Autos:	70.7%	-	17.59	
Pare	ier Height:	0.0 feet			M	ledium T	rucks:	82.2%	3.5%	14.39	6 2.42%
Barrier Type (0-Wa	II, 1-Berm):	0.0				Heavy T	rucks:	70.8%	6.2%	23.09	6 11.05%
Centerline Dist		60.0 feet		No	oise S	ource El	levation	s (in fe	eet)		
Centerline Dist. to		60.0 feet				Auto	s: 0.	000			
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 2.	297			
Observer Height (A	,	5.0 feet				vy Truck		004	Grade Ad	justmer	t: 0.0
	d Elevation:	0.0 feet		_							
	d Elevation:	0.0 feet		Lá	ne Eq	uivalent			feet)		
R	oad Grade:	0.0%				Auto		000			
	Left View: Right View:	-90.0 degre				ım Truck vy Truck		803 822			
FHWA Noise Model	Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	erm Atten
Autos:	71.78	-0.15		0.58		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	82.40	-15.68		0.61		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-9.09		0.61		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise			barrie	r attenu	ation)						
	.eq Peak Hou			Leq Eve	_		Night		Ldn		CNEL
Autos:	71		69.7		68.0		64.	-	72.	-	72.7
Medium Trucks:	66		65.5		57.8		59.:	_	66.	-	67.
Heavy Trucks:	76		75.4		70.9		71.		78.		79.
Vehicle Noise:	78	.0	76.8		72.8	1	72.	3	79.	9	80.
Centerline Distance	to Noise Co	ntour (in feet	)	70 '			-10.4		20 404	-	C -/D4
			Later	70 dE		65	dBA	1 -	60 dBA		5 dBA
		_	Ldn:		275		592		1,274		2,746
		C	NEL:		284		612		1,319	,	2,842

Scenario	o: F+P					Project	Name:	Rich H	aven Spec	ific Plan	
	e: Archibald A	Av.						14822	атоп орос		
Road Segmen	t: n/o Ontario	Ranch Rd.									
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	= 10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	26,968 vehicl	es					Autos:	15		
Peak Hour I	Percentage:	7.91%			Me	dium Tr	ıcks (2	Axles):	15		
Peak Ho	our Volume:	2,133 vehicle	s		He	avy Truc	cks (3+	Axles):	15		
Vel	nicle Speed:	55 mph		,	Vehicle I	Wix					
Near/Far Lar	ne Distance:	80 feet		F		icleType		Dav	Evening	Night	Dailv
Site Data							lutos:	70.7%		17.5%	89.069
Rar	rier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	1.979
Barrier Type (0-Wa	-	0.0			- 1	Heavy T	rucks:	70.8%	6.2%	23.0%	8.979
Centerline Dis	. ,	60.0 feet			Noise So	roo El	o rotio	an (in f	net)		
Centerline Dist. t	o Observer:	60.0 feet			voise so	Auto.		.000	el)		
Barrier Distance t	o Observer:	0.0 feet			Modiu	Auto. m Truck		.000			
Observer Height (/	Above Pad):	5.0 feet				y Truck	-	.004	Grade Ad	iuctment	0.0
Pa	d Elevation:	0.0 feet			пеач	ry Truck	s. o	.004	Grade Adj	usunent	0.0
Roa	d Elevation:	0.0 feet		1	Lane Eq	uivalent	Distar	ice (in i	eet)		
F	Road Grade:	0.0%				Auto.	s: 45	.000			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 44	.803			
	Right View:	90.0 degre	es		Heav	y Truck	s: 44	.822			
FHWA Noise Mode	I Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	71.78			0.5	-	-1.20		-4.69		000	0.00
Medium Trucks:	82.40			0.6		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-9.89	)	0.6	1	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
	Leq Peak Ho		_	Leg E			Night		Ldn		VEL
Autos:	-	1.2	70.0		68.2		65.	_	72.6	-	73
Medium Trucks:		5.3	64.7		57.0		58.		66.1	•	66
Heavy Trucks:		5.9	74.6		70.1		71.		78.0		78.
Vehicle Noise:	77	7.5	76.2		72.4		72.	.2	79.3	3	79
Centerline Distanc	e to Noise C	ontour (in fee	t)								
			L	70 c		65	dBA		i0 dBA		dBA
			Ldn:		250		539	9	1,162		2,504
		_	NEL:		259		559		1.204		2,598

Friday, October 14, 2022

F	HWA-RD-	77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL	(9/12/2	(021)		
Scenario: OY Road Name: Ard Road Segment: n/o	hibald Av					Project I Job No			Haven Spec	ific Plar	ı
SITE SPEC	IFIC INF	UT DATA			04- 0				L INPUT	s	
Highway Data					Site Con	aitions (	Hara :				
Average Daily Traffic	. ,	31,396 vehicle	S					Autos			
Peak Hour Perce	-	7.91%				dium Tru					
Peak Hour Vo		2,483 vehicles	•		не	avy Truc	KS (3+	Axies)	: 15		
Vehicle S	,	55 mph			Vehicle I	Иіх					
Near/Far Lane Dis	tance:	80 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	70.79	6 11.8%	17.5%	88.70%
Barrier H	leiaht:	0.0 feet			Me	edium Tr	ucks:	82.29	6 3.5%	14.3%	2.03%
Barrier Type (0-Wall, 1-		0.0			F	Heavy Tr	ucks:	70.89	6.2%	23.0%	9.27%
Centerline Dist. to E	,	60.0 feet			Noise Sc	uraa Ele	nucation	na (in i	in nel		
Centerline Dist. to Obs	server:	60.0 feet		ŀ	Noise 30	Autos			eei)		
Barrier Distance to Obs	server:	0.0 feet						2.297			
Observer Height (Above	Pad):	5.0 feet				m Trucks			Grade Ad	inatmon	t: 0.0
Pad Ele	vation:	0.0 feet			Heav	y Trucks	:: 8	3.004	Grade Ad	justrieri	ι. υ.υ
Road Ele	vation:	0.0 feet			Lane Eq	uivalent	Distar	ıce (in	feet)		
Road	Grade:	0.0%				Autos	: 45	5.000			
Left	t View:	-90.0 degree	s		Mediui	m Trucks	: 44	.803			
Right	! View:	90.0 degree	S		Heav	y Trucks	: 44	.822			
FHWA Noise Model Cald											
		Traffic Flow	Dis	tance	Finite		Fres		Barrier Att		rm Atten
Autos:	71.78	0.72		0.5		-1.20		-4.69		000	0.000
Medium Trucks:	82.40	-15.68		0.6		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-9.09		0.6		-1.20		-5.34	0.0	000	0.000
Unmitigated Noise Leve VehicleType Leg F	e <b>ls (witho</b> Peak Hour				vening	Leg I	Viaht	-T	Ldn		NEL
Autos:	71.9		70.6	LUY L	68.8	Logi	4igrit 65	8	73.	_	73.6
Medium Trucks:	66.1		35.5		57.8		59		66.5		67.1
Heavy Trucks:	76.7		75.4		70.9		71	-	78.	-	79.0
Vehicle Noise:	78.2		77.0		73.1		73		80.		80.3
Centerline Distance to N	loise Cor	ntour (in feet)									
				70	dBA	65 c			60 dBA		dBA
		-	Ldn: IFL:		282 292		60		1,307 1.355		2,816 2,918

	FHWA-R	D-77-108 HIGH	IWAY	NOISE	PREDIC	CTION M	ODEL	(9/12/20	021)		
Road Na	ario: HY me: Archibald i ent: n/o Ontario						Name: umber:		aven Spec	ific Plar	ı
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Dail	y Traffic (Adt):	37,904 vehicle	es					Autos:	15		
Peak Hou	ır Percentage:	7.91%				edium Tri		,			
Peak	Hour Volume:	2,998 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
V	'ehicle Speed:	55 mph		v	ehicle	Mix					
Near/Far L	ane Distance:	80 feet		F		icleType		Dav	Evening	Niaht	Dailv
Site Data							Autos:	70.7%		17.5%	86.53%
R	arrier Height:	0.0 feet			М	edium Ti	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-	Wall, 1-Berm):	0.0				Heavy Ti	rucks:	70.8%	6.2%	23.0%	11.05%
	Dist. to Barrier:	60.0 feet		٨	loise S	ource El	evation	ıs (in fe	eet)		
	t. to Observer:	60.0 feet				Auto	s: 0	.000			
Barrier Distanc		0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Heigh	. ,	5.0 feet			Hear	vy Truck	s: 8	.004	Grade Ad	justmen	t: 0.0
	Pad Elevation:	0.0 feet		-							
R	oad Elevation:	0.0 feet		L	ane Eq	uivalent		_ •	feet)		
	Road Grade:	0.0%				Auto		.000			
	Left View:	-90.0 degre				m Truck		.803			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 44	.822			
FHWA Noise Mo	del Calculation	ıs									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		rm Atten
Autos				0.58		-1.20		-4.69		000	0.000
Medium Trucks				0.61		-1.20		-4.88		000	0.000
Heavy Trucks				0.61		-1.20		-5.34	0.0	000	0.000
Unmitigated Noi			_					-			
VehicleType	Leq Peak Ho			Leq Ev		-	Night		Ldn		NEL
Autos		2.6	71.3		69.6		66.	-	73.	-	74.3
Medium Trucks		7.7	67.1		59.4		60.		68.		68.7
Heavy Trucks Vehicle Noise		9.6	77.0 78.4		72.5 74.4		73. 74.		80. 81.		80.6 81.7
Centerline Dista	nce to Noise C	ontour (in feet	)								
				70 d	BA	65	dBA	6	60 dBA	55	dBA
			Ldn:		350		75	4	1,625	5	3,500
		C	NEL:		362		780	)	1,681		3,623

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION	MODEL	(9/12/2	021)		
Scenari									laven Spec	ific Plan	
	e: Haven Av.					Job I	Number:	14822			
Road Segmer	nt: n/o Riversi	de Dr.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				2	site Cor	aitions	(Hara =		oft = 15)		
Average Daily	. ,	18,527 vehicl	es					Autos			
	Percentage:	7.91%					rucks (2	/			
	our Volume:	1,465 vehicle	S		He	eavy Tru	icks (3+	Axles)	: 15		
	hicle Speed:	55 mph		١	/ehicle	Mix					
Near/Far La	ne Distance:	80 feet			Veh	icleTyp	e	Day	Evening	Night	Daily
Site Data							Autos:	70.79	6 11.8%	17.5%	86.53%
Rai	rier Heiaht:	0.0 feet			М	edium 1	rucks:	82.29	6 3.5%	14.3%	2.42%
Barrier Type (0-W		0.0				Heavy 1	rucks:	70.89	6.2%	23.0%	11.05%
Centerline Dis	st. to Barrier:	60.0 feet		^	loise S	ource E	levation	s (in t	eet)		
Centerline Dist.	to Observer:	60.0 feet				Auto		.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (	Above Pad):	5.0 feet				vy Truci		004	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet		-							
	ad Elevation:	0.0 feet		L	ane Eq		t Distan		feet)		
I	Road Grade:	0.0%				Auto		.000			
	Left View:	-90.0 degre	es			m Truck		.803			
	Right View:	90.0 degre	es		Hea	vy Truci	ks: 44	.822			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		tance		Road	Fres		Barrier Att		rm Atten
Autos:	71.78	-1.68		0.58		-1.20		-4.69		000	0.00
Medium Trucks:	82.40	-17.21		0.61		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40			0.61		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise										1	
	Leq Peak Hou			Leq Ev			Night	<u>,                                    </u>	Ldn		NEL
Autos:		9.5	68.2		66.4		63.		70.8	-	71.
Medium Trucks:	-	1.6	64.0		56.3		57.	-	65.4	•	65.0
Heavy Trucks:		5.2	73.9		69.4		70.		77.3		77.
Vehicle Noise:		3.5	75.3		71.3		71.	3	78.4	4	78.0
Centerline Distanc	e to Noise Co	ontour (in feet	*)	70 a	IRA	65	dBA	T	60 dBA	55	i dBA
			Ldn:	,,,,	217	1 00	468		1.008		2.172
		C	NEL:		225		484	-	1,000		2,172
		C			220		-10-		1,040		2,240

	FHWA-RI	D-77-108 HIGH\	VAY NO	JISE	PREDIC	HON MO	DEL (S	711212	JZ1)		
	o: HY+P								aven Spec	ific Plan	
	e: Archibald A					Job Nui	mber: 1	4822			
Road Segmen	t: n/o Ontario	Ranch Rd.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				5	Site Con	ditions (F	lard =	10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	42,963 vehicle	3				,	Autos:	15		
Peak Hour I	Percentage:	7.91%			Me	dium Truc	ks (2 A	xles):	15		
Peak He	our Volume:	3,398 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vel	hicle Speed:	55 mph		١	/ehicle I	Лix					
Near/Far Lar	ne Distance:	80 feet		F	Vehi	cleType		Day	Evening	Night	Daily
Site Data						Au	itos:	70.7%	11.8%	17.5%	88.129
Bar	rier Height:	0.0 feet			Me	edium Tru	cks:	82.2%	3.5%	14.3%	2.149
Barrier Type (0-Wa		0.0			F	leavy Tru	cks:	70.8%	6.2%	23.0%	9.75
Centerline Dis	t. to Barrier:	60.0 feet			Voise So	urce Elev	/ations	(in fe	et)		
Centerline Dist. t	to Observer:	60.0 feet		F	10.00 00	Autos:		000	,		
Barrier Distance t	to Observer:	0.0 feet			Mediu	n Trucks:		97			
Observer Height (	Above Pad):	5.0 feet				y Trucks:		004	Grade Ad	iustment	. 00
Pa	d Elevation:	0.0 feet		L		•				Juotimom	. 0.0
Roa	d Elevation:	0.0 feet		L	Lane Equ	uivalent E	Distanc	e (in i	feet)		
F	Road Grade:	0.0%				Autos:	45.0	000			
	Left View:	-90.0 degree	8		Mediur	n Trucks:	44.8	303			
	Right View:	90.0 degree	S		Heav	y Trucks:	44.	322			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresn	el	Barrier Att	en Ber	rm Atten
Autos:	71.78	2.05		0.58	В	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	82.40	-14.10		0.61	1	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-7.51		0.61	1	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and b	arrier a	itteni	uation)						
	Leq Peak Hou		_	eq Ev	ening/	Leq N	-		Ldn		NEL
Autos:	73	-	1.9		70.2		67.1		74.	-	75
Medium Trucks:	67		7.1		59.4		60.7		68.	-	68
Heavy Trucks:	78		7.0		72.5		73.4		80.4		80
Vehicle Noise:	79	.8 7	8.5		74.6		74.5		81.0	6	81
Centerline Distanc	e to Noise Co	ontour (in feet)									
			. L	70 d		65 dE		1 6	i0 dBA		dBA
		_	.dn:		356		768		1,654		3,56
		CV	EL:		369		795		1.713		3,69

Friday, October 14, 2022

	FHWA-R	D-77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	(9/12/2	2021)		
Road Na	ario: E+P me: Haven Av. ent: n/o Riversi	de Dr.						: Rich I : 14822	Haven Spec	cific Plar	1
SITE Highway Data	SPECIFIC II	NPUT DATA			Site Con				EL INPUT	s	
Average Dail	y Traffic (Adt): ir Percentage:	34,509 vehicle 7.91%	:S			edium Tru		Autos	: 15		
	Hour Volume:	2,730 vehicles	3		He	avy Truc	cks (3+	Axles)	: 15		
	'ehicle Speed: ane Distance:	55 mph 80 feet			Vehicle I Veh	Mix icleType		Day	Evening	Night	Daily
	arrier Height:	0.0 feet				edium Tr		70.79	% 3.5%	17.5%	6 1.30%
	Dist. to Barrier:	0.0 60.0 feet			Noise So	Heavy Tr		70.89 ns (in t		23.0%	6 5.93%
Centerline Dist Barrier Distance Observer Height	e to Observer:	60.0 feet 0.0 feet 5.0 feet				Autos m Trucks vy Trucks	s: 2	0.000 2.297 3.004	Grade Ad	liustmen	t: 0.0
	Pad Elevation: oad Elevation:	0.0 feet 0.0 feet			Lane Eq	•				,	
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos m Trucks yy Trucks	s: 4	5.000 4.803 4.822			
FHWA Noise Mo	del Calculation	ıs		1							
VehicleType Autos	REMEL : 71.78	Traffic Flow 1.33	Dis	tance 0.5		-1.20	Fres	-4.69	Barrier Att	en Be	rm Atten 0.000
Medium Trucks Heavy Trucks				0.6		-1.20 -1.20		-4.88 -5.34		000 000	0.000
Unmitigated Nois	se Levels (with	out Topo and I	barrie	er atte	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening		Night		Ldn		NEL
Autos			71.2		69.4		66		73.		74.2
Medium Trucks			64.0		56.3		57		65.		65.6
Heavy Trucks Vehicle Noise			73.9 76.1		69.4 72.5		70		77. 79.		77.5 79.3
Centerline Distar	nce to Noise C	ontour (in feet)									
				70	dBA	65 (	dBA		60 dBA	58	5 dBA
		-	Ldn:		242		52		1,122		2,418
		CN	VEL:		251		54	1	1,166	i	2,513

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	TION N	IODEL	(9/12/2	021)		
	io: OY ne: Haven Av. nt: n/o Riversi	de Dr.					Name: lumber:		laven Spec	ific Plar	1
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data				- 3	Site Cor	aitions	(Hara =	: 10, Sc	ort = 15)		
Average Daily	Traffic (Adt):	26,968 vehicle	es					Autos:			
Peak Hour	Percentage:	7.91%				dium Tr					
Peak H	lour Volume:	2,133 vehicles	S		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	55 mph		1	/ehicle	Mix					
Near/Far La	ne Distance:	80 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	70.7%	11.8%	17.59	6 86.53%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.39	6 2.42%
Barrier Type (0-W		0.0				Heavy T	rucks:	70.8%	6.2%	23.09	6 11.05%
Centerline Di		60.0 feet		١,	Voise S	FI	lovetion	o (in f	not)		
Centerline Dist.	to Observer:	60.0 feet		<u> </u>	voise 3	Auto		.000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				n Truck vy Truck		.004	Grade Ad	livetman	t 0.0
P	ad Elevation:	0.0 feet			пеа	ry ITUCK	s. o	.004	Grade Ad	jusunen	i. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalent	Distar	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 45	.000			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 44	.803			
	Right View:	90.0 degree	es		Hea	y Truck	s: 44	.822			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	71.78			0.5	-	-1.20		-4.69		000	0.000
Medium Trucks:	82.40	-15.58		0.6	1	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-8.99		0.6	1	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	/ening	Leq	Night		Ldn	(	CNEL
Autos:			69.8		68.1		65.	0	72.		72.9
Medium Trucks:			65.6		57.9		59.	3	67.	0	67.2
Heavy Trucks:			75.5		71.0		71.	-	78.	-	79.1
Vehicle Noise:	78	3.1	76.9		72.9		72.	9	80.	0	80.2
Centerline Distant	ce to Noise C	ontour (in feet	)								
				70 c	IBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:		279		60	1	1,295	5	2,789
		C	VEL:		289		623	2	1.340	)	2.887

	FHWA-RD	-77-108 HIGH	NAY N	VOISE	PREDIC	TION M	ODEL	(9/12/2	(021)		
Scenari	o: HY					Project	Name.	Rich I	laven Spec	cific Plan	า
	e: Haven Av.					Job N	umber.	14822	2		
Road Segmer	nt: n/o Riverside	e Dr.									
	SPECIFIC IN	PUT DATA			ita Can				EL INPUT oft = 15)	s	
Highway Data				3	ite Con	iaitions (	Hara				
Average Daily	. ,	33,655 vehicle	S					Autos			
	Percentage:	7.91%				edium Tru		,			
		2,662 vehicles			He	eavy Truc	ks (3+	Axles)	: 15		
	hicle Speed:	55 mph		١	/ehicle l	Mix					
Near/Far Lai	ne Distance:	80 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	70.79	6 11.8%	17.59	6 86.53%
Rar	rier Heiaht:	0.0 feet			М	edium Tr	ucks:	82.29	6 3.5%	14.39	6 2.42%
Barrier Type (0-W	all, 1-Berm):	0.0			1	Heavy Tr	ucks:	70.89	6.2%	23.09	6 11.05%
Centerline Dis		60.0 feet		1	loise So	ource Ele	evatio	ns (in t	eet)		
Centerline Dist.		60.0 feet				Autos	s: (	0.000			
Barrier Distance		0.0 feet			Mediu	m Trucks	: 2	2.297			
Observer Height (		5.0 feet			Heav	vy Trucks	. 8	3.004	Grade Ad	ljustmer	t: 0.0
	d Elevation:	0.0 feet		-		•				-	
	Road Elevation: 0.0 fee				ane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		5.000			
	Left View:	-90.0 degree	S			m Trucks		1.803			
	Right View:	90.0 degree	S		Heav	vy Trucks	S: 44	1.822			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dist	ance		Road	Fres		Barrier Att		erm Atten
Autos:	71.78	0.92		0.58		-1.20		-4.69		000	0.000
Medium Trucks:	82.40	-14.62		0.61		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-8.02		0.61		-1.20		-5.34	0.0	000	0.000
Unmitigated Noise											
• • • • • • • • • • • • • • • • • • • •	Leq Peak Hour			Leq Ev		Leq			Ldn		CNEL
Autos:	72.		70.8		69.0		66		73.		73.8
Medium Trucks:	67.		6.6		58.9		60		68.	-	68.1
Heavy Trucks:	77.		76.5		72.0		72		79.	-	80.0
Vehicle Noise:	79.	1 7	77.9		73.9	1	73	.9	81.	0	81.2
Centerline Distanc	e to Noise Co	ntour (in feet)		70 a	ID A	65.	iBA		60 dBA	E	5 dBA
			dn:	700	323	05 (	<i>1BA</i> 69		1.501		3,233
		-	.an: IEL:		335		72		,		-,
		Ch	LL.		335		12		1,553	,	3,347

0		D-77-108 HIGH						'		ifi - Di	
	o: OY+P e: Haven Av.						Name: umber:		aven Spec	ific Plan	
Road Name Road Segmen		do Dr				JOD N	umper:	14822			
SITE S Highway Data	SPECIFIC IN	IPUT DATA		Si	te Con	ditions			L INPUT:	5	
Average Daily	Traffic (Adt):	42.951 vehicle	20					Autos:	15		
	Percentage:	7.91%			Ma	dium Tru			15		
	our Volume:	3.397 vehicle				avy Truc					
	nicle Speed:	55 mph	,				,,, o	10100).			
Near/Far Lar		80 feet		Ve	ehicle l				г г		
	o Biolarioo.	00 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data							lutos:	70.7%			91.549
Bar	rier Height:	0.0 feet				edium Tr		82.2%		14.3%	1.529
Barrier Type (0-Wa	all, 1-Berm):	0.0			1	Heavy Tr	ucks:	70.8%	6.2%	23.0%	6.949
Centerline Dis	t. to Barrier:	60.0 feet		No	oise So	ource Ele	evation	s (in fe	et)		
Centerline Dist. t	o Observer:	60.0 feet				Autos		000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height (	Above Pad):	5.0 feet			Heav	y Trucks	: 8	004	Grade Ad	iustment.	0.0
Pa	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		Lá	ne Eq	uivalent			eet)		
F	Road Grade:	0.0%				Autos		.000			
	Left View:	-90.0 degree				m Trucks		.803			
	Right View:	90.0 degree	es		Heav	y Trucks	s: 44	.822			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresi	_	Barrier Att		m Atten
Autos:	71.78	2.22		0.58		-1.20		-4.69		000	0.00
Medium Trucks:	82.40			0.61		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-8.99		0.61		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise											
	Leq Peak Hou			Leq Eve			Night	<u> </u>	Ldn	-	VEL
Autos:	73		72.1		70.3		67.	-	74.7		75.
Medium Trucks:	66		65.6		57.9		59.	-	67.0	-	67.
Heavy Trucks:_ Vehicle Noise:	76 78		75.5 77.5		71.0		71.	-	78.9 80.9		79. 80.
venicie Noise:					73.8		73.	4	80.8	)	80
		natour (in foot	)								
Centerline Distanc	e to Noise Co	ontour (in reet		70 45	2Δ	65 /	HRΔ	-	O dra	55	dRΔ
Centerline Distanc	e to Noise Co	ontour (in reet	Ldn:	70 dE	3A 301	65 (	dBA 648	_	0 dBA 1.396		dBA 3,00

Friday, October 14, 2022

FHWA	-RD-77	'-108 HIGH\	NAY	NOISE	PREDIC	TION N	IODEL (9	/12/2	(021)	
Scenario: HY+P Road Name: Haven A Road Segment: n/o Rive		r.				.,	Name: F lumber: 1		Haven Specifi	Plan
SITE SPECIFIC	INPU	T DATA							L INPUTS	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)	
Average Daily Traffic (Adt Peak Hour Percentage Peak Hour Volume	: 7.	637 vehicle: .91% 26 vehicles					ucks (2 A cks (3+ A	,	: 15	
Vehicle Speed		55 mph			Vehicle	Mix				
Near/Far Lane Distance	ť.	80 feet		F	Veh	icleType		Day	Evening 1	light Daily
Site Data								70.79		17.5% 90.87%
Barrier Heigh		0.0 feet			М	edium T	rucks:	32.29	6 3.5%	14.3% 1.64%
Barrier Type (0-Wall, 1-Berm		0.0				Heavy T	rucks:	70.89	6.2%	23.0% 7.49%
Centerline Dist. to Barrie		60.0 feet		1	Noise S	ource El	evations	(in f	eet)	
Centerline Dist. to Observe Barrier Distance to Observe		0.0 feet 0.0 feet				Auto m Truck	s: 0.0	00	,	
Observer Height (Above Pad	):	5.0 feet				vy Truck			Grade Adjus	tment: 0.0
Pad Elevation		0.0 feet		_ L		•				
Road Elevation		0.0 feet		1	Lane Eq		t Distanc		feet)	
Road Grade		.0%				Auto				
Left Viev Right Viev		90.0 degree 90.0 degree				m Truck /y Truck				
FHWA Noise Model Calculate	ons									
VehicleType REMEL	Tra	affic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atten	Berm Atten
Autos: 71	78	2.82		0.5	8	-1.20		4.69	0.00	0.000
Medium Trucks: 82	40	-14.62		0.6	1	-1.20		4.88	0.00	0.000
Heavy Trucks: 86	40	-8.02		0.6	1	-1.20		5.34	0.00	0.000
Unmitigated Noise Levels (w	ithout	Topo and b	arrie	er atten	uation)					
VehicleType Leq Peak I	_	Leq Day		Leq E			Night		Ldn	CNEL
Autos:	74.0		2.7		70.9		67.9		75.3	75.7
Medium Trucks:	67.2		6.6		58.9		60.2		68.0	68.1
Heavy Trucks:	77.8		6.5		72.0		72.9		79.9	80.0
Vehicle Noise:	79.6	7	8.3		74.6		74.2		81.4	81.6
Centerline Distance to Noise	Conto	our (in feet)								
			, L	70 (		65	dBA		60 dBA	55 dBA
		_	.dn:		344		741		1,595	3,437
		CN	IEL:		357		768		1,655	3,567

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	CTION N	IODEL	9/12/2	021)		
	io: E ne: Haven Av. nt: s/o Riversio	de Dr.					Name: lumber:		aven Spec	ific Plan	
	SPECIFIC IN	IPUT DATA			0:4- 0				L INPUT	s	
Highway Data					Site Cor	aitions	(Hara =				
Average Daily	. ,	10,432 vehicle	es					Autos:			
	Percentage:	7.91%				edium Tr					
	lour Volume:	825 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	62 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-W		0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Di		50.0 feet		-	Noise S	ource F	lovation	e (in fa	oot)		
Centerline Dist.	to Observer:	50.0 feet		· F	110/36 01	Auto		000	,		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iuetman	t: 0.0
P	ad Elevation:	0.0 feet			rica	vy Truck	3. 0	.004	Orace Au	Justinen	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 39	.547			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 39	.323			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 39	.345			
FHWA Noise Mod	el Calculation	s									-
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		rm Atten
Autos:	70.20			1.4	-	-1.20		-4.65		000	0.000
Medium Trucks:				1.4	-	-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-12.70		1.4	6	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:			65.4		63.6		60.	6	68.0	)	68.4
Medium Trucks:			61.3		53.6		55.	0	62.8	В	62.9
Heavy Trucks:			71.7		67.1		68.	-	75.0	-	75.2
Vehicle Noise:	74	1.1	72.9		68.9		68.	9	76.0	)	76.2
Centerline Distant	ce to Noise C	ontour (in feet	)								
				70	dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:		126		271		584		1,259
		C	NEL:		130		281		605	,	1.303

Average Daily Traffic (Adt): 20,983 vehicles Peak Hour Pourcentage: 7,91% Peak Hour Pourcentage: 1,660 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 62 feet    Vehicle Mix   Vehicle Type   Day   Evening   Night   Vehicle Mix	Scenari Bood Nom	io: OY	D-77-108 HI	5111171			Projec	t Name	: Rich H	laven Spec	ific Plan					
			de Dr.				JOD I	vurriber	. 14022							
Average Daily Traffic (Adt): 20,983 vehicles   Peak Hour Percentage: 7,91%   Medium Trucks (2 Axles): 15   Heavy Trucks (3+ Axles): 15   Wehicle Speed: 50 mph Near/Far Lane Distance: 62 feet   Wehicle Type   Day   Evening   Night   Day	SITE	SPECIFIC II	NPUT DAT	A				NOISE	MODE	L INPUT	s					
Peak Hour Percentage: 7.91%   Medium Trucks (2 Axles): 15	Highway Data					Site Cor	nditions	(Hard	= 10, Sc	oft = 15)						
Peak Hour Volume: 1,660 vehicles	Average Daily	Traffic (Adt):	20,983 veh	icles					Autos:	15						
Vehicle   Speed:   So mph   Near/Far Lane Distance:   62 feet   Vehicle Mix   Vehicle Type   Day   Evening   Night   Day   Day   Evening   Night   Day   D	Peak Hour	Percentage:	7.91%			Me	edium Ti	rucks (2	Axles):	15						
Near/Far Lane Distance: 62 feet   VehicleType   Day   Evening   Night   Day   Night	Peak H	lour Volume:	1,660 vehic	cles		He	eavy Tru	icks (3+	Axles):	15						
Site Data   Partier Height:   0.0   feet   Barrier Height:   0.0   feet   Heavy Trucks:   82.2%   3.5%   14.3%   2   23.0%   11.5%   86.2%   23.0%   86.2%   86.2%	Ve	hicle Speed:	50 mph		ŀ	Vehicle	Mix									
Barrier Height:   0.0   feet	Near/Far La	ne Distance:	62 feet			Veh	icleTyp	е	Day	Evening	Night	Daily				
Barrier Type (0-Wall, 1-Berm):	Site Data							Autos:	70.7%	11.8%	17.5%	86.53%				
Barrier Type (0-Wall, 1-Berm):	Rai	rrier Heiaht	0.0 feet			M	ledium 1	rucks:	82.2%	3.5%	14.3%	2.42%				
Centerline Dist. to Observer:				•			Heavy 1	rucks:	70.8%	6.2%	23.0%	11.05%				
Centerline Dist. to Observer: 50.0 feet   Barrier Distance to Observer: 0.0 feet   Barrier Distance to Observer: 0.0 feet   Christian	Centerline Dis	st. to Barrier:	50.0 feet		ŀ	Noise S	nurce F	levatio	ns (in f	pet)						
Barrier Distance to Observer:   0.0 feet   Medium Trucks:   2.97   Heavy Trucks:   8.004   Grade Adjustment: 0.05   Gra	Centerline Dist.	to Observer:	50.0 feet		ŀ	710,00			_ •	301)						
Diserver Height (Above Pad): 5.0 feet   Heavy Trucks: 8.004   Grade Adjustment: 0.0	Barrier Distance	to Observer:	0.0 feet			Modiu										
Pad Elevation: 0.0 feet   Lane Equivalent Distance (in feet)	Observer Height (	Above Pad):	5.0 feet							Grade Ad	iustmant	. 0 0				
Road Grade: 0.0%	Pa	ad Elevation:	0.0 feet			пеа	vy IIuci	15. (	5.004	Grade Adjustinent. 0.0						
Left View:	Ros	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	nce (in	feet)						
	I	Road Grade:	0.0%				Auto	os: 3	9.547							
FHWA Noise Model Calculations   VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berm A		Left View:	-90.0 deg	rees		Mediu	m Truck	ks: 3	9.323							
VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berm A		Right View:	90.0 deg	rees		Hea	vy Truci	ks: 3!	9.345							
Autos: 70.20	FHWA Noise Mode	el Calculation	ıs													
Medium Trucks:         81.00         -16.26         1.46         -1.20         -4.87         0.000         0           Heavy Trucks:         85.38         -9.66         1.46         -1.20         -5.43         0.000         0           Unmitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         69.7         68.4         66.7         68.0         65.8         65.8           Medium Trucks:         65.0         64.4         56.7         58.0         65.8         65.8           Heavy Trucks:         76.0         74.7         70.2         71.1         78.1           Vehicle Noise:         77.2         75.9         71.9         72.0         79.1           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         201         432         931         2	VehicleType	REMEL	Traffic Flov	v D	istance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten				
Heavy Trucks: 85.38	Autos:	70.20	-0.	72	1.4	12	-1.20		-4.65	0.0	000	0.00				
Unmitigated Noise Levels (without Topo and barrier attenuation)   VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL	Medium Trucks:	81.00	-16.	26	1.4	16	-1.20		-4.87	0.0	000	0.00				
VehicleType	Heavy Trucks:	85.38	-9.	66	1.4	16	-1.20		-5.43	0.0	000	0.00				
Autos:     69.7     68.4     66.7     63.6     71.0       Medium Trucks:     65.0     64.4     56.7     58.0     65.8       Heavy Trucks:     76.0     74.7     70.2     71.1     78.1       Vehicle Noise:     77.2     75.9     71.9     72.0     79.1       Centerline Distance to Noise Contour (in feet)       TO dBA     65 dBA     60 dBA     55 dBA       Ldn:     201     432     931     2	Unmitigated Noise	Levels (with	out Topo ar	nd barr	ier atter	nuation)										
Medium Trucks:         65.0         64.4         56.7         58.0         65.8           Heavy Trucks:         76.0         74.7         70.2         71.1         78.1           Vehicle Noise:         77.2         75.9         71.9         72.0         79.1           Centerline Distance to Noise Contour (in feet)           Image: Contour (in feet)         0 dBA         65 dBA         60 dBA         55 dBA           Ldn:         201         432         931         2	VehicleType	Leq Peak Ho	ur Leq E	ay	Leq E	vening	Leg	Night		Ldn	C					
Heavy Trucks:   76.0   74.7   70.2   71.1   78.1	Autos:	69	9.7	68.4		66.7		63	1.6	71.0	)	71.4				
Vehicle Noise:         77.2         75.9         71.9         72.0         79.1           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         201         432         931         2	Medium Trucks:	65	5.0	64.4		56.7		58	1.0	65.8	В	66.				
Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         201         432         931         2	Heavy Trucks:	76	3.0	74.7		70.2	!	71	.1	78.	1	78.				
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 201 432 931 2	Vehicle Noise:	77	7.2	75.9		71.9	)	72	2.0	79.	1	79.				
Ldn: 201 432 931 2	Centerline Distanc	e to Noise C	ontour (in fe	eet)												
							65									
CNEL: 208 447 963 2									_			2,007				
				CNEL:		208		44	7	963		2,076				

Road Name: Haven Av.   Road Segment: slo Riverside Dr.	Scenari	io: E+P					Proiect Na	ame:	Rich H	aven Spec	ific Plar	
SITE SPECIFIC INPUT DATA   SITE SPECIFIC INPUT DATA   SITE SPECIFIC INPUT DATA   SITE Conditions (Hard = 10, Soft = 15)												
Average Daily Traffic (Adt): 28,244 vehicles   Peak Hour Percentage: 7.91%   Autos: 15   Heavy Trucks (24 Axles): 15   Heavy Trucks: 70.7%   11.8%   17.5%   95.03   Medium Trucks: 82.2%   3.5%   14.3%   0.89   Heavy Trucks: 70.8%   6.2%   23.0%   4.08   Heavy Trucks: 70.0%   4.08   He	Road Segmen	nt: s/o Riversio	le Dr.									
Average Daily Traffic (Adf): 28,244 vehicles   Peak Hour Percentage: 7,91%   Medium Trucks (2 Axles): 15   Heavy Trucks (3 + Axles): 15		SPECIFIC IN	IPUT DATA								S	
Peak Hour Volume: 2,234 vehicles   Heavy Trucks (3 Axles): 15   Heavy Trucks: 10 Axlos: 170.7%   Medium Trucks: 170.8%   Mediu	Highway Data				S	ite Con	ditions (H	ard =	10, Sc	ft = 15)		
Peak Hour Volume:	Average Daily	Traffic (Adt):	28,244 vehicles	3					Autos:	15		
Vehicle Speed: Near/Far Lane Distance: 62 feet   Vehicle Mix   Vehicle Type   Day   Evening   Night   Daily	Peak Hour	Percentage:	7.91%			Me	dium Truck	(s (2 /	Axles):	15		
Near/Far Lane Distance:   62 feet       VehicleType   Day     Evening   Night   Daily   Site Data     VehicleType   Day   Evening   Night   Daily   Site Data     VehicleType   Day   Evening   Night   Daily   Site Data     VehicleType   Day   Evening   Night   Daily   Site Data     VehicleType   Data   VehicleType   Data   VehicleType   Data   VehicleType   Data   VehicleType   Data   VehicleType   Data   Data	Peak H	our Volume:	2,234 vehicles			He	avy Trucks	(3+)	(xles	15		
Near/Far Lane Distance:   62 feet     VehicleType   Day   Evening   Night   Daily	Ve	hicle Speed:	50 mph		V	ahicle I	Miy					
Autos: 70.7%   11.8%   17.5%   95.03	Near/Far Lai	ne Distance:	62 feet		-			Т	Dav	Evenina	Night	Dailv
Barrier Type (0-Wall, 1-Berm): 0.0   Heavy Trucks: 70.8% 6.2% 23.0% 4.08	Site Data						Aut	os:	70.7%		17.5%	95.039
Barrier Type (0-Wall, 1-Berm):	Bar	rier Heiaht:	0.0 feet			Me	edium Truc	ks:	82.2%	3.5%	14.3%	0.899
Noise Source Elevations (in Teet)			0.0			F	Heavy Truc	ks:	70.8%	6.2%	23.0%	4.089
Centerline Dist. to Observer:   5.0.0 feet   Barrier Distance to Observer:   0.0 feet   Cobserver Height (Above Pad):   5.0 feet   Cobserver Height (Above Pad):   6.0 feet   Cobserver Heavy Trucks:   39.323   Cobserver Height (Above Pad):   6.0 feet   Cobserver Height (Above Pad):   6.0 feet   Cobserver Heavy Trucks:   81.00   6.0 feet   6.0 feet	Centerline Dis	st. to Barrier:	50.0 feet			laica Sa	urco Elov	ation	r (in fo	not)		
Barrier Distance to Observer:   0.0 feet     Medium Trucks:   2.297   Heavy Trucks:   8.004   Grade Adjustment: 0.0	Centerline Dist.	to Observer:	50.0 feet		/4	0136 30			•	ei)		
Pad Elevation:	Barrier Distance	to Observer:	0.0 feet			Modiuu						
Pad Elevation: 0.0 feet	Observer Height (	Above Pad):	5.0 feet							Grade Ad	iustman	t· 0.0
Road Grade:	Pa	ad Elevation:	0.0 feet			ricav	y ITUCKS.	0.	004	Orauc Au	justinen	i. 0.0
Left View:	Roa	ad Elevation:	0.0 feet		L	ane Equ	uivalent D	istan	e (in t	eet)		
Right View: 90.0 degrees   Heavy Trucks: 39.345	F	Road Grade:	0.0%				Autos:	39.	547			
		Left View:	-90.0 degrees			Mediur	m Trucks:	39.	323			
VehicleType		Right View:	90.0 degrees	3		Heav	y Trucks:	39.	345			
Autos:         70.20         0.97         1.42         -1.20         -4.65         0.000         0.00           Medium Trucks:         81.00         -19.29         1.46         -1.20         -4.87         0.000         0.00           Inmitigated Noise Levels (without Topo and barrier attenuation)         Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         71.4         70.1         68.4         65.3         72.7         73           Medium Trucks:         62.0         61.3         53.6         55.0         62.8         62           Heavy Trucks:         72.9         71.7         67.1         68.0         75.0         75           Vehicle Noise:         75.4         74.2         70.9         70.0         77.2         77           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         151         325         700         1,50	FHWA Noise Mode	el Calculation:	s									
Medium Trucks:   81.00   -19.29   1.46   -1.20   -4.87   0.000   0.00	VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	iel	Barrier Att	en Be	rm Atten
Heavy Trucks: 85.38												0.00
Immitigated Noise   Levels (without Topo and barrier attenuation)   VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL												0.00
VehicleType	Heavy Trucks:	85.38	-12.70		1.46		-1.20		-5.43	0.0	000	0.00
Autos:         71.4         70.1         68.4         65.3         72.7         73           Medium Trucks:         62.0         61.3         53.6         55.0         62.8         62           Heavy Trucks:         72.9         71.7         67.1         68.0         75.0         75           Vehicle Noise:         75.4         74.2         70.9         70.0         77.2         77           Centerline Distance to Noise Contour (in feet)         TO dBA         65 dBA         60 dBA         55 dBA           Ldn:         151         325         700         1,50				_							_	
Medium Trucks:         62.0         61.3         53.6         55.0         62.8         62           Heavy Trucks:         72.9         71.7         67.1         68.0         75.0         75           Vehicle Noise:         75.4         74.2         70.9         70.0         77.2         77           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         151         325         700         1,50				_	eq Ev		Leq Ni				_	
Heavy Trucks:   72.9   71.7   67.1   68.0   75.0   75.0     Vehicle Noise:   75.4   74.2   70.9   70.0   77.2   77.2     Centerline Distance to Noise Contour (in feet)												
Vehicle Noise:         75.4         74.2         70.9         70.0         77.2         77           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         151         325         700         1,50											-	
Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         151         325         700         1,50												
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 151 325 700 1,50	Vehicle Noise:	75	.4 7	4.2		70.9		70.0	)	77.	2	77
Ldn: 151 325 700 1,50	Centerline Distanc	e to Noise Co	ontour (in feet)		70.0		25 15	_				
101 020 100 1,00					/U di		65 dB					
CNEL: 157 339 729 1,57			_									,
			CN	CL.		157		339		729	'	1,57

Friday, October 14, 2022

	FHWA-RI	0-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL	(9/12/2	2021)						
Road Nan	nio: OY+P ne: Haven Av. nt: s/o Riversio	le Dr.						Rich I 14822	Haven Spec	ific Plar	1				
	SPECIFIC IN	PUT DATA			04- 0				EL INPUT	s					
Highway Data					Site Con	aitions	Hara								
Average Daily	. ,	38,795 vehicle	es					Autos							
	Percentage:	7.91%				dium Tru									
	lour Volume:	3,069 vehicles	3		He	avy Truc	:ks (3+	Axles)	: 15						
	hicle Speed:	50 mph		İ	Vehicle I	Vix									
Near/Far La	ne Distance:	62 feet		l	Veh	icleType		Day	Evening	Night	Daily				
Site Data						F	lutos:	70.79	6 11.8%	17.5%	92.72%				
Ba	rrier Height:	0.0 feet			M	edium Tr	ucks:	82.29	6 3.5%	14.3%	6 1.31%				
Barrier Type (0-V		0.0			- 1	Heavy Tr	ucks:	70.89	6.2%	23.0%	5.97%				
	st. to Barrier:	50.0 feet		-	Noise So	roo El	overtie	no (in t	[aat]						
Centerline Dist.	to Observer:	50.0 feet			Noise 30	Autos			eet)						
Barrier Distance	to Observer:	0.0 feet				m Trucks		2.297							
Observer Height	(Above Pad):	5.0 feet						3.004	Grade Ad	iuctman	t: 0.0				
P	ad Elevation:	0.0 feet			Heav	y Trucks	s: c	3.004	Grade Au	justinen	2. 0.0				
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distai	nce (in	feet)	et)					
	Road Grade:	0.0%				Autos	s: 39	9.547							
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 39	9.323							
	Right View:	90.0 degree	es		Heav	y Trucks	39	9.345							
FHWA Noise Mod															
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		rm Atten				
Autos:	70.20	2.25		1.4	-	-1.20		-4.65		000	0.000				
Medium Trucks:		-16.26		1.4		-1.20		-4.87		000	0.000				
Heavy Trucks:		-9.66		1.4		-1.20		-5.43	0.0	000	0.000				
Unmitigated Nois VehicleType	e <b>Levels (with</b> Leg Peak Hou				vening	l en	Night		Ldn		NEL				
Autos:			71.4	LUY L	69.6	Logi	66	6	74.1	_	74.4				
Medium Trucks:			64.4		56.7		58		65.8	-	66.0				
Heavy Trucks:			74.7		70.2		71		78.	-	78.2				
Vehicle Noise:			76.6		73.0		72		79.		79.9				
Centerline Distan	ce to Noise Co	ntour (in feet)	)												
				70	dBA	65 (	dΒA		60 dBA		5 dBA				
			Ldn:		221		47	-	1,025		2,209				
		CI	VEL:		229		49	4	1,065	i	2,294				

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	CTION N	IODEL	(9/12/2	021)						
	o: HY e: Haven Av. t: s/o Riverside	e Dr.					t Name: lumber:		laven Spec	ific Plan					
	SPECIFIC IN	PUT DATA			0:4- 0				L INPUT	s					
Highway Data					site Con	aitions	(Hara -		oft = 15)						
Average Daily 1		28,411 vehicle	s					Autos:							
Peak Hour F		7.91%					rucks (2	,							
		2,247 vehicles	•		He	eavy Tru	icks (3+	Axles):	15						
	nicle Speed:	50 mph		١	/ehicle	Mix									
Near/Far Lan	ne Distance:	62 feet			Veh	icleType	9	Day	Evening	Night	Daily				
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%				
Barr	rier Heiaht:	0.0 feet			М	edium 7	rucks:	82.2%	3.5%	14.3%	2.42%				
Barrier Type (0-Wa		0.0				Heavy 7	rucks:	70.8%	6.2%	23.0%	11.05%				
Centerline Dis		50.0 feet		,	Voise S	ource E	levation	s (in f	eet)						
Centerline Dist. t	o Observer:	50.0 feet				Auto		.000	,						
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck		297							
Observer Height (A	Above Pad):	5.0 feet			Hear	vv Truck	rs: 8	.004	Grade Ad	iustment	: 0.0				
	d Elevation:	0.0 feet				,									
	d Elevation:	0.0 feet		1	Lane Eq				feet)	eet)					
R	Road Grade:	0.0%				Auto		.547							
	Left View:	-90.0 degree				m Truck		.323							
	Right View:	90.0 degree	:S		Hea	vy Truck	(s: 39	.345							
FHWA Noise Mode					_										
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		m Atten				
Autos:	70.20	0.59		1.42	_	-1.20		-4.65		000	0.000				
Medium Trucks:	81.00	-14.94		1.46	-	-1.20		-4.87		000	0.000				
Heavy Trucks:	85.38	-8.35		1.46		-1.20		-5.43	0.0	000	0.000				
VehicleType	<b>Levels (witho</b> Leg Peak Hour		_	er atten Leg Ev		Lea	Night	_	Ldn		NFL.				
Autos:	71.1		69.7	LUY L	68.0		64	a	72.3	_	72.8				
Medium Trucks:	66.3	-	65.7		58.0		59	-	67.1	-	67.3				
Heavy Trucks:	77.:	-	76.0		71.5		72		79.4		79.0				
Vehicle Noise:	78.		77.3		73.2		73.		80.4		80.0				
Centerline Distance	e to Noise Coi	ntour (in feet)													
				70 c	IBA	65	dBA		60 dBA	55	dBA				
			Ldn:		246		529	9	1,140		2,456				
		CI	IEL:		254		54	7	1,179		2,540				

		D-77-108 HIGH		HOIGE	-14-516			•			
Scenari	io: E ne: Haven Av.							: Rich F : 14822	laven Spec	ific Plan	
	ne: Haven Av. nt: n/o Ontario	Donah Dd				JOD I	vumber	: 14822			
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard		oft = 15)		
Average Daily	. ,	13,491 vehicl	es					Autos			
	Percentage:	7.91%				dium Ti		,			
	lour Volume:	1,067 vehicle	!S		He	avy Tru	icks (3+	- Axles)	: 15		
	hicle Speed:	50 mph		1	Vehicle	Mix					
Near/Far La	ne Distance:	62 feet			Veh	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	70.79	6 11.8%	17.5%	86.53%
Bai	rrier Height:	0.0 feet			М	edium 7	rucks:	82.29	6 3.5%	14.3%	2.42%
Barrier Type (0-W		0.0				Heavy 7	rucks:	70.89	6.2%	23.0%	11.05%
Centerline Dis	st. to Barrier:	50.0 feet		-	Noise S	urce F	levatio	ns (in f	eet)		
Centerline Dist.	to Observer:	50.0 feet		i i	10,00 0	Auto		0.000	000		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		2.297			
Observer Height (	'Above Pad):	5.0 feet				/y Truck		8.004	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet		L		•					
	ad Elevation:	0.0 feet		- 4	Lane Eq				feet)		
ı	Road Grade:	0.0%				Auto		9.547			
	Left View:	-90.0 degre				m Truck	-	9.323			
	Right View:	90.0 degre	es		Hea	y Truck	ks: 3	9.345			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fre	snel	Barrier Att		rm Atten
Autos:	70.20	-2.64		1.4	_	-1.20		-4.65		000	0.00
Medium Trucks:	81.00			1.4	-	-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-11.58		1.4	6	-1.20		-5.43	0.0	000	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		NEL
Autos:		7.8	66.5		64.7		-	1.7	69.		69.
Medium Trucks:		3.1	62.5		54.8			3.1	63.9		64.
Heavy Trucks:		1.1	72.8		68.2			9.1	76.		76.
Vehicle Noise:		5.2	74.0		70.0		70	0.0	77.	1	77.
Centerline Distanc	e to Noise C	ontour (in fee	t)	70	-/D.4		dBA	_	60 dBA		- 404
			Ldn:	70 (	149	05	<i>aBA</i> 32		<i>694</i>		dBA
		_	Lan:		149		32		694 718		1,495 1.546
		C	IVĽL.		155		30	,,	/ 10		1,340

	THWA-K	D-77-108 HIGH	TVVAT	TOISE F	KEDIL	HON WC	DEC (	<i>31</i> 1212(	721)		
	o: HY+P								aven Spec	ific Plan	
	e: Haven Av.					Job Nu	mber:	14822			
Road Segmen	t: s/o Riversi	de Dr.									
	SPECIFIC II	NPUT DATA							LINPUT	S	
Highway Data				Si	ite Con	ditions (l	Hard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	46,224 vehicl	es					Autos:	15		
Peak Hour	Percentage:	7.91%				dium Truc			15		
Peak H	our Volume:	3,656 vehicle	s		He	avy Truck	is (3+ A	Axles):	15		
Vel	hicle Speed:	50 mph		V	ehicle	Mix					
Near/Far Lar	ne Distance:	62 feet				icleType		Day	Evening	Night	Daily
Site Data						Au	ıtos:	70.7%	11.8%	17.5%	91.72
Rar	rier Height:	0.0 feet			М	edium Tru	icks:	82.2%	3.5%	14.3%	1.49
Barrier Type (0-W	-	0.0				Heavy Tru	icks:	70.8%	6.2%	23.0%	6.79
Centerline Dis		50.0 feet		N	oise S	ource Ele	vation	s (in fe	et)		
Centerline Dist. 1	to Observer:	50.0 feet				Autos:		000	- ,		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks:		297			
Observer Height (	Above Pad):	5.0 feet				y Trucks:		004	Grade Ad	iustment	: 0.0
Pa	d Elevation:	0.0 feet				•					
	d Elevation:	0.0 feet		La	ane Eq	uivalent l			eet)		
F	Road Grade:	0.0%				Autos:		547			
	Left View:	-90.0 degre	es			m Trucks:		323			
	Right View:	90.0 degre	es		Heav	y Trucks:	39.	345			
FHWA Noise Mode		7									
Vehicle Type	REMEL	Traffic Flow		ance		Road	Fresn	_	Barrier Att		m Atten
Autos:	70.20			1.42		-1.20		-4.65		000	0.00
Medium Trucks:	81.00			1.46		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38			1.46		-1.20		-5.43	0.0	000	0.00
Unmitigated Noise						1 1	1:1-4		Late		
VehicleType Autos:	Leq Peak Ho	ur Leq Da 3.4	72.1	Leq Eve	70.3	Leq N	1gnt 67.3		Ldn 74.	_	NEL 75
Medium Trucks:		3.4 6.3	65.7		70.3 58.0		59.4		67.		75 67
		o.3 7.3	76.0				72.4		79.4		
Heavy Trucks: Vehicle Noise:		9.0	77.8		71.5 74.1		73.7		80.8		79 81
Centerline Distanc	e to Noise C	ontour (in fee	t)								
	50.00 0		,	70 dE	3A	65 d	BA	6	0 dBA	55	dBA
			Ldn:		264		569		1,225		2,64

Friday, October 14, 2022

	FHWA-RI	D-77-108 HIGH	WAY N	IOISE	PREDIC	TION M	ODEL	(9/12/2	(021)						
Road Nar	rio: E+P ne: Haven Av. ent: n/o Ontario	Ranch Rd.						Rich I 14822	Haven Spec	ific Plan	ı				
	SPECIFIC IN	IPUT DATA							L INPUT	s					
Highway Data					Site Con	ditions (	Hard :	= 10, S	oft = 15)						
Average Daily	Traffic (Adt):	40,050 vehicle	es.					Autos							
Peak Hou	Percentage:	7.91%				dium Tru									
	Hour Volume:	3,168 vehicles	3		He	avy Truc	ks (3+	Axles)	: 15						
	ehicle Speed:	50 mph		1	/ehicle l	Wix									
Near/Far La	ane Distance:	62 feet		F	Veh	icleType		Day	Evening	Night	Daily				
Site Data						A	utos:	70.79	6 11.8%	17.5%	95.46%				
Ra	rrier Height:	0.0 feet			M	edium Tr	ucks:	82.29	6 3.5%	14.3%	0.82%				
Barrier Type (0-V		0.0			- 1	Heavy Tr	ucks:	70.89	6.2%	23.0%	3.72%				
	ist. to Barrier:	50.0 feet		١,	Vaina Ca	ource Ele	nucation	na (in f	in nel						
Centerline Dist.	to Observer:	50.0 feet		,	voise sc	Autos			eei)						
Barrier Distance	to Observer:	0.0 feet						2.000							
Observer Height	(Above Pad):	5.0 feet				m Trucks		1.004	Grade Ad	iustman	e n n				
F	ad Elevation:	0.0 feet			Heav	y Trucks	i: 8	1.004	Grade Au	Justinein	. 0.0				
Ro	ad Elevation:	0.0 feet		I	ane Eq	uivalent	Distar	ıce (in	feet)	et)					
	Road Grade:	0.0%				Autos	: 39	.547							
	Left View:	-90.0 degree	es.		Mediu	m Trucks	: 39	.323							
	Right View:	90.0 degree	es.		Heav	y Trucks	39	345							
FHWA Noise Mod	lel Calculation	s													
Vehicle Type	REMEL	Traffic Flow	Dista		Finite		Fres		Barrier Att		rm Atten				
Autos:		2.51		1.42	_	-1.20		-4.65		000	0.000				
Medium Trucks:				1.40	-	-1.20		-4.87		000	0.000				
Heavy Trucks:				1.40		-1.20		-5.43	0.0	000	0.000				
Unmitigated Nois VehicleType	e Levels (with Leg Peak Hou				uation) rening	Leg I	liebt	_	Ldn		NFL.				
Autos:			71.7	Ley El	69.9	Leq	vigrit 66	8	74.		74.7				
Medium Trucks			62.5		54.8		56		63.5		64.0				
Heavy Trucks			72.8		68.2		69		76.	-	76.3				
Vehicle Noise:			75.5		72.2		71		78.		78.7				
Centerline Distan	ce to Noise Co	ontour (in feet)													
	-			70 c		65 0			60 dBA		dBA				
			Ldn:		183		39	-	851		1,834				
		CI	VEL:		191		41	2	887	,	1.912				

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	TION N	IODEL (	9/12/2	021)		
	io: OY ne: Haven Av. nt: n/o Ontario	Ranch Rd.					Name: lumber:		aven Spec	ific Plar	1
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	18,453 vehicle	es					Autos:			
Peak Hour	Percentage:	7.91%				dium Tr					
Peak F	lour Volume:	1,460 vehicle	S		He	avy Tru	cks (3+.	Axles):	15		
Ve	hicle Speed:	50 mph		1	/ehicle	Mix					
Near/Far La	ne Distance:	62 feet		ľ		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-W		0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Di		50.0 feet		٠,	Voice S	ource El	ovation	e (in f	not)		
Centerline Dist.	to Observer:	50.0 feet		· ·	VUISE S	Auto		.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				/y Truck		004	Grade Ad	liustman	t: 0.0
P	ad Elevation:	0.0 feet								justinen	i. 0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalent	Distan	ce (in :	feet)		
	Road Grade:	0.0%				Auto	s: 39	.547			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 39	.323			
	Right View:	90.0 degree	es		Hea	y Truck	s: 39	.345			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fresi		Barrier Att		rm Atten
Autos:	70.20			1.42	_	-1.20		-4.65		000	0.000
Medium Trucks:				1.46	-	-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-10.22		1.46	6	-1.20		-5.43	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leg Ev	/ening	Leq	Night		Ldn	C	NEL
Autos:			67.9		66.1		63.		70.	5	70.9
Medium Trucks:	64	1.4	63.8		56.1		57.	5	65.	3	65.4
Heavy Trucks:			74.1		69.6		70.	-	77.		77.7
Vehicle Noise:	76	5.6	75.4		71.3		71.	4	78.	5	78.7
Centerline Distant	ce to Noise Co	ontour (in feet,	)								
				70 c	iBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:		184		397	7	855	5	1,842
		C	NEL:		191		410	)	884	ļ.	1.905

	o: HY e: Haven Av.	D-77-108 HIGH		10.02	- KEDIC	Project		Rich H	laven Spec	ific Plan	
Road Segmen	t: n/o Ontario	Ranch Rd.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				5	ite Con	aitions	(Hara :		oft = 15)		
Average Daily	. ,	24,005 vehicl	es					Autos:			
Peak Hour I		7.91%				dium Tr	,	,			
	our Volume:	1,899 vehicle	S		He	avy Tru	cks (3+	Axles).	15		
	nicle Speed:	50 mph		ν	ehicle l	Vlix					
Near/Far Lar	ne Distance:	62 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Rar	rier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-Wa		0.0			-	Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dis		50.0 feet		-							
Centerline Dist. t		50.0 feet		N	loise So				eet)		
Barrier Distance t	o Observer:	0.0 feet				Auto		.000			
Observer Height (/		5.0 feet				m Truck		.297			
Pa	d Elevation:	0.0 feet			Heav	ry Truck	:s: 8	.004	Grade Ad	justmen	0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	nce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 39	.547			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 39	.323			
	Right View:	90.0 degre			Heav	y Truck	s: 39	.345			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	-0.14		1.42	!	-1.20		-4.65	0.0	000	0.000
		-15.67		1.46	i	-1.20		-4.87	0.0	000	0.000
Medium Trucks:	81.00							-5.43	0.0	000	0.000
Medium Trucks: Heavy Trucks:	81.00 85.38	-9.08		1.46	i	-1.20		-5.43	0.0		
Heavy Trucks:	85.38					-1.20		-5.43	0.0		
Heavy Trucks:  Unmitigated Noise  VehicleType	85.38 Levels (with Leq Peak Hou	out Topo and	barrier		<b>iation)</b> ening		Night		Ldn		NEL
Heavy Trucks: Unmitigated Noise	85.38	out Topo and	barrier	attenu	ıation)		Night 64		Ldn 71.6	3	
Unmitigated Noise VehicleType Autos: Medium Trucks:	85.38  Levels (with  Leq Peak Hou  70  65	out Topo and ir Leq Day	69.0 65.0	attenu	ening 67.2		64 58	.2	Ldn 71.6	6 4	72.0
Heavy Trucks:  Unmitigated Noise  VehicleType  Autos:	85.38 <b>Levels (with</b> Leq Peak Hou	out Topo and ir Leq Day	barrier / 69.0	attenu	uation) ening 67.2		64	.2	Ldn 71.6	6 4	72.0 66.5
Unmitigated Noise VehicleType Autos: Medium Trucks:	85.38  Levels (with  Leq Peak Hou  70  65	out Topo and Ir Leq Day 1.3 1.6 1.6	69.0 65.0	attenu	ening 67.2		64 58	.2 .6	Ldn 71.6	6 4 6	72.0 66.9 78.0
Heavy Trucks:  Unmitigated Noise  VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	85.38  Levels (with  Leq Peak Hou  70  65  76	out Topo and Ir Leq Day 1.3 1.6 1.6 1.8	69.0 65.0 75.3	attenu Leq Ev	67.2 57.3 70.8 72.5	Leq	64 58 71 72	.2 .6 .6	Ldn 71.66.78.6	6 4 6 6	72.0 66.9 78.8 79.9
Heavy Trucks:  Unmitigated Noise  VehicleType Autos:  Medium Trucks: Heavy Trucks:	85.38  Levels (with  Leq Peak Hou  70  65  76	out Topo and Ir Leq Day 1.3 1.6 1.6 1.8	barrier / 69.0 65.0 75.3 76.5	attenu	ening 67.2 57.3 70.8 72.5	Leq	64 58 71 72 dBA	2 .6 .6 .5	Ldn 71.6 66 78.6 79.6	5 4 5 5	72.0 66.5 78.8 79.9
Heavy Trucks:  Unmitigated Noise  VehicleType Autos:  Medium Trucks: Heavy Trucks: Vehicle Noise:	85.38  Levels (with  Leq Peak Hou  70  65  76	out Topo and ir Leq Da 3. 6. 6. 7. 8 ontour (in feet	69.0 65.0 75.3	attenu Leq Ev	67.2 57.3 70.8 72.5	Leq	64 58 71 72	.2 .6 .6 .5	Ldn 71.66.78.6	55	72.0 66.9 78.8 79.9

Autos: 70.7%   11.8%   17.5%   94.		FHWA-RI	D-77-108 HIGH	łWAY	NOIS	E PR	EDIC	TION M	IODEL	(9/12/2	021)		
	Road Name	e: Haven Av.	Ranch Rd.									cific Plan	ı
Average Daily Traffic (Adt):		PECIFIC IN	IPUT DATA									s	
Peak Hour Percentage:	Highway Data					Site	Con	ditions	(Hard =	= 10, Sc	oft = 15)		
	Average Daily 1	raffic (Adt):	45,012 vehicl	es									
Vehicle Speed: Near/Far Lane Distance: 62 feet   Vehicle Mix   Vehicle Type   Day   Evening   Night   Day   Power   Night   Day   Day   Night   Day									,				
Near/Far Lane Distance:   62 feet     Vehicle Nye   Day   Evening   Night   Day   Site Data     Number   Near Processing   Night   Day   Night   Night   Day   Night   Night			-,	:S			He	avy Truc	cks (3+	Axles):	15		
Site Data						Veh	icle l	Wix					
Barrier Height:   0.0   feet   Medium Trucks:   8.2.2%   3.5%   14.3%   0.1	Near/Far Lan	e Distance:	62 feet				Veh	icleType		Day	Evening	Night	Daily
Barrier Trype   C-Vall, 1-Berm   0.0 feet   50.0 feet   50.0 feet   Centerline Dist. to Diserver: 50.0 feet   Solution    Site Data							-	Autos:	70.7%	11.8%	17.5%	94.489	
Barrier Type (0-Wall, 1-Berm): 0.0   Centerline Dist. to Deserver: 50.0 feet   So.0 feet   Centerline Dist. to Observer: 0.0 feet   Barrier Distance to Observer: 0.0 feet   Centerline Dist. to Observer: 0.0 feet   Centerline Distance to Obs	Ban	rier Heiaht:	0.0 feet			1	M	edium T	rucks:	82.2%	3.5%	14.3%	0.999
Centerline Dist. to Observer:   50.0 feet			0.0				1	Heavy T	rucks:	70.8%	6.2%	23.0%	4.53
Centerline Dist. to Observer:   50.0 feet   Barrier Distance to Observer:   50.0 feet   Medium Trucks:   2.297   Heavy Trucks:   80.04   Grade Adjustment:   0.0 feet   Pad Elevation:   0.0 feet   Road Grade:   0.0 feet   Road Grade:   0.0 feet   Left View:   90.0 degrees   Right View:   90.0 degrees   Heavy Trucks:   39.323   Heavy Trucks:   39.345   Heavy Trucks:			50.0 feet			Nois	se So	ource El	evation	ıs (in f	eet)		
Observer Height (Above Pad):											,		
Pad Elevation:	Barrier Distance t	o Observer:				N	1ediu	m Truck	s: 2	.297			
Road Elevation:		,					Heav	v Truck	s: 8	.004	Grade Ad	ljustmen	t: 0.0
Road Grade:						_							
Left View:						Lan	e Eq				feet)		
Right View: 90,0 degrees   Heavy Trucks: 39,345	F												
FHWA Noise Model Calculations			-										
VehicleType		Right View:	90.0 degre	es			неач	y Iruck	s: 39	1.345			
Autos: 70.20   2.97   1.42   -1.20   -4.65   0.000   0													
Medium Trucks:   81.00   -16.81   1.46   -1.20   -4.87   0.000   0     Heavy Trucks:   85.38   -10.22   1.46   -1.20   -5.43   0.000   0     Unmitigated Noise Levels (without Topo and barrier attenuation)   Vehicle Type   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL     Autos:   73.4   72.1   70.4   67.3   74.7     Medium Trucks:   64.4   63.8   56.1   57.5   65.3     Heavy Trucks:   75.4   74.1   69.6   70.5   77.5     Vehicle Noise:   77.7   76.5   73.1   72.3   79.5     Centerline Distance to Noise Contour (in feet)	-,-					_	inite		Fres				
Heavy Trucks: 85.38													0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         73.4         72.1         70.4         67.3         74.7           Medium Trucks:         64.4         63.8         56.1         57.5         65.3           Heavy Trucks:         75.4         74.1         69.6         70.5         77.5           Vehicle Noise:         77.7         76.5         73.1         72.3         79.5           Centerline Distance to Noise Contour (in feet)													0.00
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         73.4         72.1         70.4         67.3         74.7           Medium Trucks:         64.4         63.8         56.1         57.5         65.3           Heavy Trucks:         75.4         74.1         69.6         70.5         77.5           Vehicle Noise:         77.7         76.5         73.1         72.3         79.5           Centerline Distance to Noise Contour (in feet)								-1.20		-5.43	0.	000	0.00
Autos:         73.4         72.1         70.4         67.3         74.7           Medium Trucks:         64.4         63.8         56.1         57.5         65.3           Heavy Trucks:         75.4         74.1         69.6         70.5         77.5           Vehicle Noise:         77.7         76.5         73.1         72.3         79.5           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA		•		_				100	Night	_	l dn		NEI
Medium Trucks:         64.4         63.8         56.1         57.5         65.3           Heavy Trucks:         75.4         74.1         69.6         70.5         77.5           Vehicle Noise:         77.7         76.5         73.1         72.3         79.5           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA	-,-				Logi		_	_		3			75
Heavy Trucks:   75.4   74.1   69.6   70.5   77.5   Vehicle Noise:   77.7   76.5   73.1   72.3   79.5										-			65
Vehicle Noise:         77.7         76.5         73.1         72.3         79.5           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA		-								-		-	77
70 dBA 65 dBA 60 dBA 55 dBA													79
	Centerline Distance	e to Noise Co	ontour (in feet	t)									
					70	dBA		65	dBA		60 dBA	55	dBA
Ldn: 215 463 999 2,				Ldn:			215		46	3	999	)	2,15
CNEL: 224 482 1,039 2,			С	NEL:			224		48	2	1,039	)	2,23

Friday, October 14, 2022

	FHWA-RI	D-77-108 HIGH	WAY	NOIS	E PREDIC	TION M	ODEL	(9/12/2	021)		
Road Na	ario: HY+P me: Haven Av. ent: n/o Ontario	Ranch Rd.						Rich H 14822	laven Spec	cific Plan	ı
SITE Highway Data	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	s	
Average Dail Peak Hou Peak	y Traffic (Adt): ir Percentage: Hour Volume: 'ehicle Speed:	50,564 vehicle 7.91% 4,000 vehicle 50 mph			Ме	dium Tru avy Truc	icks (2	Autos. Axles).	15 15		
Near/Far L	ane Distance:	62 feet				icleType	T	Day	Evening	Night	Dailv
Site Data B Barrier Type (0-	arrier Height:	0.0 feet 0.0			М			70.79 82.29 70.89	11.8% 3.5%	17.5% 14.3% 23.0%	1.15%
	Dist. to Barrier:	50.0 feet					-				
Centerline Dis Barrier Distance Observer Height	enterline Dist. to Observer: 50.0 feet arrier Distance to Observer: 0.0 feet server Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet					Autos m Trucks ry Trucks	i: (	0.000 0.297 0.004	eet) Grade Ad	ljustmen	t: 0.0
R	oad Flevation:	0.0 feet			Lane Eq	uivalent	Distar	ice (in	feet)		
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Autos m Trucks ry Trucks	: 39	0.547 0.323 0.345			
FHWA Noise Mo	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos	70.20	3.44		1.4	12	-1.20		-4.65	0.	000	0.000
Medium Trucks	81.00	-15.67		1.4	16	-1.20		-4.87	0.	000	0.000
Heavy Trucks	85.38	-9.08		1.4	16	-1.20		-5.43	0.	000	0.000
Unmitigated Nois			barri	er atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq I			Ldn		NEL
Autos			72.6		70.8		67		75.	_	75.6
Medium Trucks			65.0		57.3		58		66.		66.5
Heavy Trucks Vehicle Noise			75.3 77.4		70.8 73.9		71 73		78. 80.	-	78.8 80.7
Centerline Distar	nce to Noise Co	ontour (in feet	)								
Contentine Distar	10 110136 00	our (iii reet		70	dBA	65 c	iBA		60 dBA	55	dBA
			Ldn:		248		53	4	1,151	· ·	2,481
		C	NEL:		258		55	6	1,197	7	2,579

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION N	IODEL (	9/12/2	021)		
	io: E ne: Mill Creek i nt: s/o Chino i						Name: lumber:		aven Spec	ific Plan	
	SPECIFIC IN	IPUT DATA			0:4- 0				L INPUT	s	
Highway Data					Site Con	aitions					
Average Daily	. ,	2,866 vehicle	es					Autos:			
	Percentage:	7.91%					ucks (2 )	/			
	lour Volume:	227 vehicle	s		He	avy Tru	cks (3+ )	Axles):	15		
	hicle Speed:	45 mph		f	Vehicle i	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleType	•	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Ва	rrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-V		0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Di	st. to Barrier:	44.0 feet		ŀ	Noise So	urce F	lovation	e (in fa	not)		
Centerline Dist.	to Observer:	44.0 feet		F	110/36 00	Auto		000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				ry Truck		004	Grade Ad	iustmen	t· 0.0
P	ad Elevation:	0.0 feet								,000,77077	0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	t Distan	ce (in :	feet)		
	Road Grade:	0.0%				Auto		460			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40.	241			
	Right View:	90.0 degre	es		Heav	y Truck	s: 40.	262			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow		stance		Road	Fresr	_	Barrier Att		rm Atten
Autos:	68.46			1.2		-1.20		-4.61		000	0.000
Medium Trucks:				1.3		-1.20		-4.87		000	0.000
Heavy Trucks:	84.25	-17.85		1.3	81	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois			barri	er atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn	_	NEL
Autos:		0.6	58.3		56.6		53.	-	61.0	-	61.4
Medium Trucks:		5.1	54.5		46.8		48.		55.9	-	56.1
Heavy Trucks:		3.5	65.2		60.7		61.6		68.0		68.8
Vehicle Noise:		7.6	66.3		62.2		62.4	1	69.	5	69.7
Centerline Distan	ce to Noise Co	ontour (in feet	)					_		_	
			L	70	dBA	65	dBA		60 dBA		dBA
		_	Ldn:		41		87		188		406
		C	NEL:		42		90		195		420

	e: Mill Creek A						t Name. Number		aven Spec	ific Plan	
Road Segmer	nt: s/o Chino A	iV.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				3	ite Cor	iaitions	(Hara		oft = 15)		
Average Daily	. ,	3,164 vehicl	es					Autos:			
	Percentage:	7.91%				edium Ti		,			
	lour Volume:	250 vehicle	S		He	eavy Tru	icks (3+	Axles):	15		
	hicle Speed:	45 mph		ν	ehicle	Mix					
Near/Far La	ne Distance:	36 feet			Ver	icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Rai	rrier Height:	0.0 feet			M	edium 7	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-W		0.0				Heavy 7	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dis	st. to Barrier:	44.0 feet			loisa S	ource E	levatio	ne (in f	not)		
Centerline Dist.	to Observer:	44.0 feet			0/36 0	Auto		0.000	,		
Barrier Distance	to Observer:	0.0 feet			A de elle	m Truck		2.297			
Observer Height (	Above Pad):	5.0 feet						3.004	Grade Ad	iustman	- 0.0
Pá	ad Elevation:	0.0 feet			неа	vy Truck	(S: 6	3.004	Grade Au	Justinein	. 0.0
Ros	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distai	nce (in	feet)		
I	Road Grade:	0.0%				Auto	os: 40	0.460			
	Left View:	-90.0 degre	es		Mediu	m Truck	ks: 40	).241			
	Right View:	90.0 degre	es		Hea	vy Truck	ks: 4(	0.262			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier Att	en Be	rm Atten
Autos:	68.46	-8.48		1.28		-1.20		-4.61	0.0	000	0.00
Medium Trucks:	79.45	-24.01		1.31		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-17.42		1.31		-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	ıation)						
VehicleType	Leq Peak Hou	ır Leq Da	V	Leq Ev	ening	Leq	Night		Ldn	С	NEL
Autos:	60	.1	58.8		57.0		54	.0	61.4	4	61.
Medium Trucks:	55	.5	54.9		47.2		48	.6	56.4	4	56.
Heavy Trucks:	66	.9	65.7		61.1		62	.0	69.0	)	69.
Vehicle Noise:	68	.0	66.8		62.7		62	.8	69.9	9	70.
Centerline Distanc	ce to Noise Co	ontour (in fee	)								
			L	70 d		65	dBA		60 dBA		dBA
			Ldn:		43			3	201		434
		C	NEL:		45		9	7	208	i	448

	FHWA-R								•			
Scenario Road Name Road Segmen	e: Mill Creek								:: Rich F :: 14822	laven Spec	cific Pla	n
	PECIFIC II	NPUT	DATA							L INPUT	s	
Highway Data						Site Co	ondition	s (Hard	= 10, S	oft = 15)		
Average Daily T	raffic (Adt):	9,2	07 vehicle	:S					Autos.	15		
Peak Hour I	Percentage:	7.9	1%				∕ledium 1		/			
Peak Ho	our Volume:	72	8 vehicles	5		F	Heavy Tr	ucks (3	+ Axles).	15		
	icle Speed:		5 mph			Vehicle	e Mix					
Near/Far Lan	e Distance:	3	6 feet			Ve	ehicleTyp	е	Day	Evening	Night	Daily
Site Data								Autos:	70.79	6 11.8%	17.59	6 95.81
Bar	rier Height:	(	.0 feet			1	Medium	Trucks:	82.29	6 3.5%	14.39	6 0.75
Barrier Type (0-Wa	-		0.0				Heavy	Trucks:	70.8%	6.2%	23.09	6 3.44
Centerline Dis	t. to Barrier:	44	.0 feet			Noise	Source L	Elevatio	ns (in f	eet)		
Centerline Dist. t	o Observer:	44	.0 feet				Aut		0.000	,		
Barrier Distance t	o Observer:	-	.0 feet			Med	ium Truc		2.297			
Observer Height (A	,	-	i.0 feet			He	avy Truc	ks:	8.004	Grade Ad	justmer	nt: 0.0
	d Elevation:	-	.0 feet									
	d Elevation:	-	.0 feet			Lane E	quivale			feet)		
F	Road Grade:	0.0					Aut		0.460			
	Left View:		0.0 degree				ium Truc		0.241			
	Right View:	90	).0 degree	es.		не	avy Truc	KS: 4	0.262			
FHWA Noise Mode	l Calculation	าร										
VehicleType	REMEL		fic Flow	Di	stance	_	te Road		snel	Barrier Att		erm Atter
Autos:	68.46	-	-3.40			28	-1.20		-4.61		000	0.00
Medium Trucks:	79.45	-	-24.44			31	-1.20		-4.87		000	0.00
Heavy Trucks:	84.25		-17.85			31	-1.20	)	-5.50	0.	000	0.00
Unmitigated Noise				-					-		1 .	21/5/
VehicleType Autos:	Leq Peak Ho	5.1	Leq Day	63.9	Leq	Evening 62		q Night	9.0	Ldn 66		CNEL 66
Medium Trucks:	-	5.1 5.1		54.5		46		-	3.1	55.	-	56
Heavy Trucks:	-	5. i 6.5		65.2		60			1.6	68.	-	68
Vehicle Noise:		9.1		67.8		64		_	3.6	70.	-	71
Centerline Distance	e to Noise C	onto	r (in feet)	,								
Diotano			1000)		70	dBA	65	5 dBA		60 dBA	5	5 dBA
				Ldn:			0	- 1	07	231		49
				Luii.		0	U		) [	23		

Friday, October 14, 2022

Scenario: OY+P				
Road Name: Mill Creek Av. Road Segment: s/o Chino Av.		iect Name: Rich I b Number: 14822		Plan
SITE SPECIFIC INPUT DATA		NOISE MOD		
Highway Data	Site Condition	ns (Hard = 10, S	oft = 15)	
Average Daily Traffic (Adt): 9,505 vehicles		Autos		
Peak Hour Percentage: 7.91%		Trucks (2 Axles)		
Peak Hour Volume: 752 vehicles	Heavy 1	Trucks (3+ Axles)	): 15	
Vehicle Speed: 45 mph	Vehicle Mix			
Near/Far Lane Distance: 36 feet	VehicleTy	ype Day	Evening N	ight Daily
Site Data	· ·	Autos: 70.79	% 11.8% 1	7.5% 95.52%
Barrier Height: 0.0 feet	Mediun	n Trucks: 82.29	% 3.5% 1	4.3% 0.81%
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy	y Trucks: 70.89	% 6.2% 2	3.68%
Centerline Dist. to Barrier: 44.0 feet	Noise Source	Elevations (in	feet)	
Centerline Dist. to Observer: 44.0 feet		utos: 0.000	,	
Barrier Distance to Observer: 0.0 feet	Medium Tri			
Observer Height (Above Pad): 5.0 feet	Heavy Tru		Grade Adjus	tment: 0.0
Pad Elevation: 0.0 feet				
Road Elevation: 0.0 feet		ent Distance (in	feet)	
Road Grade: 0.0%		utos: 40.460		
Left View: -90.0 degrees	Medium Tru	10.211		
Right View: 90.0 degrees	Heavy Tru	ucks: 40.262		
FHWA Noise Model Calculations				
VehicleType REMEL Traffic Flow Distance			Barrier Atten	Berm Atten
	1.28 -1.2			
	1.31 -1.2			
	1.31 -1.2	20 -5.50	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier at  VehicleType   Leq Peak Hour   Leq Day   Lei		eg Night	l dn	CNEL
Autos: 65.3 64.0	62.2	59.2	66.6	67.0
Medium Trucks: 55.5 54.9	47.2	48.6	56.4	56.5
Heavy Trucks: 66.9 65.7	61.1	62.0	69.0	69.2
Vehicle Noise: 69.4 68.1	64.8	64.0	71.1	71.4
Centerline Distance to Noise Contour (in feet)				
		65 dBA	60 dBA	55 dBA
		113	243	523
Ldn: CNEL:	52 55	117	253	545

	FHWA-RD	)-77-108 HIGH	WAY	NOISE	PREDIC	TION N	IODEL	(9/12/2	021)		
	io: HY ne: Mill Creek A nt: s/o Chino A						Name: lumber:		aven Spec	cific Plar	1
SITE :	SPECIFIC IN	PUT DATA			Site Con				L INPUT	S	
					Site Con	uitions	(паги				
Average Daily	. ,	7,391 vehicle	es					Autos:	15		
	Percentage:	7.91%				dium Tr					
	lour Volume:	585 vehicles	5		не	avy Tru	CKS (3+	Axies):	15		
	hicle Speed:	45 mph			Vehicle I	Иiх					
Near/Far La	ne Distance:	36 feet			Veh	icleТуре	•	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.59	6 86.53%
Bai	rrier Height:	0.0 feet			M	edium T	rucks:	82.2%	3.5%	14.39	6 2.42%
Barrier Type (0-W		0.0			1	leavy T	rucks:	70.8%	6.2%	23.09	6 11.05%
Centerline Di		44.0 feet									
Centerline Dist.		44.0 feet			Noise Sc				eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height (	Above Pad):	5.0 feet				n Truck		.297			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	ljustmen	t: 0.0
	ad Elevation:	0.0 feet		ľ	Lane Eq	uivalen	t Distar	ce (in	feet)		
	Road Grade:	0.0%		-		Auto	s: 40	.460			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 40	.241			
	Right View:	90.0 degree			Heav	y Truck	s: 40	.262			
FHWA Noise Mode	el Calculation:	S									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier At	ten Be	rm Atten
Autos:	68.46	-4.80		1.2	28	-1.20		-4.61	0.	000	0.000
Medium Trucks:	79.45	-20.33		1.3	31	-1.20		-4.87	0.	000	0.000
Heavy Trucks:	84.25	-13.74		1.3	31	-1.20		-5.50	0.	000	0.000
Unmitigated Noise			barri	er attei	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leq E	vening	Leq	Night		Ldn	(	NEL
Autos:	63	.7	62.5		60.7		57	.6	65.	1	65.5
Medium Trucks:	59	.2	58.6		50.9		52	-	60.	-	60.2
Heavy Trucks:	70	.6	69.4		64.8		65	.7	72.	7	72.9
Vehicle Noise:	71	.7	70.5		66.4		66	.5	73.	6	73.8
Centerline Distance	ce to Noise Co	ntour (in feet)									
				70	dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:		76		16	5	354	1	764
		CI	VEL:		79		17	0	366	3	789

	FHWA-KL	-77-108 HIGH	IVVAT	NOISE	PREDIC	, I IUN W	IODEL	(9/12/2	021)		
Scenario									laven Spec	cific Plan	
	e: Milliken Av.					Job N	lumber	14822			
Road Segmen	nt: n/o Riversid	le Dr.									
	SPECIFIC IN	PUT DATA			011 0				L INPUT	S	
Highway Data					Site Con	ditions	(Hard				
Average Daily	. ,	19,818 vehicle	es					Autos:			
	Percentage:	7.91%				edium Tr		,			
Peak Ho	our Volume:	1,568 vehicles	S		He	eavy Tru	cks (3+	Axles):	15		
	hicle Speed:	55 mph		-	Vehicle i	Mix					
Near/Far Lar	ne Distance:	80 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						,	Autos:	70.7%	11.8%	17.5%	86.53%
Bar	rier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-Wa		0.0			1	Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dis	st. to Barrier:	60.0 feet		ŀ	Noise So	ource Fl	lovatio	ne (in f	oot)		
Centerline Dist. t	to Observer:	60.0 feet		1	140/36 00	Auto		0.000	ccij		
Barrier Distance t	to Observer:	0.0 feet			Modiu	m Truck	,	2.297			
Observer Height (/	Above Pad):	5.0 feet				vy Truck		3.004	Grade Ad	liustman	+ n n
Pa	d Elevation:	0.0 feet			rical	vy IIUCK	S. (	5.004	0/440/14	, ao an ao an	0.0
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent	t Dista	nce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 4	5.000			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 4	4.803			
	Right View:	90.0 degree	es		Heav	vy Truck	s: 4	1.822			
FHWA Noise Mode	l Calculations	3									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	ten Be	rm Atten
Autos:	71.78	-1.38		0.5	58	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	82.40	-16.92		0.6		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-10.32		0.6	31	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise		<del></del>								_	
	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL
Autos:	69	-	68.5		66.7		63		71.		71.5
Medium Trucks:	64	-	64.3		56.6		57		65.	•	65.8
Heavy Trucks:	75.		74.2		69.7		70		77.		77.
Vehicle Noise:	76		75.6		71.6		71	.ნ	78.	/	78.9
Centerline Distanc	e to Noise Co	ntour (in feet)	)	70	dBA	65	dBA		60 dBA		i dBA
			Ldn:	70	ава 227	05	<i>aba</i> 48		1.054		2.271
			NEL:		235		48 50	-	1,054		2,271
		Ci	VLL.		233		30	,	1,091		2,001

		D-77-108 HIGH	HWAY	NOISE	PREDIC						
	o: HY+P								aven Spec	ific Plan	
	e: Mill Creek /					Job Ni	umber:	14822			
Road Segmen	it: s/o Chino F	W.									
SITE S	SPECIFIC IN	IPUT DATA			Cita Car	N ditions			L INPUT	S	
					Site Con	uilions (					
Average Daily	. ,	13,732 vehicl	es					Autos:	15		
	Percentage:	7.91%				dium Tru		,	15		
	our Volume:	1,086 vehicle	es .		He	avy Truc	ks (3+ .	Axles):	15		
Vel	hicle Speed:	45 mph		-	Vehicle	Mix					
Near/Far Lar	ne Distance:	36 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.7%	11.8%	17.5%	92.75%
Rar	rier Heiaht:	0.0 feet			М	edium Tr	ucks:	82.2%	3.5%	14.3%	1.30%
Barrier Type (0-W		0.0				Heavy Tr	ucks:	70.8%	6.2%	23.0%	5.95%
Centerline Dis	. ,	44.0 feet									
Centerline Dist		44.0 feet		Ľ	Noise S	ource Ele			eet)		
Barrier Distance		0.0 feet				Autos		000			
Observer Height (		5.0 feet				m Trucks		297			
	d Flevation:	0.0 feet			Hea	y Trucks	8.	004	Grade Ad	ustment	: 0.0
Roa	d Flevation:	0.0 feet		1	Lane Eq	uivalent	Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Autos	: 40	460			
	Left View:	-90.0 degre	es		Mediu	m Trucks	: 40	241			
	Right View:	90.0 degre	es		Hea	y Trucks	: 40	262			
FHWA Noise Mode	l Calculation	•									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresi	nel .	Barrier Att	en Bei	m Atten
Autos:	68.46	-1.81		1.2		-1.20	1 1001	-4.61		000	0.00
Medium Trucks:	79.45			1.3	-	-1.20		-4.87		000	0.00
Heavy Trucks:	84.25	-13.74		1.3		-1.20		-5.50		000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Da	у	Leq E	vening	Leq I	Vight		Ldn	C	NEL
Autos:	66	5.7	65.5		63.7		60.	3	68.1	1	68.
Medium Trucks:	59	0.2	58.6		50.9		52.	3	60.0	)	60.
Heavy Trucks:	70	).6	69.4		64.8		65.	7	72.7	7	72.
Vehicle Noise:	72	2.3	71.1		67.4		67.	)	74.2	2	74.
Centerline Distanc	e to Noise Co	ontour (in fee	t)								
			L	70 (	dBA	65 (			60 dBA		dBA
		_	Ldn:		83		179		387		833
			NEL:		86		186		401		864

Friday, October 14, 2022

	FHWA-RD-	77-108 HIGHV	VAY NO	ISE PREDI	CTION M	ODEL (9/12	/2021)	
	o: E+P e: Milliken Av. t: n/o Riverside	e Dr.			.,	Name: Rich umber: 148	ı Haven Speci 22	fic Plan
SITE S	PECIFIC INF	UT DATA			N	OISE MOI	DEL INPUTS	3
Highway Data				Site Co	nditions	(Hard = 10,	Soft = 15)	
Average Daily 1 Peak Hour F Peak Ho	Percentage:	33,876 vehicle: 7.91% 2,680 vehicles	3			Auto ucks (2 Axle cks (3+ Axle	s): 15	
Veh	icle Speed:	55 mph		Vehicle	Mix			
Near/Far Lan	e Distance:	80 feet			hicleType	Day	Evening	Night Daily
Site Data						Autos: 70.		17.5% 91.28%
Rari	rier Height:	0.0 feet		- 1	∕ledium T	rucks: 82.	2% 3.5%	14.3% 1.55%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy T	rucks: 70.8	8% 6.2%	23.0% 7.17%
Centerline Dis		60.0 feet		Noise S	Source El	evations (in	feet)	
	o Observer: Above Pad): d Elevation:	0.0 feet 0.0 feet 5.0 feet 0.0 feet		Hea	Auto um Truck avy Truck	s: 2.297 s: 8.004		ustment: 0.0
	d Elevation:	0.0 feet		Lane E		Distance (i	n feet)	
R	Road Grade:	0.0%			Auto			
	Left View: Right View:	-90.0 degrees			um Truck avy Truck			
FHWA Noise Mode	I Calculations							
VehicleType	REMEL	Traffic Flow	Distan	ce Finit	e Road	Fresnel	Barrier Atte	en Berm Atten
Autos:	71.78	1.18		0.58	-1.20	-4.6	9 0.0	00 0.000
Medium Trucks:	82.40	-16.52		0.61	-1.20	-4.8	88 0.0	0.000
Heavy Trucks:	86.40	-9.87		0.61	-1.20	-5.3	34 0.0	0.000
Unmitigated Noise	Levels (withou	ut Topo and b	arrier a	ttenuation	)			
VehicleType I	Leq Peak Hour	Leq Day	Le	eq Evening	Leq	Night	Ldn	CNEL
Autos:	72.3	3 7	1.1	69.	3	66.2	73.7	74.1
Medium Trucks:	65.3	3 6	4.7	57.	0	58.3	66.1	66.2
Heavy Trucks:	75.9	9 7	4.7	70.	1	71.0	78.0	78.2
Vehicle Noise:	77.8	3 7	6.5	72.	9	72.4	79.6	79.8
Centerline Distance	e to Noise Cor	tour (in feet)		70 101			00 104	55 (0.4
			. L	70 dBA		dBA	60 dBA	55 dBA
		_	dn:	261		562	1,211	2,608
		CN	EL:	271	l	583	1,257	2,707

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION N	IODEL (	9/12/20	021)		
Scenario: Road Name: Road Segment:	Milliken Av.						Name: lumber:		aven Spec	ific Plan	
SITE SP	ECIFIC IN	IPUT DATA					IOISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, Sc	ft = 15)		
Average Daily Tra	ffic (Adt):	22,416 vehicle	es					Autos:	15		
Peak Hour Pe	centage:	7.91%			Me	dium Tr	ucks (2)	Axles):	15		
Peak Hour	Volume:	1,773 vehicle	s		He	avy Tru	cks (3+ )	Axles):	15		
Vehici	e Speed:	55 mph			/ehicle	Miv					
Near/Far Lane	Distance:	80 feet		H'		icleType		Dav	Evening	Night	Dailv
Site Data							Autos:	70.7%		17.5%	. ,
	r Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.429
Barrier Type (0-Wall,		0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.059
Centerline Dist. t	,	60.0 feet		ļ.							
Centerline Dist. to 0		60.0 feet		1	Voise So				eet)		
Barrier Distance to 0	Observer:	0.0 feet			A de elle	Auto m Truck		000 297			
Observer Height (Abi	ove Pad):	5.0 feet						297 004	Crada Ad	iuatmant	
Pad I	Elevation:	0.0 feet			near	y Truck	s: 8.	004	Grade Ad	usuneni	0.0
Road I	Elevation:	0.0 feet		1	Lane Eq	uivalen	Distan	ce (in i	feet)		
Roa	d Grade:	0.0%				Auto	s: 45.	000			
L	.eft View:	-90.0 degre	es		Mediu	m Truck	s: 44.	803			
Ri	ght View:	90.0 degre	es		Heav	y Truck	s: 44.	822			
FHWA Noise Model C	alculation	s									
	REMEL	Traffic Flow		stance		Road	Fresr	_	Barrier Att		m Atten
Autos:	71.78	-0.85		0.5	-	-1.20		-4.69		000	0.00
Medium Trucks:	82.40	-16.38		0.6		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-9.79		0.6	1	-1.20		-5.34	0.0	000	0.00
Inmitigated Noise Le											
-,-	q Peak Hoι			Leq E		Leq	Night		Ldn	-	VEL
Autos:	70		69.0		67.3		64.2	_	71.6	-	72.
Medium Trucks:	65		64.8		57.1		58.	-	66.2	-	66.
Heavy Trucks: Vehicle Noise:	76 77		74.7 76.1		70.2 72.1		71.		78.1 79.2		78. 79.
					12.1		12.		19.2	<u> </u>	79.
Centerline Distance t	o Noise Co	ontour (in feet	)	70 (	iBA	65	dBA	1 6	0 dBA	55	dBA
			Ldn:	,,,,	247		531		1.145	1	2.466

Scenari Road Nam Road Segmen	e: Milliken Av.						t Name: lumber:		aven Spec	ific Plan	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Cor	ditions	(Hard =				
Average Daily	Traffic (Adt):	53,343 vehicle	es					Autos:			
Peak Hour	Percentage:	7.91%					rucks (2	,			
Peak H	our Volume:	4,219 vehicle	S		He	avy Tru	icks (3+	Axles):	15		
	nicle Speed:	55 mph		١	/ehicle	Mix					
Near/Far Lar	ne Distance:	80 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Par	rier Heiaht:	0.0 feet			М	edium 7	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-W		0.0				Heavy 7	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dis	. ,	60.0 feet		-							
Centerline Dist. 1		60.0 feet		,	Voise S		levation		eet)		
Barrier Distance t		0.0 feet				Auto		.000			
Observer Height (		5.0 feet				m Truck	–	.297			
	d Elevation:	0.0 feet			Hea	y Truck	rs: 8	.004	Grade Ad	ustment	0.0
	d Flevation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 45	.000	-		
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 44	.803			
	Right View:	90.0 degre			Hea	y Truck	(s: 44	.822			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	71.78	2.92		0.58	3	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	82.40	-12.62		0.61	1	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-6.02		0.61	1	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou			Leq Ev			Night		Ldn		VEL
Autos:	74		72.8		71.0		68.		75.4	•	75.8
Medium Trucks:	69		68.6		60.9		62.	_	70.0		70.
Heavy Trucks:	79		78.5		74.0		74.	-	81.9		82.0
Vehicle Noise:	81	.1	79.9		75.9		75.	9	83.0	)	83.2
Centerline Distanc	e to Noise Co	ontour (in feet	)								
			L	70 a		65	dBA		60 dBA		dBA
			Ldn:		440		947		2,040		4,395
			NEL:		455		980	1	2.112		4,549

	rio: OY+P								aven Spec	ific Plan	
	ne: Milliken Av. ent: n/o Riversid	e Dr.				Job Nu	mber:	14822			
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions (F					
Average Daily	Traffic (Adt):	36,475 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	7.91%				dium Truc			15		
Peak I	Hour Volume:	2,885 vehicles	S		He	avy Truck	ıs (3+ .	Axles):	15		
Ve	ehicle Speed:	55 mph		-	Vehicle I	Miv					
Near/Far La	ane Distance:	80 feet		F		icleType		Dav	Evening	Night	Dailv
Site Data							ıtos:	70.7%		17.5%	90.949
Rs	arrier Height:	0.0 feet			М	edium Tru	icks:	82.2%	3.5%	14.3%	1.619
Barrier Type (0-V	-	0.0			1	Heavy Tru	icks:	70.8%	6.2%	23.0%	7.459
Centerline D	ist. to Barrier:	60.0 feet		1	Noise So	ource Ele	vation	s (in fe	et)		
Centerline Dist.	to Observer:	60.0 feet		F		Autos		000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks:		297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks:		004	Grade Ad	iustmen	. 00
F	Pad Elevation:	0.0 feet			11001	y mucho.	0.	004	0/440 / 14	Judimom	. 0.0
Ro	oad Elevation:	0.0 feet		I	Lane Eq	uivalent L	Distan	ce (in f	eet)		
	Road Grade:	0.0%				Autos:		.000			
	Left View:	-90.0 degree	es		Mediu	m Trucks:	44	.803			
	Right View:	90.0 degree	es		Heav	y Trucks:	44	.822			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fresi	_	Barrier Att	_	rm Atten
Autos:		1.48		0.5	-	-1.20		-4.69		000	0.00
Medium Trucks:		-16.03		0.6		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-9.39		0.6	1	-1.20		-5.34	0.0	000	0.00
Unmitigated Nois			barri								
VehicleType	Leq Peak Hou			Leg E		Leq N	-		Ldn		NEL
Autos:			71.4		69.6		66.	-	74.0	-	74.
Medium Trucks:		-	65.2		57.5		58.	-	66.0	-	66.
Heavy Trucks:			75.1		70.6		71.		78.		78.
Vehicle Noise:	78.	2	77.0		73.3		72.	9	80.0	0	80.
Centerline Distan	ce to Noise Co	ntour (in feet,	)	70 c	-IDA	65 dl	DΛ	-	i0 dBA		dBA
			Ldn:	700	279	05 U	601		1.295		2.790
			VEL:		279		624		1,295		2,790
		Ci	VLL.		290		024		1,344	•	2,890

Friday, October 14, 2022

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION M	ODEL (	9/12/2	021)		
Road Nam	o: HY+P e: Milliken Av. nt: n/o Riversid	le Dr.				Project I Job Ni			laven Spec	ific Plan	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	67,401 vehicle	es					Autos:	15		
Peak Hour	Percentage:	7.91%				dium Tru					
Peak H	our Volume:	5,331 vehicle	S		He	avy Truc	ks (3+ .	4xles):	15		
Ve	hicle Speed:	55 mph		}	Vehicle I	Mix					
Near/Far La	ne Distance:	80 feet				icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.7%	11.8%	17.5%	88.92%
Rai	rier Heiaht:	0.0 feet			Me	edium Tr	ucks:	82.2%	3.5%	14.3%	1.98%
Barrier Type (0-W		0.0			F	Heavy Tr	ucks:	70.8%	6.2%	23.0%	9.10%
Centerline Dis	. ,	60.0 feet		-							
Centerline Dist.	to Observer:	60.0 feet		-	Noise Sc				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos	. 0.	000			
Observer Height (	Above Pad):	5.0 feet				m Trucks		297	0		
	d Elevation:	0.0 feet			Heav	y Trucks	: 8.	004	Grade Adj	ustmen	: 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)		
F	Road Elevation: 0.0					Autos	: 45	000			
	Left View:	-90.0 degree	es		Mediui	m Trucks	: 44	803			
	Right View:	90.0 degree	es		Heav	y Trucks	: 44	822			
FHWA Noise Mode	l Calculations	3									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fresi		Barrier Atte		rm Atten
Autos:	71.78	4.05		0.5	-	-1.20		-4.69		000	0.000
Medium Trucks:	82.40	-12.47		0.6		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-5.85		0.6	11	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er attei	nuation)						
	Leq Peak Hou			Leq E	vening	Leq I	_		Ldn		NEL
Autos:	75	_	73.9		72.2		69.		76.5		76.9
Medium Trucks:	69	-	68.7		61.0		62.		70.2	_	70.3
Heavy Trucks:	80		78.7		74.1		75.	-	82.0		82.2
Vehicle Noise:	81	.5	80.3		76.4		76.	2	83.3	3	83.6
Centerline Distanc	e to Noise Co	ntour (in feet	)								
			L	70	dBA	65 c		1 -	60 dBA		dBA
			Ldn:		464		1,000		2,155		4,643
		C	NEL:		481		1,037		2,233		4,811

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	CTION N	IODEL	(9/12/2	(021)		
	rio: E ne: Milliken Av. nt: s/o Riversio						t Name lumber		laven Spec	ific Plan	
	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	s	
Highway Data					Site Con	aitions	(Hara				
Average Daily	. ,	18,436 vehicle	es					Autos			
	Percentage:	7.91%				edium Tr		,			
	lour Volume:	1,458 vehicles	3		He	eavy Tru	CKS (3+	Axies)	: 15		
	hicle Speed:	55 mph			Vehicle I	Mix					
Near/Far La	ne Distance:	80 feet		Ī	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.79	6 11.8%	17.5%	86.53%
Ra	rrier Heiaht:	0.0 feet			М	edium T	rucks:	82.29	6 3.5%	14.3%	2.42%
Barrier Type (0-V		0.0			1	Heavy T	rucks:	70.89	6.2%	23.0%	11.05%
Centerline Di	ist. to Barrier:	60.0 feet		T.	Noise So	ource E	levatio	ns (in f	eet)		
Centerline Dist.		60.0 feet		t		Auto		0.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet			Heav	vv Truck		3.004	Grade Ad	iustmen	t: 0.0
P	ad Elevation:	0.0 feet		L		,				,	
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distai	nce (in	feet)		
	Road Grade: 0.0%					Auto	s: 48	5.000			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 44	1.803			
	Right View:	90.0 degree	es		Heav	vy Truck	s: 4	1.822			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Be	rm Atten
Autos:	71.78	-1.70		0.5	8	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	82.40	-17.23		0.6	1	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-10.64		0.6	1	-1.20		-5.34	0.0	000	0.000
<b>Unmitigated Nois</b>	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL
Autos:			68.2		66.4		63		70.	-	71.2
Medium Trucks:			64.0		56.3		57		65.4		65.5
Heavy Trucks:			73.9		69.4		70		77.2		77.4
Vehicle Noise:	76	.5	75.3		71.3		71	.3	78.4	4	78.6
Centerline Distan	ce to Noise Co	ontour (in feet)		70	dBA	65	dBA		60 dBA		i dBA
			Ldn:	701		65					
			Lan: VEL:		216		46	-	1,005		2,165
		CI	VEL:		224		48	3	1,040		2,240

FHW	A-RD-77-	108 HIGH\	WAY	NOISE I	PREDIC	CTION N	MODEL	(9/12/2	021)		
Scenario: OY Road Name: Milliker Road Segment: s/o Riv							t Name: lumber:		laven Spec	ific Plan	
SITE SPECIFI	CINPUT	T DATA							L INPUT	s	
Highway Data  Average Daily Traffic (Ad Peak Hour Percenta, Peak Hour Vehicle Spec Near/Far Lane Distan	e: 7.9 e: 1,69 d: 5	131 vehicle 131% 135 vehicles 135 mph 130 feet			Ме	edium Tr eavy Tru	ucks (2	Autos:	15 15		
	e. 6	30 leet			Veh	nicleType		Day	Evening	Night	Daily
Site Data  Barrier Heig Barrier Type (0-Wall, 1-Berr	n): (	<b>0.0 feet</b> 0.0				ledium T Heavy T		70.7% 82.2% 70.8%	6 3.5%	17.5% 14.3% 23.0%	
Centerline Dist. to Barn Centerline Dist. to Observ Barrier Distance to Observ Observer Height (Above Pa Pad Elevati	er: 60 er: 0 d): !	0.0 feet 0.0 feet 0.0 feet 5.0 feet 0.0 feet		N	Mediu	ource E Auto Im Truck vy Truck	s: (	ns (in f 0.000 2.297 3.004	eet) Grade Ad	justmen	± 0.0
Road Grad Left Vie	Road Elevation: 0.0 feet   Road Grade: 0.0%   Left View: -90.0 degrees   Right View: 90.0 degrees				Mediu	Auto Auto Im Truck vy Truck	s: 45	5.000 4.803 4.822	reet)		
FHWA Noise Model Calcula								. 1			
Medium Trucks: 8	1.78 2.40 3.40	-1.04 -16.58 -9.98	Dist	0.58 0.61 0.61		-1.20 -1.20 -1.20	Fres	-4.69 -4.88 -5.34	0.0	en Bei 000 000 000	0.000 0.000 0.000
Unmitigated Noise Levels (	vithout 1	Topo and b	arrie	r attenu	ıation)						
VehicleType Leq Peak	Hour	Leq Day		Leq Ev	ening	Leq	Night		Ldn		NEL
Autos: Medium Trucks: Heavy Trucks:	70.1 65.2 75.8	ē	88.8 84.6 74.5		67.1 56.9 70.0	)	64 58 70	.3	71.4 66.0 77.9	) 9	71.9 66.2 78.1
Vehicle Noise:	77.1	7	75.9		71.9	)	71	.9	79.0	)	79.2
Centerline Distance to Nois	e Conto	ur (in feet)		70 d	BA	65	dBA		60 dBA	55	dBA
		-	.dn: IEL:	. 0 0	239 248		51 53	6	1,111 1,150	1	2,393 2,477

Scenario	. E.D					Drainat *	lomo: 5	Diob !!	ouen Cr	ifia Dlc -	
	: E+P : Milliken Av.					Job Nu			aven Spec	ilic Plan	
Road Segment		e Dr				JOD IVU	niber.	4022			
	PECIFIC IN					NC	DISE N	IODE	L INPUT	s	
Highway Data				S	ite Con	ditions (F					
Average Daily T	raffic (Adt):	28,604 vehicle	8				,	Autos:	15		
Peak Hour P	Percentage:	7.91%			Med	dium Truc	ks (2 A	xles):	15		
Peak Ho	ur Volume:	2,263 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vehi	icle Speed:	55 mph		v	/ehicle N	Niv					
Near/Far Land	e Distance:	80 feet		ľ		cleType		Dav	Evening	Niaht	Dailv
Site Data								70.7%		17.5%	. ,
Rarr	ier Heiaht:	0.0 feet			Ме	edium Tru	cks:	82.2%	3.5%	14.3%	1.72
Barrier Type (0-Wa		0.0			F	leavy Tru	cks:	70.8%	6.2%	23.0%	7.96
Centerline Dist	to Barrier:	60.0 feet			laisa Sa	urce Ele	rations	· (in fo	not)		
Centerline Dist. to	Observer:	60.0 feet			ioise so	Autos:		000	ei)		
Barrier Distance to	Observer:	0.0 feet			Modiur	n Trucks:		297			
Observer Height (A	bove Pad):	5.0 feet				v Trucks:		004	Grade Ad	iustment	0.0
Pad	d Elevation:	0.0 feet				,					
	d Elevation:	0.0 feet		L	ane Equ	ıivalent L			eet)		
R	oad Grade:	0.0%				Autos:					
	Left View:	-90.0 degree	S			n Trucks:					
	Right View:	90.0 degree	S		Heav	y Trucks:	44.8	322			
HWA Noise Model	Calculations	;									
VehicleType	REMEL	Traffic Flow	Distai		Finite		Fresn		Barrier Att		rm Atter
Autos:	71.78	0.39		0.58		-1.20		-4.69		000	0.0
Medium Trucks:	82.40	-16.81		0.61		-1.20		-4.88		000	0.0
Heavy Trucks:	86.40	-10.15		0.61	•	-1.20		-5.34	0.0	000	0.00
Inmitigated Noise											
**	.eq Peak Hou			.eq Ev	ening	Leq N	•		Ldn	_	NEL
Autos:	71.	-	0.3		68.5		65.5		72.9	-	73
Medium Trucks:	65.	-	4.4		56.7		58.0		65.8	-	66
Heavy Trucks:	75.		4.4		69.8		70.7		77.7		77
Vehicle Noise:	77.		6.1		72.4		72.0	1	79.2		79
	to Noise Co	ntour (in feet)		70.		65 dl	2/	-	i0 dBA	55	dBA
Centerline Distance											
Centerline Distance		,	.dn:	70 d	245	65 at	528		1.138		2.45

Friday, October 14, 2022

	FHWA-RE	)-77-108 HIGH	WAY I	NOISE	PREDIC	TION M	ODEL	(9/12/2	2021)		
Scenario Road Name Road Segmen	e: Milliken Av.							Rich I 14822	Haven Spec	ific Plan	ı
	PECIFIC IN	PUT DATA			0:4- 0				EL INPUT	S	
Highway Data	F	31.599 vehicle	_		Site Con	aitions	нага	Autos			
Average Daily 1 Peak Hour F	. ,	7.91%	5		Me	dium Tru	icke (2				
	our Volume:	2.499 vehicles				avy Truc					
	nicle Speed:	55 mph		L			, NO (O .	ANICO	. 10		
Near/Far Lan		80 feet		L	Vehicle I						
iveai/i ai Laii	e Distance.	00 leet			Veh	icleType		Day	Evening	Night	Daily
Site Data							lutos:	70.79		17.5%	
Barı	rier Height:	0.0 feet				edium Tr		82.29		14.3%	
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	Heavy Tr	ucks:	70.89	6.2%	23.0%	8.25%
Centerline Dis	t. to Barrier:	60.0 feet		-	Noise Sc	ource Flo	evatio	ns (in t	feet)		
Centerline Dist. to	o Observer:	60.0 feet		ŀ	Noise Source Elevations (in feet)  Autos: 0.000						
Barrier Distance to	o Observer:	0.0 feet			Modiu	m Trucks	. ,	2.297			
Observer Height (A	Above Pad):	5.0 feet				y Trucks		3.004	Grade Ad	iustmen	t· 0.0
Pa	d Elevation:	0.0 feet		L	Ticav	y IIucka	). (	3.004	0/440 / 14	, 401111011	0.0
Roa	Road Elevation: 0.0 feet				Lane Eq	uivalent	Dista	nce (in	feet)		
R	Road Grade: 0.0%					Autos	s: 4	5.000			
	Left View:	-90.0 degree	s		Mediui	m Trucks	s: 44	1.803			
	Right View:	90.0 degree	s		Heav	y Trucks	S: 44	1.822			
FHWA Noise Mode	l Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite		Fres		Barrier Att		rm Atten
Autos:	71.78	0.81		0.5		-1.20		-4.69		000	0.000
Medium Trucks:	82.40	-16.21		0.6		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-9.56		0.6		-1.20		-5.34	0.0	000	0.000
VehicleType	Levels (with Leg Peak Hou				vening	100	Night		Ldn		NEL
Autos:	72		70.7	LUY L	68.9		65	9	73.3		73.7
Medium Trucks:	65		35.0		57.3		58		66.4		66.6
Heavy Trucks:	76		75.0		70.4		71		78.3		78.
Vehicle Noise:	77		76.7		72.9		72		79.		80.0
Centerline Distance	e to Noise Co	ntour (in feet)									
				70	dBA	65 (	dBA		60 dBA		dBA
		-	Ldn:		267		57	-	1,238		2,667
	CNEL:				277 596 1,284 2,7						

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION N	IODEL (	9/12/2	021)		
	io: HY ne: Milliken Av nt: s/o Riversio						Name: l lumber:		aven Spec	ific Plar	ı
	SPECIFIC IN	NPUT DATA			0:: 0				L INPUT	s	
Highway Data					Site Con	aitions	•				
Average Daily	. ,	41,531 vehicl	es					Autos:			
	Percentage:	7.91%					ucks (2 A	/			
	lour Volume:	3,285 vehicle	S		He	avy Tru	cks (3+ A	Axles):	15		
	hicle Speed:	55 mph			Vehicle i	Mix					
Near/Far La	ne Distance:	80 feet		İ	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Ba	rrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-VI		0.0			1	Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Di	st. to Barrier:	60.0 feet		-	Noise So	urce F	evation	e (in fa	not)		
Centerline Dist.	to Observer:	60.0 feet		H	110/36 00	Auto		000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iustmen	t: 0.0
P	ad Elevation:	0.0 feet									
Ro	Road Elevation: 0.0				Lane Eq				feet)		
	Road Grade: 0.0%					Auto		000			
	Left View:	-90.0 degre	es			m Truck		803			
	Right View:	90.0 degre	es		Heav	ry Truck	s: 44.	822			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow		stance		Road	Fresr	_	Barrier Att		rm Atten
Autos:	71.78			0.5	-	-1.20		-4.69		000	0.000
Medium Trucks:				0.6		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-7.11		0.6	51	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois										1	
VehicleType	Leq Peak Hot			Leq E	vening		Night		Ldn		NEL
Autos:		3.0	71.7		69.9		66.9		74.3	-	74.7
Medium Trucks:		3.1	67.5		59.8		61.1		68.9	-	69.1
Heavy Trucks:		3.7	77.4		72.9		73.8		80.8		81.0
Vehicle Noise:		0.0	78.8		74.8		74.8	5	81.9	9	82.1
Centerline Distan	ce to Noise Co	ontour (in feet	)								
			L	70	dBA	65	dBA	(	60 dBA		5 dBA
			Ldn:		372		801		1,727		3,720
		С	NEL:		385		829		1,787		3,850

	_										
Scenario									laven Spec	ific Plan	
	: Hamner Av					Job N	lumber:	14822			
Road Segmen	t: s/o Chino F	AV.									
	PECIFIC IN	NPUT DAT	A.						EL INPUT	8	
Highway Data					Site Cor	ditions	(Hard	= 10, S	oft = 15)		
Average Daily 1	raffic (Adt):	18,514 veh	icles					Autos	15		
Peak Hour F	Percentage:	7.91%			Me	dium Tr	ucks (2	Axles)	: 15		
Peak Ho	our Volume:	1,464 vehic	les		He	avy Tru	cks (3+	Axles)	: 15		
Veh	icle Speed:	55 mph			Vehicle	Mix					
Near/Far Lan	e Distance:	80 feet		F		icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.79	6 11.8%	17.5%	86.53%
Ran	rier Heiaht:	0.0 feet			М	edium T	rucks:	82.29	6 3.5%	14.3%	2.42%
Barrier Type (0-Wa		0.0				Heavy T	rucks:	70.89	6.2%	23.0%	11.05%
Centerline Dis	t. to Barrier:	60.0 feet		- 1	Noise S	ource E	levatio	ns (in t	eet)		
Centerline Dist. t		60.0 feet		F		Auto		0.000	,		
Barrier Distance t		0.0 feet			Mediu	m Truck		2.297			
Observer Height (A	,	5.0 feet			Hear	/y Truck	s: E	3.004	Grade Ad	ustment	0.0
	d Elevation:	0.0 feet				•					
	d Elevation:	0.0 feet		1	Lane Eq				feet)		
R	Road Grade:	0.0%				Auto		5.000			
	Left View:	-90.0 deg				m Truck		1.803			
	Right View:	90.0 deg	rees		Hea	ry Truck	:s: 44	1.822			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flov		stance		Road	Fres		Barrier Att		m Atten
Autos:	71.78			0.5	-	-1.20		-4.69		000	0.00
Medium Trucks:	82.40			0.6		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40			0.6		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise										1	
	Leq Peak Hou		,	Leq E	vening		Night		Ldn		NEL
Autos:		9.5	68.2		66.4		63		70.8		71.
Medium Trucks:		1.6	64.0		56.3		57		65.4		65.0
Heavy Trucks:		5.2	73.9		69.4		70		77.3		77.
Vehicle Noise:		3.5	75.3		71.3		71	.3	78.4	,	78.0
Centerline Distance	e to Noise Co	ontour (in fe	et)	70	dBA	e e	dBA		60 dBA	FE	dBA
				701		00				55	
			I do:		247		40	0	1 000		
			Ldn:		217 225		46 48	-	1,008 1.043		2,171 2,247

	: 104.D					n : 1	.,	D: 1 11	_	·6 DI	
	rio: HY+P								aven Spec	ific Plan	
	ne: Milliken Av ent: s/o Riversi	-				JOD IV	umper:	14822			
SITE Highway Data	SPECIFIC II	IPUT DATA			Site Con	N ditions			L INPUT	S	
				-	one con	uitions	(riaru -				
Average Daily	. ,	51,699 vehic	les			eticone Tor	! (0	Autos:	15 15		
	Percentage:	7.91%				dium Tru		,			
	Hour Volume:	4,089 vehicle	es		HE	avy Truc	:KS (3+	Axies):	15		
	ehicle Speed:	55 mph		١	/ehicle	Mix					
Near/Far La	ne Distance:	80 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	70.7%	11.8%	17.5%	88.639
Ва	rrier Height:	0.0 feet			М	edium Ti	rucks:	82.2%	3.5%	14.3%	2.039
Barrier Type (0-V		0.0				Heavy Ti	rucks:	70.8%	6.2%	23.0%	9.349
Centerline D	ist. to Barrier:	60.0 feet			Joien S	ource El	ovation	ac (in fo	not)		
Centerline Dist.	to Observer:	60.0 feet		-	10/36 30	Auto:		.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Madiu	m Truck:		.000			
Observer Height	(Above Pad):	5.0 feet				vy Truck:	-	.004	Grade Ad	iuctment	
P	ad Elevation:	0.0 feet			пеа	ry Truck	s. o	.004	Grade Adj	usunent	0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	ice (in f	feet)		
	Road Grade:	0.0%				Auto	s: 45	.000			
	Left View:	-90.0 degre	es		Mediu	m Trucks	s: 44	.803			
	Right View:	90.0 degre	es		Heav	y Truck	s: 44	.822			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	71.78	2.88	3	0.58	3	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	82.40	-13.51		0.61	1	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-6.89	)	0.61	1	-1.20		-5.34	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	l barri	er atteni	uation)						
VehicleType	Leq Peak Ho		_	Leq Ev			Night		Ldn	-	VEL
Autos:	-	1.0	72.8		71.0		68.	-	75.4		75.
Medium Trucks:	-	3.3	67.7		60.0		61.	-	69.1		69.
Heavy Trucks:		3.9	77.6		73.1		74.	-	81.0		81.
Vehicle Noise:	80	).4	79.2		75.3		75.	.1	82.3	3	82.
Centerline Distan	ce to Noise C	ontour (in fee	t)	70	(D.4	-	-/0.4		0 404		-10.4
			1 -1	70 d		65	dBA		i0 dBA		dBA
			Ldn:		394		849	9	1.830		3.94
		,	NEL:		408		88		1.896		4.08

Friday, October 14, 2022

Average Daily Traffic (Adf): 28,300 vehicles		FHWA-RD	-77-108 HIGH\	VAY NOI	SE PREDIC	CTION M	ODEL (9/12	/2021)	
Average Daily Traffic (Adt): 28,300 vehicles   Peak Hour Percentage: 7,91%   Medium Trucks (2 Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks (3 + Axles): 15   Heavy Trucks: (3 + Axles): 16   Heavy Trucks: (3 + Axles): 17   Road Name	e: Hamner Av.				.,			fic Plan	
Average Daily Traffic (Adf): 28,300 vehicles	SITE S	SPECIFIC IN	PUT DATA			N	OISE MOD	EL INPUTS	3
Peak Hour Volume: 2,239 vehicles   Heavy Trucks (3 + Axles): 15	Highway Data				Site Cor	ditions	Hard = 10,	Soft = 15)	
Near/Far Lane Distance: 80 feet   VehicleType   Day   Evening   Night   Daily	Peak Hour I Peak Ho	Percentage: our Volume:	7.91% 2,239 vehicles	6	He	eavy Truc	icks (2 Axle	s): 15	
Noise   Nois			1						
Barrier Height:   0.0   feet   Heavy Trucks:   82.2%   3.5%   14.3%   1.74%   Heavy Trucks:   70.8%   6.2%   23.0%   8.08%   Reavy Trucks:   70.0%   Red Elevation:   0.0   feet   Read Elevation:   Read Elevation:   0.0   feet   Read Elevation:   0.0   feet   Read Elevation:   0.0   feet   Read Elevation:   0.0   feet   Read Elevation:   f		ic Distance.	00 1001		Veh				
Barrier Type (0-Wall, 1-Berm): 0.0 feet   Centerline Dist. to Observer: 60.0 feet   Centerline Distance to Observer: 60.0 feet   Centerline Distance to Observer: 60.0 feet   Centerline Distance to Observer: 60.0 feet   Centerline Distance to Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline Distance for Observer: 60.0 feet   Centerline for Observer:									
Centerline Dist. to Observer: Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Barrier Distance to Observer: 0.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 fee									
Autos: 0.000	Centerline Dis	t. to Barrier:	60.0 feet		Noise S	ource Fl	vations (in	foot)	
Road Grade:	Barrier Distance t Observer Height (A	to Observer: Above Pad): ad Elevation:	0.0 feet 5.0 feet 0.0 feet		Mediu Hea	Autos m Trucks vy Trucks	0.000 2.297 8: 8.004	Grade Adj	ustment: 0.0
Left View:		0.0 1000						1110019	
VehicleType	r	Left View:	-90.0 degree			m Trucks	44.803		
Autos:         71.78         0.34         0.58         -1.20         -4.69         0.000         0.000           Medium Trucks:         82.40         -16.79         0.61         -1.20         -4.88         0.000         0.000           Unmitigated Noise Levels (without Topo and barrier attenuation)         -1.20         -5.34         0.000         0.000           Unmitigated Noise Levels (without Topo and barrier attenuation)	FHWA Noise Mode	l Calculations	1						
Medium Trucks: 82.40	VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Heavy Trucks: 86.40	Autos:	71.78	0.34		0.58	-1.20	-4.6	9 0.0	00 0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)   VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL	Medium Trucks:	82.40	-16.79		0.61	-1.20	-4.8	8 0.0	0.000
VehicleType	Heavy Trucks:	86.40	-10.14		0.61	-1.20	-5.3	4 0.0	0.000
Autos:         71.5         70.2         68.5         65.4         72.8         73.2           Medium Trucks:         65.0         64.4         56.7         58.1         65.8         66.6           Heavy Trucks:         75.7         74.4         69.9         70.8         77.7         77.5           Vehicle Noise:         77.3         76.1         72.3         72.0         79.2         79.2           Centerline Distance to Noise Contour (in feet)           Image: Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         245         528         1,138         2,451									
Medium Trucks:         65.0         64.4         56.7         58.1         65.8         66.0           Heavy Trucks:         75.7         74.4         69.9         70.8         77.7         77.5           Vehicle Noise:         77.3         76.1         72.3         72.0         79.2         79.4           Centerline Distance to Noise Contour (in feet)         0 dBA         65 dBA         60 dBA         55 dBA           Ldn:         245         528         1,138         2,451							-		
Heavy Trucks:         75.7         74.4         69.9         70.8         77.7         77.5           Vehicle Noise:         77.3         76.1         72.3         72.0         79.2         79.4           Centerline Distance to Noise Contour (in feet)         00 dBA         65 dBA         60 dBA         55 dBA           Ldn:         245         528         1,138         2,451									
Vehicle Noise:         77.3         76.1         72.3         72.0         79.2         79.4           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         245         528         1,138         2,451									
Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         245         528         1,138         2,451	· -								
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 245 528 1,138 2,451				6.1	72.3	i	72.0	79.2	79.4
Ldn: 245 528 1,138 2,451	Centerline Distanc	e to Noise Co	ntour (in feet)		70 dB4	65.0	√R.A	60 dB4	55 dB4
			,			051			
			_					1,180	2,542

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	CTION N	MODEL (	9/12/20	021)		
	io: OY ne: Hamner Av nt: s/o Chino A						t Name: lumber:		aven Spec	ific Plar	1
	SPECIFIC IN	NPUT DATA							L INPUT	s	
Highway Data				5	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
	Traffic (Adt): Percentage: lour Volume:	20,979 vehicle 7.91% 1,659 vehicle					rucks (2 ) icks (3+ )	,			
Ve	hicle Speed:	55 mph		1	/ehicle	Mix					
Near/Far La	ne Distance:	80 feet		ľ		icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Bai	rrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-W		0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Di	st. to Barrier:	60.0 feet			loise Si	nurce F	levation	s (in fe	eet)		
Centerline Dist.	to Observer:	60.0 feet		,	10/36 01	Auto		000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297			
Observer Height (	'Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iustmen	t: 0.0
	ad Elevation:	0.0 feet									
	ad Elevation:	0.0 feet		L	ane Eq		t Distan		feet)		
	Road Grade:	0.0%				Auto		000			
	Left View: Right View:	-90.0 degree				m Truck vy Truck		803 822			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	nel .	Barrier Att	en Be	rm Atten
Autos:	71.78	-1.14		0.58	3	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	82.40	-16.67		0.61	I	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-10.08		0.61	I	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou			Leq Ev			Night		Ldn		NEL
Autos:			68.7		67.0		63.9		71.4		71.
Medium Trucks:			64.5		56.8		58.2	-	66.0	-	66.
Heavy Trucks:		5.7	74.5		69.9		70.8		77.8		78.
Vehicle Noise:	77	7.1	75.8		71.8		71.8	3	78.9	9	79.
Centerline Distance	ce to Noise Co	ontour (in feet	)								
			L	70 a		65	dBA		0 dBA		5 dBA
			Ldn:		236		508		1,095		2,359
		C	NEL:		244		526		1,133		2,442

		D-77-108 HIGH		NOIDE I	ILLDI			•			
Scenari									aven Spec	ific Plan	
	e: Hamner Av nt: s/o Chino A					JOD I	lumber.	14822			
SITE : Highway Data	SPECIFIC IN	IPUT DATA			ito Cor	nditions			L INPUT	S	
				3	ne cor	iuitions	(паги				
Average Daily	. ,	42,863 vehicl	les					Autos:			
	Percentage:	7.91%				edium Ti		,			
	lour Volume:	3,390 vehicle	es		He	eavy Tru	icks (3+	Axles):	15		
	hicle Speed:	55 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	80 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Bai	rrier Height:	0.0 feet			M	ledium 7	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-W		0.0				Heavy 7	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dis	st. to Barrier:	60.0 feet		N	loise S	ource E	levatio	ns (in fe	oet)		
Centerline Dist.	to Observer:	60.0 feet			0/36 0	Auto		0.000	,		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		2.297			
Observer Height (	Above Pad):	5.0 feet				vy Truck		3.004	Grade Ad	iustman	- 0.0
Pa	ad Elevation:	0.0 feet			пеа	vy IIucr	is. c	5.004	Orace Au	Justinerii	. 0.0
Roa	Road Elevation: 0.0 feet						t Distai	nce (in :	feet)		
I	Road Grade: 0.0%						s: 45	5.000			
	Left View:	-90.0 degre	es		Mediu	m Truck	(S: 44	1.803			
	Right View:	90.0 degre	es		Hea	vy Truck	(S: 44	1.822			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	71.78			0.58		-1.20		-4.69		000	0.00
Medium Trucks:	82.40			0.61		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-6.97	,	0.61		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er attenu	ıation)						
	Leq Peak Hou		,	Leq Ev			Night		Ldn		NEL
Autos:	73		71.9		70.1		67		74.	-	74.
Medium Trucks:		3.2	67.6		59.9		61		69.		69.
Heavy Trucks:	78		77.6		73.0		73		80.9	-	81.
Vehicle Noise:	80	).2	78.9		74.9	)	74	.9	82.0	)	82.
Centerline Distanc	e to Noise C	ontour (in fee	t)								
			L	70 d		65	dBA		60 dBA		dBA
		_	Ldn:		380		81	-	1,763		3,799
		C	:NEL:		393		84	1	1,825	,	3,932

Scenario: O'	V+P					Project A	lama. D	ich H	aven Spec	ific Plan	
Road Name: Ha						Job Nui			aven opec	ilic Flair	
Road Segment: s/d						000 1441	noci. i	7022			
SITE SPE	CIFIC IN	PUT DATA		Т		NC	ISE M	ODE	L INPUT	s	
Highway Data				S	ite Con	ditions (F	lard = :	10, So	ft = 15)		
Average Daily Traffi	ic (Adt):	30,765 vehicle	8				A	lutos:	15		
Peak Hour Perce	entage:	7.91%			Med	dium Truc	ks (2 A	xles):	15		
Peak Hour V	/olume:	2,434 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vehicle	Speed:	55 mph			ehicle N	Aiv					
Near/Far Lane Di	istance:	80 feet		۲		cleType	-	Day	Evening	Night	Daily
Site Data					*0			70.7%	11.8%	17.5%	,
Barrier I	Hoiaht.	0.0 feet		_	Ме	edium Tru	cks: 1	32.2%	3.5%	14.3%	
Barrier Type (0-Wall, 1-	-	0.0			F	leavy Tru	cks:	70.8%	6.2%	23.0%	8.31
Centerline Dist. to		60.0 feet		L							
Centerline Dist. to Ob		60.0 feet		٨	loise So	urce Ele		•	et)		
Barrier Distance to Ob		0.0 feet				Autos:					
Observer Height (Abov		5.0 feet				n Trucks:					
Pad Fle	,	0.0 feet			Heav	y Trucks:	8.0	04	Grade Ad	ustment	0.0
Road Ele	evation:	0.0 feet		L	ane Equ	uivalent E	Distanc	e (in f	eet)		
Road	Grade:	0.0%				Autos:	45.0	100			
Le	ft View:	-90.0 degree	S		Mediur	n Trucks:	44.8	103			
Righ	ht View:	90.0 degree	S		Heav	y Trucks:	44.8	22			
FHWA Noise Model Cai	lculations	ì									
	EMEL	Traffic Flow	Distan		Finite		Fresne		Barrier Att		m Atte
Autos:	71.78	0.69		0.58		-1.20		4.69		000	0.0
Medium Trucks:	82.40	-16.30		0.61		-1.20		4.88		000	0.0
Heavy Trucks:	86.40	-9.65		0.61		-1.20		5.34	0.0	000	0.0
Unmitigated Noise Lev	•										
	Peak Hou		_	eq Ev	ening	Leq N	•		Ldn		NEL
Autos:	71.	-	0.6		68.8		65.8		73.2	_	73
Medium Trucks:	65.		i4.9		57.2		58.6		66.3	-	66
Heavy Trucks: Vehicle Noise:	76.		4.9		70.3		71.2		78.2		78
	77.		6.6		72.8		72.5		79.6	Ď.	79
	Noise Co	ntour (in feet)		70 d	BA	65 dF	3 <i>A</i>	6	0 dBA	55	dBA
Centerline Distance to	Noise Co	, ,	dn:	70 d	BA 263	65 dE	566	6	0 dBA 1,220		dBA 2.62

Friday, October 14, 2022

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION M	DDEL	(9/12/2	021)					
Road Nam	o: HY+P e: Hamner Av. nt: s/o Chino A					Project i Job Nu			laven Spec	cific Plai	1			
	SPECIFIC IN	PUT DATA							L INPUT	s				
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily	Traffic (Adt):	52,650 vehicle	es					Autos:						
Peak Hour	Percentage:	7.91%				dium Tru								
Peak H	our Volume:	4,165 vehicles	S		He	avy Truc	ks (3+	Axles):	15					
Ve	hicle Speed:	55 mph		1	Vehicle I	Wix								
Near/Far La	ne Distance:	80 feet				icleType		Day	Evening	Night	Daily			
Site Data						A	utos:	70.7%	11.8%	17.59	6 88.49%			
Ran	rier Heiaht:	0.0 feet			M	edium Tri	ucks:	82.2%	3.5%	14.39	6 2.06%			
Barrier Type (0-W		0.0			1	Heavy Tri	ucks:	70.8%	6.2%	23.09	6 9.45%			
Centerline Dis	. ,	60.0 feet			Noise Source Elevations (in feet)									
Centerline Dist.	to Observer:	60.0 feet		-	Noise Sc	Autos			eet)					
Barrier Distance	to Observer:	0.0 feet						.000						
Observer Height (	Above Pad):	5.0 feet				m Trucks			Grade Ad	livotmov	st: 0.0			
• '		0.0 feet			Heav	y Trucks	: 8	.004	Grade Ad	justinei	12. 0.0			
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	ice (in	feet)					
F	Road Grade:	0.0%				Autos	: 45	.000						
	Left View:	-90.0 degrees			Mediu	m Trucks	: 44	.803						
	Right View:	90.0 degree	es		Heav	y Trucks	: 44	.822						
FHWA Noise Mode	l Calculations	5												
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fres		Barrier Att		erm Atten			
Autos:	71.78	2.96		0.5		-1.20		-4.69		000	0.000			
Medium Trucks:	82.40	-13.38		0.6		-1.20		-4.88		000	0.000			
Heavy Trucks:	86.40	-6.76		0.6	31	-1.20		-5.34	0.	000	0.000			
Unmitigated Noise														
	Leq Peak Hou			Leq E	vening	Leq N	-		Ldn		CNEL			
Autos:	74				71.1		68.		75.		75.9			
Medium Trucks:	68		67.8		60.1		61.	-	69.	_	69.4			
Heavy Trucks:	79		77.8		73.2		74.		81.	•	81.3			
Vehicle Noise:	80		79.3		75.4		75.	.3	82.	4	82.6			
Centerline Distanc	e to Noise Co	ntour (in feet,	)					_						
			L	70	dBA	65 a			60 dBA		5 dBA			
			Ldn:		401		86	-	1,863		4,015			
		CI	NEL:		416		89	ö	1,931	1	4,159			

	FHWA-R	D-77-108 HIGH	IWAY	NOISE	PREDIC	CTION N	IODEL	(9/12/2	021)		
	rio: E ne: Hamner Av ent: s/o Ontario						Name: lumber:		laven Spec	ific Plan	
	SPECIFIC II	NPUT DATA			a:. a				L INPUT	s	
Highway Data					Site Cor	aitions	(Hara =	= 10, Sc	ort = 15)		
Average Daily	Traffic (Adt):	26,376 vehicle	es					Autos:			
Peak Hou	r Percentage:	7.91%				edium Tr					
Peak I	Peak Hour Volume: 2,086 vehicles				He	eavy Tru	cks (3+	Axles):	15		
Ve	ehicle Speed:	55 mph		1	Vehicle	Mix					
Near/Far La	ane Distance:	80 feet		F		icleType	,	Dav	Evenina	Niaht	Dailv
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Rs	arrier Height:	0.0 feet			Medium Trucks: 82.2% 3.5% 14						2.42%
Barrier Type (0-V		0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
*, ,	ist. to Barrier:	60.0 feet		-							
Centerline Dist.		60.0 feet		4	Noise S			_ •	eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck		.297			
		0.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	justment	: 0.0
Road Elevation: 0.0 feet			1	Lane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 45	.000			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 44	.803			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 44	.822			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Bei	m Atten
Autos:	71.78	-0.14		0.5	8	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	82.40	-15.68		0.6	1	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-9.08		0.6	1	-1.20		-5.34	0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:		1.0	69.7		68.0		64.	-	72.		72.
Medium Trucks:	66	6.1 65.5			57.8		59.	2	66.	9	67.
Heavy Trucks:	76	5.7	75.5		70.9	ı	71.	.8	78.	3	79.
Vehicle Noise:	78	3.0	76.8		72.8		72.	.8	79.	9	80.
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70 (	dBA	65	dBA	(	60 dBA	55	dBA
			Ldn:		275		592	2	1,276		2,748
		C	NEL:		284		613	3	1.320	1	2.845

FHWA-RD	-77-108 HIGHWAY	NOISE	PREDICTION	ON MODEL	(9/12/2	021)		
Scenario: OY Road Name: Hamner Av. Road Segment: s/o Ontario F	Ranch Rd.			oject Name lob Number		aven Speci	fic Plan	
SITE SPECIFIC INI	PUT DATA					L INPUTS	3	
Highway Data		s	ite Condit	ions (Hard	= 10, Sc	oft = 15)		
Peak Hour Percentage:	29,827 vehicles 7.91% 2.359 vehicles			m Trucks (2 / Trucks (3-	,	15		
Vehicle Speed:	55 mph			•	71,1,00).			
Near/Far Lane Distance:	80 feet	V	ehicle Mix					
	00 1001		Vehicle		Day	Evening	Night	Daily
Site Data				Autos:	70.7%		17.5%	
Barrier Height:	0.0 feet			um Trucks:	82.2%		14.3%	2.42%
Barrier Type (0-Wall, 1-Berm):	0.0		Hea	vy Trucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dist. to Barrier:	60.0 feet	N	oise Sour	ce Elevatio	ns (in fe	eet)		
Centerline Dist. to Observer:	60.0 feet	-			0.000			
Barrier Distance to Observer:	0.0 feet		Medium 1		2.297			
Observer Height (Above Pad):	5.0 feet		Heavy 1		8.004	Grade Adj	ustment.	0.0
Pad Elevation:	0.0 feet		,					
Road Elevation:	0.0 feet	L		alent Dista		feet)		
Road Grade:	0.0%				5.000			
Left View:	-90.0 degrees		Medium 1		4.803			
Right View:	90.0 degrees		Heavy 1	rucks: 4	4.822			
FHWA Noise Model Calculations								
// .		stance	Finite Ro			Barrier Atte		m Atten
Autos: 71.78	0.39	0.58		1.20	-4.69	0.0		0.00
Medium Trucks: 82.40	-15.14	0.61		1.20	-4.88	0.0		0.00
Heavy Trucks: 86.40	-8.55	0.61		1.20	-5.34	0.0	00	0.00
Unmitigated Noise Levels (witho								
VehicleType Leq Peak Hour		Leq Ev	-	Leq Night		Ldn		VEL
Autos: 71.			68.5		5.5	72.9		73.
Medium Trucks: 66.			58.3		9.7	67.5		67.
Heavy Trucks: 77.:			71.4		2.3	79.3		79.
Vehicle Noise: 78.			73.4	73	3.3	80.4		80.
Centerline Distance to Noise Cor	ntour (in feet)	70.		05 154				10.4
	, . L	70 d		65 dBA		60 dBA	55	dBA
	Ldn:		298	64	-	1,385		2,983
	CNEL:		309	66	55	1.433		3.088

		D-77-108 HIGH		TOIGE I	KLDIC			`			
Scenario									laven Spec	ific Plan	
	e: Hamner Av					Job N	umber:	14822			
Road Segmen	t: s/o Ontario	Ranch Rd.									
	PECIFIC II	NPUT DATA							L INPUT	S	
Highway Data				Si	te Con	ditions					
Average Daily 1	raffic (Adt):	34,332 vehicl	es					Autos:			
Peak Hour F	-	7.91%				dium Tru		,			
	our Volume:	2,716 vehicle	s		He	avy Truc	ks (3+ .	Axles):	15		
	icle Speed:	55 mph		Ve	ehicle l	Mix					
Near/Far Lan	e Distance:	80 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						F	lutos:	70.7%	11.8%	17.5%	89.659
Rari	rier Height:	0.0 feet			М	edium Tr	ucks:	82.2%	3.5%	14.3%	1.869
Barrier Type (0-Wa		0.0			1	Heavy Tr	ucks:	70.8%	6.2%	23.0%	8.499
Centerline Dis	t. to Barrier:	60.0 feet		N	nise Sr	ource Ele	evation	s (in f	oet)		
Centerline Dist. to	o Observer:	60.0 feet			0.00	Autos		.000	,,,,		
Barrier Distance to	o Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height (A	Above Pad):	5.0 feet				y Trucks		.004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet								,	
Road Elevation: 0.0 feet				Lá	ne Eq	uivalent			feet)		
R	Road Grade:	0.0%				Autos		.000			
	Left View:	-90.0 degre				m Trucks		.803			
	Right View:	90.0 degre	es		Heav	y Trucks	s: 44	.822			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow		ance	Finite	Road	Fresi		Barrier Att		m Atten
Autos:	71.78			0.58		-1.20		-4.69		000	0.00
Medium Trucks:	82.40			0.61		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40			0.61		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	•							1			
VehicleType I	Leq Peak Ho	ur Leq Da	71.0	Leq Eve			Night 66.		Ldn 73.1		NEL 74
Medium Trucks:		2.3 3.1	65.5		69.3 57.8		59.	-	66.5	-	67
							71.	_		-	
Heavy Trucks: Vehicle Noise:	·					73.	-	78.8 80.1		79. 80.	
		5.0			13.3		73.	U	80		80
	e to Noise C	ontour (in fee	t)	70 dF		65	dBA		60 dBA		dBA
Centerline Distance											
Centerline Distance			Ldn:	70 UE	286	00 (	лом 616		1.327		2.85

	FHWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION MO	DDEL	(9/12/2	021)				
Scenario Road Name Road Segmen	e: Hamner Av.				Project Name: Rich Haven Specific Plan Job Number: 14822								
SITE S Highway Data	PECIFIC IN	PUT DATA			Site Con				L INPUT	S			
Average Daily 1 Peak Hour F Peak Ho	Percentage: our Volume:	37,783 vehicle 7.91% 2,989 vehicles			Ме	dium Tru avy Truci	cks (2	Autos: Axles):	15 15				
veri Near/Far Lan	nicle Speed:	55 mph 80 feet			Vehicle I				, ,				
Site Data	o Biolarioo.	00 1001			Veh	icleType	utos:	Day 70.7%	Evening 11.8%	Night 17.5%	Daily 89.37%		
	rier Height: all, 1-Berm):	0.0 feet 0.0			Medium Trucks: 82.2% 3.5% 14.3%  Heavy Trucks: 70.8% 6.2% 23.0%								
Centerline Dis	t. to Barrier:	60.0 feet		-	Noise Source Elevations (in feet)								
Centerline Dist. to Barrier Distance to Observer Height (A	o Observer:	60.0 feet 0.0 feet 5.0 feet 0.0 feet		+	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0								
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent	Distar	nce (in	feet)				
R	Road Grade:	0.0%				Autos	: 45	5.000					
	Left View: Right View:	-90.0 degree				m Trucks vy Trucks		1.803 1.822					
FHWA Noise Mode	I Calculations	;											
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten		
Autos:	71.78	1.56		0.5	8	-1.20		-4.69	0.	000	0.000		
Medium Trucks:	82.40	-15.14			.61 -1.20		-4.88			000	0.000		
Heavy Trucks:	86.40	-8.55		0.6	61	-1.20		-5.34	0.	000	0.000		
Unmitigated Noise			barrie	er atter	nuation)								
	Leq Peak Hou			Leq E	vening	Leq N			Ldn		NEL		
Autos:	72.		71.4		69.7		66		74.	-	74.5		
Medium Trucks:	66.		66.0		58.3		59		67.	-	67.6		
Heavy Trucks: Vehicle Noise:	77. 78.				71.4 73.8		72 73				79.5 80.9		
Centerline Distance		-			. 5.0			-	50.				
Cemerine Distance	e to Noise Co	mour (iii ieet)		70	dBA	65 d	BA		60 dBA	55	dBA		
			Ldn:		309		66	6	1,434	1	3,090		
			VEL:		320		69	^	1.486		3.203		

	FHWA-R	D-77-108 HIGH	WAY	NOISE	PREDIC	TION N	IODEL	(9/12/2	021)		
Road Nar	rio: HY ne: Hamner Av ent: s/o Ontario						Name: lumber:		aven Spec	ific Plan	
	SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data					Site Cor	aitions	(Hara =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	31,170 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	7.91%				dium Tr					
Peak I	Peak Hour Volume: 2,466 vehicles				He	avy Tru	cks (3+	Axles):	15		
Ve	ehicle Speed:	55 mph		h	/ehicle	Mix					
Near/Far La	ane Distance:	80 feet		F		icleType		Dav	Evenina	Niaht	Dailv
Site Data							Autos:	70.7%		17.5%	. ,
Rs	arrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-V		0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
*, ,	ist. to Barrier:	60.0 feet		ļ.							
Centerline Dist.		60.0 feet		1	Voise S				eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck		.297			
Pad Elevation: 0.0 feet		0.0 feet			Hea	y Truck	s: 8	.004	Grade Ad	justment	0.0
Road Elevation: 0.0 feet			1	Lane Eq	uivalent	Distar	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 45	.000			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 44	.803			
	Right View:	90.0 degre	es		Hea	y Truck	s: 44	.822			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	71.78	0.58		0.5	В	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	82.40	-14.95		0.6	1	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-8.36		0.6	1	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/	Leg E	/ening	Leq	Night		Ldn	C	NEL
Autos:		1.7	70.5		68.7		65.	7	73.	1	73.
Medium Trucks:	66	6.9 66.2			58.5 5		59.	59.9		7	67.
Heavy Trucks:	77	7.4	76.2		71.6		72.	5	79.	5	79.
Vehicle Noise:	78	3.8	77.5		73.6		73.	5	80.6	3	80.9
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70 c	iBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		307		662	2	1,426		3,072
		C	NEL:		318		68	5	1,476	;	3.180

	FHWA-RD-	77-108 HIGH	WAY N	OISE	PREDIC	TION M	ODEL	(9/12/2	021)				
Scenario: Road Name: Road Segment:	Riverside Dr.				Project Name: Rich Haven Specific Plan Job Number: 14822								
SITE SP	ECIFIC INF	UT DATA			NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)								
Average Daily Tra Peak Hour Pei Peak Hour	rcentage:	7.91% 1,256 vehicles 50 mph			Ме	dium Tru	icks (2	Autos: Axles):	15 15				
	le Speed:			ν	'ehicle l	Mix							
Near/Far Lane	Distance:	80 feet			Veh	icleType		Day	Evening	Night	Daily		
Site Data  Barrie  Barrier Type (0-Wall,	r Height:	0.0 feet 0.0				A edium Tr Heavv Tr		70.7% 82.2% 70.8%	3.5%	17.5% 14.3% 23.0%			
Centerline Dist. t	,	60.0 feet											
Centerline Dist. to (		60.0 feet		٨	Noise Source Elevations (in feet)								
Barrier Distance to 0		0.0 feet				Autos		0.000					
Observer Height (Abo		5.0 feet				m Trucks		2.297					
	d Elevation: 0.0 feet			Heav	y Trucks	:: 8	3.004	Grade Ad	ljustment	: 0.0			
	Elevation:	0.0 feet		L	ane Eq	uivalent	Distar	nce (in	feet)				
Roa	ad Grade:	0.0%				Autos	: 45	5.000					
	Left View:	-90.0 degree	ıs		Mediu	m Trucks	: 44	1.803					
Ri	ight View:	90.0 degree			Heav	y Trucks	: 44	1.822					
FHWA Noise Model C	Calculations												
		Traffic Flow	Dista			Road	Fres		Barrier Att		m Atten		
Autos:	70.20	-1.93		0.58		-1.20		-4.69		000	0.00		
Medium Trucks:	81.00	-17.47		0.61		-1.20		-4.88		000	0.00		
Heavy Trucks:	85.38	-10.87		0.61		-1.20		-5.34	0.0	000	0.00		
Unmitigated Noise Le								_					
	q Peak Hour			.eq Ev		Leq I			Ldn		NEL		
Autos:	67.7		66.4		64.6		61		69.	-	69.		
Medium Trucks:	62.9		62.3		54.6 56.				-	63.			
Heavy Trucks: Vehicle Noise:	73.9				68.1		69 69				76. 77.		
					09.8		09	.5	77.	U	11.		
Centerline Distance t	o Noise Cor	tour (in feet)		70 d	RΔ	65.0	IRΔ	٠,	50 dBA	55	dBA		
											ULIH		
			Ldn:		176	00 0	37	8	815	5	1.756		

Scenario: HY+P						Project N	lame: F	Rich H	aven Spec	ific Plan	
Road Name: Hamner	Δv					Job Nu			aven opec	ano i ian	
Road Segment: s/o Onta		ch Rd.				000 / (0		TOLL			
SITE SPECIFIC	INPUT	T DATA			a:: a				L INPUT	s	
Highway Data					Site Con	ditions (F					
Average Daily Traffic (Adt)	,	26 vehicle	S				-	Autos:	15		
Peak Hour Percentage	7.9	91%				dium Truc		/	15		
Peak Hour Volume	3,09	5 vehicles			He	avy Truck	s (3+ A	xles):	15		
Vehicle Speed	5	55 mph		-	Vehicle I	Wix					
Near/Far Lane Distance		30 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	70.7%	11.8%	17.5%	89.279
Barrier Height		0.0 feet			Me	edium Tru	cks:	82.2%	3.5%	14.3%	1.939
Barrier Type (0-Wall, 1-Berm)	: (	0.0			F	Heavy Tru	cks:	70.8%	6.2%	23.0%	8.80%
Centerline Dist. to Barrier		0.0 feet		1	Noise Sc	ource Ele	vations	(in fe	et)		
Centerline Dist. to Observer	60	0.0 feet		ı		Autos		000	.,		
Barrier Distance to Observer	. (	0.0 feet			Mediu	m Trucks:		97			
Observer Height (Above Pad)		5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	iustmen	t: 0.0
Pad Elevation	. (	0.0 feet		L							
Road Elevation	. (	0.0 feet		Į.	Lane Eq	uivalent L	Distanc	e (in t	feet)		
Road Grade	0.0	0%				Autos:					
Left View	-90	0.0 degree	S		Mediui	m Trucks:	44.8	303			
Right View	90	0.0 degree	S		Heav	y Trucks:	44.	322			
FHWA Noise Model Calculation	ons										
VehicleType REMEL	_	ffic Flow	Dist	tance	_	Road	Fresn		Barrier Att		rm Atten
Autos: 71.	-	1.70		0.5		-1.20		-4.69		000	0.00
Medium Trucks: 82.4		-14.95		0.6		-1.20		-4.88		000	0.00
Heavy Trucks: 86.4		-8.36		0.6		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise Levels (wi			arrie								
VehicleType Leq Peak F		Leq Day		Leq E	vening	Leq N	-		Ldn		NEL
	72.9		1.6		69.8		66.8		74.	_	74.
	66.9				58.5		59.9		67.		67.
· · · · · · · · · · · · · · · · · · ·	Heavy Trucks: 77.4 76.2			71.6		72.5		79.	-	79.	
Vehicle Noise:	79.0		7.8		74.0		73.7		80.9	9	81.
	Contou	ır (in feet)									
Centerline Distance to Noise				70 (	dBA	65 dl	3A		iO dBA		aBA
Centerline Distance to Noise		,	.dn:	70 (	dBA 318	65 dl	3A 684	6	0 dBA 1.475		3.177

Friday, October 14, 2022

FHWA-R	D-77-108 HIGH	WAY NOIS	SE PREDIC	TION N	IODEL (9/	12/2021)					
Scenario: E+P Road Name: Riverside I Road Segment: w/o Haven			Project Name: Rich Haven Specific Plan Job Number: 14822								
SITE SPECIFIC II	NPUT DATA		NOISE MODEL INPUTS								
Highway Data			Site Con	ditions	(Hard = 1	), Soft = 15	)				
Average Daily Traffic (Adt):	17,898 vehicle	S				itos: 15					
Peak Hour Percentage:	7.91%				ucks (2 Ax	/					
Peak Hour Volume:	1,416 vehicles		He	avy Tru	cks (3+ Ax	les): 15					
Vehicle Speed:	50 mph		Vehicle	Mix							
Near/Far Lane Distance:	80 feet		Veh	icleType	. D	ay Evenir	ng N	ight Daily			
Site Data				,	Autos: 7	0.7% 11.8	% 1	7.5% 88.05%			
Barrier Height:	0.0 feet		М	edium T	rucks: 8	2.2% 3.5	% 1	4.3% 2.15%			
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy T	rucks: 7	0.8% 6.2	% 2	3.0% 9.80%			
Centerline Dist. to Barrier:	60.0 feet		Noise So	ource El	evations	in feet)					
Centerline Dist. to Observer:	60.0 feet			Auto							
Barrier Distance to Observer:	0.0 feet		Mediu	m Truck							
Observer Height (Above Pad): 5.0 feet			Hear	vy Truck	s: 8.00	4 Grade	Adjusi	tment: 0.0			
Pad Elevation:	0.0 feet			•							
Road Elevation:	0.0 feet		Lane Eq		Distance	, ,					
Road Grade:	0.0%			Auto							
Left View:	-90.0 degree			m Truck							
Right View:	90.0 degree	S	пеач	y Truck	s: 44.82	:2					
FHWA Noise Model Calculation											
VehicleType REMEL	Traffic Flow	Distance		Road	Fresnei			Berm Atten			
Autos: 70.20		-	).58	-1.20		.69	0.000				
Medium Trucks: 81.00		-	).61	-1.20		.88	0.000				
Heavy Trucks: 85.38			).61	-1.20		5.34	0.000	0.000			
Unmitigated Noise Levels (with					N.E. and I	l da		ONE			
VehicleType Leq Peak Ho  Autos: 6			Evening 65.2		Night 62.2	Ldn	20.0	CNEL			
		67.0 62.3	54.6		56.0		69.6 63.8	70.0 63.9			
		72.6	54.6 68.1		69.0		76.0	76.2			
	73.9 72.6 75.2 74.0		70.0		70.0		77.1	77.3			
Centerline Distance to Noise C	ontour (in feet)										
			0 dBA	65	dBA	60 dBA		55 dBA			
		Ldn:	178		384	3	327	1,783			
		IEL:	185		398		357	1.845			

	FHWA-RI	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION M	IODEL	(9/12/20	021)					
Road Na	ario: OY me: Riverside [ ent: w/o Haven						Name: lumber:		aven Spec	ific Plan				
	SPECIFIC IN	IPUT DATA			NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)									
Highway Data					Site Con	aitions	(Hara =		iπ = 15)					
Average Dail	y Traffic (Adt):	18,998 vehicl	es					Autos:	15					
Peak Hou	ır Percentage:	7.91%				dium Tri								
Peak	Hour Volume:	1,503 vehicle	S		He	avy Truc	cks (3+	Axles):	15					
V	ehicle Speed:	50 mph		f	Vehicle i	Mix								
Near/Far L	ane Distance:	80 feet		F	Veh	icleType		Day	Evening	Night	Daily			
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%			
R	arrier Height:	0.0 feet			Medium Trucks: 82.2% 3.5% 14.39						2.42%			
Barrier Type (0-		0.0			Heavy Trucks: 70.8% 6.2% 23.0% 11.05									
Centerline L	Dist. to Barrier:	60.0 feet		f	Noise Source Elevations (in feet)									
Centerline Dist	t. to Observer:	60.0 feet		F	Autos: 0.000									
Barrier Distance	e to Observer:	0.0 feet			Mediu	m Truck		.297						
Observer Height	Observer Height (Above Pad): 5.0 feet					vy Truck		.004	Grade Ad	iustment	- 0.0			
Pad Elevation: 0.0 feet			L						,					
R	Road Elevation: 0.0 feet				Lane Eq	uivalent	t Distan	ce (in f	feet)					
	Road Grade:	0.0%				Auto	s: 45	.000						
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 44	.803						
	Right View:	90.0 degre	es		Heav	y Truck	s: 44	.822						
FHWA Noise Mod		s		- I										
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fres		Barrier Att	en Bei	m Atten			
Autos				0.5		-1.20		-4.69		000	0.000			
Medium Trucks	: 81.00	-16.69		0.6	31	-1.20	-4.88		0.0	000	0.000			
Heavy Trucks	: 85.38	-10.09		0.6	.61 -1.20 -5		-5.34	0.0	000	0.000				
Unmitigated Nois								_						
VehicleType	Leq Peak Hou			Leq E	vening	_	Night		Ldn		NEL			
Autos		3.4	67.2		65.4		62.	-	69.	-	70.2			
Medium Trucks		3.7	63.1		55.4		56.	-	64.	-	64.7			
Heavy Trucks Vehicle Noise		4.7 73.4 5.9 74.7			68.9 70.6		69. 70.				77.0 78.0			
Centerline Distar	nce to Noise Co	ontour (in feet	9											
		(111 100)	,	70	dBA	65	dBA	6	0 dBA	55	dBA			
			Ldn:		198		426	3	918	1	1,978			
		С	NEL:		205		441	1	950		2,047			

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	FHWA-R	D-77-108 HIGH	WAY	NOISE I	PREDIC	CTION I	MODEL (9	/12/20	21)	
	rio: HY ne: Riverside [ nt: w/o Haven						t Name: F Number: 1		ven Specific	Plan
SITE	SPECIFIC II	NPUT DATA					NOISE N	IODEL	. INPUTS	
Highway Data				S	ite Cor	nditions	(Hard =	10, Soi	ft = 15)	
Peak F Ve	Traffic (Adt): Percentage: Hour Volume: chicle Speed: ane Distance:	32,988 vehicl 7.91% 2,609 vehicle 50 mph 80 feet		ν	He ehicle	eavy Tru <b>Mix</b>	rucks (2 A Icks (3+ A	xles):	15 15 15	
	ine Distance.	00 leet			Vel	nicleTyp		,	-	light Daily
Site Data  Ba  Barrier Type (0-W	rrier Height: Vall, 1-Berm):	0.0 feet 0.0				fedium T Heavy T	Trucks:	70.7% 82.2% 70.8%	3.5%	17.5% 86.53 14.3% 2.42 23.0% 11.05
Centerline Di	ist. to Barrier:	60.0 feet		N	loise S	ource E	levations	(in fe	et)	
Ro	to Observer:	60.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 w -90.0 degre		L	Hea <b>ane E</b> q Mediu	Auto vy Truck  uivalen  Auto im Truck  vy Truck	ks: 2.2 ks: 8.0 os: 45.0 ks: 44.8	97 104 <b>e (in fe</b> 100 803	Grade Adjus	stment: 0.0
FHWA Noise Mod	ol Calculation	-								
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	e/ F	Barrier Atten	Berm Atte
Autos:				0.58		-1.20		4.69	0.00	
Medium Trucks: Heavy Trucks:				0.61 0.61		-1.20 -1.20		-4.88 -5.34	0.00	
Unmitigated Noise	e Levels (with	out Topo and	barrie	r attenu	ıation)					
VehicleType	Leq Peak Ho		_	Leq Ev			Night		Ldn	CNEL
Autos:		0.8	69.6		67.8		64.7		72.2	7:
Medium Trucks:		3.1	65.5		57.8		59.2		66.9	6
Heavy Trucks:		7.1	75.8		71.3		72.2		79.2	79
Vehicle Noise:		3.3	77.1		73.0	)	73.1		80.2	81
Centerline Distan	ce to Noise C	ontour (in feet	)	70 d	D.A.		i dBA	-	) dBA	55 dBA
			Ldn:	70 a	<i>ВА</i> 286		616	00	1.327	2.8
		_	NEL:		286		637		1,327	2,8
		C	IVLL.		290		037		1,372	2,9

					E PREDIC			•			
	D: OY+P	_							laven Spec	ific Plan	
	e: Riverside [					Job N	umber:	14822			
Road Segmen	ι. w/o Haven	AV.									
	PECIFIC II	NPUT DATA	١						L INPUT	S	
Highway Data					Site Con	ditions	(Hard :	= 10, Sc	oft = 15)		
Average Daily	raffic (Adt):	21,016 vehi	cles					Autos:	15		
Peak Hour I	Percentage:	7.91%				dium Tru		,			
	our Volume:	1,662 vehic	les		He	avy Truc	cks (3+	Axles):	15		
	icle Speed:	50 mph			Vehicle	Mix					
Near/Far Lar	e Distance:	80 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							lutos:	70.7%	11.8%	17.5%	87.839
Bar	rier Heiaht:	0.0 feet			М	edium Ti	rucks:	82.2%	3.5%	14.3%	2.199
Barrier Type (0-Wi		0.0				Heavy Ti	rucks:	70.8%	6.2%	23.0%	9.999
Centerline Dis	t. to Barrier:	60.0 feet			Noise S	ource El	evatio	ns (in fe	eet)		
Centerline Dist. t	o Observer:	60.0 feet				Auto:		0.000	,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Truck:		297			
Observer Height (		5.0 feet			Heav	v Truck	s: 8	.004	Grade Ad	iustment	: 0.0
	d Elevation:	0.0 feet				,					
	d Elevation:	0.0 feet			Lane Eq				feet)		
F	Road Grade:	0.0%				Auto		5.000			
	Left View:	-90.0 degi				m Truck		.803			
	Right View:	90.0 degi	rees		Hear	y Truck:	s: 44	.822			
FHWA Noise Mode		7									
VehicleType	REMEL	Traffic Flow	_	stance		Road	Fres		Barrier Att	_	m Atten
Autos:	70.20			0.		-1.20		-4.69		000	0.00
Medium Trucks:	81.00			0.		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38			0.		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	•										
VehicleType Autos:	Leq Peak Ho	ur Leq D B.9	<i>ay</i> 67.7	Leq I	vening 65.9		Night 62	0	Ldn 70.:		NEL 70
Medium Trucks:		3.7	63.1		55.4		56		64.	-	64
		3.7 4.7	73.4		68.9		50 69		76.	-	
Heavy Trucks: _ Vehicle Noise:		6.0	74.8		70.8		70		77.	-	77. 78.
Centerline Distanc	e to Noise C	ontour (in fo	of)								
Semerime Distanc	HUISE C	omour (mre	-:/	70	dBA	65	dBA	- 6	60 dBA	55	dBA
			· ·								
			Ldn:		200		43	2	930	)	2,004

	FHWA-R	D-77-108 HIGH	A YAW	IOISE I	PREDIC	TION MC	DEL (	9/12/2	021)		
	o: HY+P								aven Spec	ific Plan	
	e: Riverside [					Job Nu	mber:	14822			
Road Segmen	t: w/o Haven	Av.									
SITE S	SPECIFIC II	NPUT DATA		9	ite Con	NO ditions (l			L INPUT	S	
	T 6E (A-W).	25 222			nte oon	unions (i		Autos:	15		
Average Daily	Percentage:	35,006 vehicl 7.91%	es		Me	dium Truc					
	our Volume:	2.769 vehicle				avy Truck		,			
	hicle Speed:	50 mph	:5				13 (51.	ANICO).	10		
Near/Far Lar		80 feet		ν	ehicle						
	ic Distance.	00 1001			Veh	icleType		Day	Evening	Night	Daily
Site Data							ıtos:	70.7%		17.5%	
Bar	rier Height:	0.0 feet				edium Tru		82.2%		14.3%	
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy Tru	icks:	70.8%	6.2%	23.0%	10.419
Centerline Dis	t. to Barrier:	60.0 feet		٨	loise S	ource Ele	vation	s (in fe	eet)		
Centerline Dist. t	to Observer:	60.0 feet				Autos:		.000			
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks:	-	297			
Observer Height (	Above Pad):	5.0 feet				vy Trucks:		004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		L	ane Eq	uivalent l			feet)		
F	Road Grade:	0.0%				Autos:		.000			
	Left View:	-90.0 degre	es			m Trucks:		.803			
	Right View:	90.0 degre	es		Heav	y Trucks:	44	.822			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		ance		Road	Fresi		Barrier Att		m Atten
Autos:	70.20			0.58		-1.20		-4.69		000	0.00
Medium Trucks:	81.00			0.61		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38			0.61		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise VehicleType	Levels (with Leg Peak Ho			<b>attenu</b> Leg Ev		Leg N	liaht	1	Ldn		NEL
Autos:		1.1	69.8	LCG LV	68.1	Login	65.	0	72.		72
Medium Trucks:	-	3.1	65.5		57.8		59.	-	66.5	-	67
Heavy Trucks:	-	7.1	75.8		71.3		72.	_	79.	-	79
Vehicle Noise:		3.3	77.1		73.1		73.		80.		80.
Centerline Distanc	e to Noise C	ontour (in fee	t)								
				70 d	BA	65 di	BA	6	0 dBA	55	dBA
			Ldn:		288		620	)	1,337		2,87
		_	NEL:		298		642		1.383		2.98

FHW.	-RD-7	7-108 HIGH	WAY	NOISE	PREDIC	TION N	ODEL (	9/12/20	021)		
Scenario: E Road Name: Riversio Road Segment: w/o Mill		v.					Name: umber:		aven Spec	ific Plan	
SITE SPECIFIC	INP	UT DATA			a:. a				L INPUT	S	
Highway Data					Site Con	aitions					
Average Daily Traffic (Adi	): 9	9,308 vehicle	es					Autos:	15		
Peak Hour Percentag	e: '	7.91%				dium Tr		,			
Peak Hour Volum	e:	736 vehicles	S		He	avy Tru	cks (3+ )	Axles):	15		
Vehicle Spee	d:	50 mph		1	Vehicle I	Mix					
Near/Far Lane Distanc	e:	80 feet		Ė		icleType		Day	Evening	Night	Daily
Site Data						,	Autos:	70.7%	11.8%	17.5%	86.53%
Barrier Heigh	t:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-Wall, 1-Bern		0.0			1	Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dist. to Barrie		60.0 feet		1	Noise So	ource El	evation	s (in fe	eet)		
Centerline Dist. to Observe		60.0 feet				Auto	s: 0.	000			
Barrier Distance to Observe	r:	0.0 feet			Mediu	m Truck	s: 2	297			
Observer Height (Above Page	D:	5.0 feet				vy Truck		004	Grade Ad	liustment	0.0
Pad Elevatio	n:	0.0 feet		L						,	
Road Elevatio	n:	0.0 feet		1	Lane Eq				feet)		
Road Grad	e:	0.0%				Auto		.000			
Left Vie	V:	-90.0 degree	es		Mediu	m Truck	s: 44.	.803			
Right Vie	V:	90.0 degree	es		Heav	y Truck	s: 44.	822			
FHWA Noise Model Calculat											
VehicleType REMEL		raffic Flow	Dis	stance		Road	Fresi	_	Barrier Att		m Atten
	.20	-4.25		0.5	-	-1.20		-4.69		000	0.00
Medium Trucks: 81	.00	-19.79		0.6	1	-1.20		-4.88		000	0.00
											0.000
Heavy Trucks: 85	.38	-13.19		0.6		-1.20		-5.34	0.0	000	0.00
Heavy Trucks: 85	rithou	t Topo and		er atten	uation)		Alicelat	-5.34			
Heavy Trucks: 85  Unmitigated Noise Levels (w VehicleType   Leq Peak	<b>rithou</b> Hour	t Topo and Leq Day	′		uation) vening	Leq	Night		Ldn	C	NEL
Heavy Trucks: 85  Unmitigated Noise Levels (w VehicleType   Leq Peak Autos:	Hour 65.3	t Topo and Leq Day	64.1	er atten	uation) vening 62.3	Leq	59.:	2	<i>Ldn</i> 66.	C 1	NEL 67.
Heavy Trucks: 85  Unmitigated Noise Levels (w VehicleType   Leq Peak Autos: Medium Trucks:	Hour 65.3 60.6	<b>t Topo and</b> Leq Day	64.1 60.0	er atten	vening 62.3 52.3	Leq	59.5 53.	2	<i>Ldn</i> 66. 61.	7 4	NEL 67.1
Heavy Trucks: 85  Unmitigated Noise Levels (w VehicleType   Leq Peak Autos:	Hour 65.3	<b>t Topo and</b> Leq Day	64.1	er atten	uation) vening 62.3	Leq	59.:	2 7	<i>Ldn</i> 66.	Ci 7 4	NEL 67. 61. 73.
Heavy Trucks: 85  Unmitigated Noise Levels (w VehicleType   Leq Peak Autos:  Medium Trucks: Heavy Trucks: Vehicle Noise:	65.3 60.6 71.6 72.8	t Topo and Leq Day	64.1 60.0 70.3 71.6	er atten	vening 62.3 52.3 65.8	Leq	59.5 53.6 66.	2 7	Ldn 66. 61. 73.	Ci 7 4	NEL 67. 61. 73.
Heavy Trucks: 85  Unmitigated Noise Levels (w VehicleType   Leq Peak Autos:  Medium Trucks: Heavy Trucks:	65.3 60.6 71.6 72.8	t Topo and Leq Day	64.1 60.0 70.3 71.6	er atten	vening 62.3 52.3 65.8 67.5	Leq	59.5 53.6 66.	2 7 7 6	Ldn 66. 61. 73.	Ci 7 4 7	
Heavy Trucks: 85  Unmitigated Noise Levels (w VehicleType   Leq Peak Autos:  Medium Trucks: Heavy Trucks: Vehicle Noise:	65.3 60.6 71.6 72.8	t Topo and Leq Day	64.1 60.0 70.3 71.6	er atten Leq E	vening 62.3 52.3 65.8 67.5	Leq	59.: 53.: 66.: 67.:	2 7 7 6	Ldn 66. 61. 73. 74.	Ci 7 4 7 7	NEL 67. 61.6 73.9 74.9

		D-77-108 HIGH	a d fa d	HOIGE				•			
Scenario Road Name Road Segmen	e: Riverside D						t Name. lumber		laven Spec	ific Plan	
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	13,501 vehicl	es					Autos	15		
Peak Hour I	Percentage:	7.91%			Me	dium Ti	rucks (2	Axles).	15		
Peak Ho	our Volume:	1,068 vehicle	S		He	avy Tru	icks (3+	Axles).	15		
	nicle Speed:	50 mph		1	/ehicle	Mix					
Near/Far Lar	ne Distance:	80 feet		F		icleType	е	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	6 11.8%	17.5%	86.539
Ran	rier Height:	0.0 feet			М	edium 7	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-Wa	all, 1-Berm):	0.0			1	Heavy 7	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dis		60.0 feet		1	Voise So	ource E	levatio	ns (in f	eet)		
Centerline Dist. t		60.0 feet				Auto	s: (	0.000	,		
Barrier Distance t		0.0 feet			Mediu	m Truck	(s: 2	2.297			
Observer Height (	,	5.0 feet			Heav	y Truck	(S: 8	3.004	Grade Adj	ustment	0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		-	.ane Eq			_ •	reet)		
F	Road Grade:	0.0%				Auto		5.000			
	Left View: Right View:	-90.0 degre				m Truck vy Truck		1.803 1.822			
	Rigitt view.	90.0 degre	es		11ca	ry IIuur	13. 44	1.022			
FHWA Noise Mode					1						
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Atte		m Atten
Autos:	70.20	-2.64		0.58	-	-1.20		-4.69		000	0.00
Medium Trucks: Heavy Trucks:	81.00 85.38	-18.17 -11.58		0.6		-1.20 -1.20		-4.88 -5.34		000	0.00
Unmitigated Noise						-1.20		-0.34	0.0	100	0.00
	Lea Peak Hou			Leg E		Len	Night	_	Ldn		NEL
Autos:	66		65.7	LUG LI	63.9	Loq	60	9	68.3		68.
Medium Trucks:	62		61.6		53.9		55		63.1		63.
Heavy Trucks:	73		71.9		67.4		68		75.3		75.
Vehicle Noise:	74	.4	73.2		69.1		69	.2	76.3	3	76.
Centerline Distanc	e to Noise Co	ontour (in feet	)								
				70 c		65	dBA		60 dBA	55	dBA
			Ldn:		158		33	a	731		1.576
			Luii.		100		55	J	701		1,01

Scenario	: F+P					Project N	lame:	Rich H	aven Spec	ific Plan	
	: Riverside D	r.				Job Nu			avon opoc	mo i idii	
Road Segment						000 / 10		··ozz			
	PECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions (F	ara =	10, Sc	itt = 15)		
Average Daily T	raffic (Adt):	16,275 vehicles	S					Autos:	15		
Peak Hour F	Percentage:	7.91%				dium Truc			15		
Peak Ho	ur Volume:	1,287 vehicles			He	avy Truck	s (3+ )	4xles):	15		
Veh	icle Speed:	50 mph		V	ehicle N	Лix					
Near/Far Lan	e Distance:	80 feet		Ė	Vehi	cleType		Day	Evening	Night	Daily
Site Data						Αι	ıtos:	70.7%	11.8%	17.5%	92.30
Barr	ier Heiaht:	0.0 feet			Me	edium Tru	cks:	82.2%	3.5%	14.3%	1.38
Barrier Type (0-Wa		0.0			F	leavy Tru	cks:	70.8%	6.2%	23.0%	6.32
Centerline Dist	to Barrier:	60.0 feet		N	nise Sn	urce Ele	vation	s (in fe	et)		
Centerline Dist. to	Observer:	60.0 feet		- 1	0.00 00	Autos:		000	,		
Barrier Distance to	Observer:	0.0 feet			Mediur	n Trucks:		297			
Observer Height (A	lbove Pad):	5.0 feet				v Trucks:		004	Grade Ad	iustment	. 0.0
Pad	d Elevation:	0.0 feet			ricav	y Trucks.	0.	004	0/440 / 14	Juotimom	. 0.0
Road	d Elevation:	0.0 feet		Li	ane Equ	uivalent L	Distan	ce (in i	eet)		
R	oad Grade:	0.0%				Autos:	45.	000			
	Left View:	-90.0 degrees	8		Mediur	n Trucks:	44.	803			
	Right View:	90.0 degrees	S		Heav	y Trucks:	44.	822			
FHWA Noise Model	Calculations	3									
VehicleType	REMEL	Traffic Flow	Distai	псе	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atter
Autos:	70.20	-1.55		0.58		-1.20		-4.69	0.0	000	0.00
Medium Trucks:	81.00	-19.79		0.61		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-13.19		0.61		-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	•							1		1	
	.eq Peak Hou			eq Eve	-	Leq N	-		Ldn		NEL
Autos:	68		6.8		65.0		61.9	-	69.4		69
Medium Trucks:	60		0.0		52.3		53.		61.4		61
Heavy Trucks:	71		0.3		65.8		66.		73.		73
Vehicle Noise:	73	.4 7	2.2		68.5		68.	1	75.	2	75
Centerline Distance	to Noise Co	ntour (in feet)		70."	74	CF "	-		-O -ID 4		-10.4
				70 dl		65 dl			i0 dBA		dBA
		_	.dn:		134		289		622		1,33
		CN	EL:		139		300		645	•	1.39

Friday, October 14, 2022

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	(9/12/2	(021)				
Road Nar	rio: OY+P ne: Riverside D ent: w/o Milliker				Project Name: Rich Haven Specific Plan Job Number: 14822								
	SPECIFIC IN	IPUT DATA			Sita Can				EL INPUT	s			
Highway Data					Site Con	aitions	Hara						
Average Daily	. ,	20,468 vehicle	es			-ti	! (0	Autos					
	r Percentage: Hour Volume:	7.91%				edium Tru eavy Truc							
	ehicle Speed:	1,619 vehicles	5		пе	avy IIuc	KS (3+	Axies)	. 15				
	enicie Speea: ane Distance:	50 mph			Vehicle I	Mix							
Near/Far La	ane Distance:	80 feet			Veh	icleType		Day	Evening	Night	Daily		
Site Data						A	lutos:	70.79	6 11.8%	17.5%	91.12%		
Ва	arrier Height:	0.0 feet			M	edium Tr	ucks:	82.29	6 3.5%	14.3%	1.60%		
Barrier Type (0-V		0.0			1	Heavy Tr	ucks:	70.89	6.2%	23.0%	7.29%		
Centerline D	ist. to Barrier:	60.0 feet		ŀ	Noise So	ourco El	ovatio	ne (in t	inati				
Centerline Dist	to Observer:	60.0 feet		H	NOISE SC	Autos		0.000	eeij				
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		297					
Observer Height	(Above Pad):	5.0 feet				vy Trucks		.004	Grade Ad	iustmen	t· 0.0		
F	Pad Elevation:	0.0 feet		ļ	ricas	ry Trucks	s. c	1.004	0/440/14	, 401, 11011	0.0		
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalent	Dista	ıce (in	feet)				
	Road Grade:	0.0%				Autos		5.000					
	Left View:	-90.0 degree	es			m Trucks		.803					
	Right View:	90.0 degree	es		Heav	y Trucks	5: 44	.822					
FHWA Noise Mod													
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fres		Barrier Att		rm Atten		
Autos		-0.61		0.5		-1.20		-4.69		000	0.000		
Medium Trucks		-18.17		0.6		-1.20		-4.88		000	0.000		
Heavy Trucks.		-11.58		0.6		-1.20		-5.34	0.	000	0.000		
Unmitigated Nois VehicleType	Leg Peak Hou				vening	Lea	Night	1	Ldn		NFL		
Autos			67.7	204 L	65.9	,	62	9	70.	_	70.7		
Medium Trucks			61.6		53.9		55		63.		63.2		
Heavy Trucks	73	.2	71.9		67.4		68	.3	75.	3	75.5		
Vehicle Noise		.8	73.6		69.9		69	.6	76.		76.9		
Centerline Distan	ce to Noise Co	ontour (in feet,	)							,			
			L	70	dBA	65 (	dBA		60 dBA		5 dBA		
			Ldn:		167		36	-	777		1,673		
		Ci	NEL:		174		37	4	805	•	1,735		

	FHWA-R	D-77-108 HIGH	IWAY	NOISE	PREDIC	TION N	IODEL	(9/12/2	021)		
Road Nar	rio: HY ne: Riverside [ ent: w/o Milliker						Name: lumber:		aven Spec	ific Plan	
	SPECIFIC II	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	aitions	(Hara =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	36,188 vehicle	es					Autos:			
	r Percentage:	7.91%				dium Tr					
Peak I	Hour Volume:	2,862 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Ve	ehicle Speed:	50 mph		- 1	Vehicle	Mix					
Near/Far La	ane Distance:	80 feet		F		icleType	,	Dav	Evenina	Niaht	Dailv
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Rs	arrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-V		0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
*, ,	ist. to Barrier:	60.0 feet		-	Noise S			- /:- #	41		
Centerline Dist.	to Observer:	60.0 feet		H.	Noise S	Auto			eet)		
Barrier Distance	to Observer:	0.0 feet			A de elle			.000			
Observer Height	(Above Pad):	5.0 feet				m Truck			0		
	Pad Elevation:	0.0 feet			Hea	y Truck	s: 8	.004	Grade Ad	justment	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 45	.000			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 44	.803			
	Right View:	90.0 degre	es		Hea	y Truck	s: 44	.822			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	1.64		0.5	8	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	81.00	-13.89		0.6	1	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-7.30		0.6	1	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	71	1.2	70.0		68.2		65.	1	72.0	6	73.0
Medium Trucks:	: 66	3.5	65.9		58.2		59.	6	67.3	3	67.5
Heavy Trucks:	77	7.5	76.2		71.7		72.	6	79.6	3	79.8
Vehicle Noise:	78	3.7	77.5		73.4		73.	5	80.6	3	80.8
Centerline Distan	ce to Noise C	ontour (in feet	)								
				70	dBA	65	dBA	6	60 dBA	55	dBA
			Ldn:		304		65	5	1,411		3,040
		C	NEL:		314		678	3	1,460	1	3.145

0-	. F					Dunia 1	Manage Divi		- Di
Scenar	ıo: E ne: Chino Av.						Name: Rici umber: 148	n Haven Specif	ic Plan
	nt: e/o Archibal	d Av				JOD N	umber: 148	22	
Road Segine	nt. e/o Archiba	u Av.							
	SPECIFIC IN	PUT DATA						DEL INPUTS	
Highway Data				S	ite Con	ditions	(Hard = 10,	Soft = 15)	
Average Daily	Traffic (Adt):	5,409 vehicle	es				Aut	os: 15	
Peak Hour	Percentage:	7.91%					ucks (2 Axle	,	
Peak H	lour Volume:	428 vehicles	3		He	avy Tru	cks (3+ Axle	s): 15	
Ve	hicle Speed:	40 mph		V	ehicle I	Mix			
Near/Far La	ne Distance:	12 feet		-	Vehi	icleType	Da	y Evening	Night Daily
Site Data								7% 11.8%	17.5% 86.539
P.	rrier Heiaht:	0.0 feet			М	edium T		2% 3.5%	14.3% 2.429
Barrier Type (0-W		0.0 1661			F	leavv T	rucks: 70.	8% 6.2%	23.0% 11.059
Centerline Di	. ,	44.0 feet				,			
Centerline Dist.		44.0 feet		N	oise Sc		evations (ii		
Barrier Distance		0.0 feet				Auto	0.000		
Observer Height		5.0 feet				n Truck			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.004	Grade Adju	stment: 0.0
	ad Elevation:	0.0 feet		Li	ane Ea	uivalent	Distance (	in feet)	
	Road Grade:	0.0%				Auto			
	Left View:	-90.0 degree	26		Mediui	n Truck			
	Right View:	90.0 degree			Heav	y Truck			
	3		-			•			
FHWA Noise Mode	el Calculations	5							
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fresnel	Barrier Atter	
Autos:	66.51	-5.64		0.75		-1.20	-4.		
Medium Trucks:		-21.17		0.78		-1.20	-4.		
Heavy Trucks:	82.99	-14.58		0.78		-1.20	-5.	50 0.00	0.00
Unmitigated Noise	e Levels (with	out Topo and	barrie	er attenu	ation)				
VehicleType	Leg Peak Hou	r Leg Day	,	Leg Eve	ening	Leg	Night	Ldn	CNEL
Autos:	60.	.4	59.1		57.4		54.3	61.7	62
Medium Trucks:	56.	.1	55.5		47.8		49.2	56.9	57
Heavy Trucks:	68	.0	66.7		62.2		63.1	70.1	70
Vehicle Noise:	68	.9	67.7		63.5		63.8	70.8	71
Centerline Distanc	ce to Noise Co	ntour (in feet	)						
				70 dE	BA	65	dBA	60 dBA	55 dBA
			Ldn:		50		108	233	50
			Luii.		30				

	104.5					B : 44				·6 DI	
	io: HY+P e: Riverside D					Project N Job Nu			aven Spec	ific Plan	
	e: Riverside L nt: w/o Milliker					JOD IVU	mber.	14822			
	SPECIFIC IN					N			L INPUT		
Highway Data	SPECIFIC IN	IPUI DATA		5	Site Con	ditions (F				3	
Average Daily	Traffic (Adt):	43.155 vehicles						Autos:	15		
Peak Hour	Percentage:	7.91%			Ме	dium Truc	ks (2 A	(xles):	15		
Peak H	our Volume:	3,414 vehicles			He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	50 mph		,	/ehicle l	Miss					
Near/Far La	ne Distance:	80 feet		١,		icleType		Dav	Evening	Night	Dailv
Site Data					****			70.7%		17.5%	
	rier Heiaht:	0.0 feet		=	Me	edium Tru		82.2%		14.3%	
Barrier Type (0-W		0.0 reet			ŀ	leavy Tru		70.8%		23.0%	
Centerline Di	. ,	60.0 feet		L							
Centerline Dist		60.0 feet		٨	Voise Sc	urce Ele			eet)		
Barrier Distance		0.0 feet				Autos:		000			
Observer Height (		5.0 feet				m Trucks:		297	0	·	4. 0.0
Pa	ad Elevation:	0.0 feet			неач	y Trucks:	8.0	004	Grade Ad	jusunen	. 0.0
Ros	ad Elevation:	0.0 feet		L	Lane Eq	uivalent L	Distanc	e (in f	feet)		
ı	Road Grade:	0.0%				Autos:	45.0	000			
	Left View:	-90.0 degrees			Mediui	m Trucks:	44.8	303			
	Right View:	90.0 degrees			Heav	y Trucks:	44.	322			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Be	rm Atter
Autos:	70.20	2.52		0.58	В	-1.20		-4.69	0.0	000	0.0
Medium Trucks:	81.00	-13.89		0.61		-1.20		-4.88		000	0.0
Heavy Trucks:	85.38	-7.30		0.61	1	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise											
	Leq Peak Hou			.eq Ev	ening/	Leq N	-		Ldn		NEL
Autos:	72		0.8		69.1		66.0		73.4		73
Medium Trucks:	66		5.9		58.2		59.6		67.	-	67
Heavy Trucks:	77		3.2		71.7		72.6		79.0	-	79
Vehicle Noise:	78	.9 7	7.6		73.7		73.6	i	80.	7	80
Centerline Distanc	e to Noise Co	ontour (in feet)		70		05.0					
			. ∟	70 d		65 dl		6	0 dBA		dBA
			dn:		311		670		1,444		3,11
		CN	L.		322		694		1,495	•	3,22

	FHWA-RD	)-77-108 HIGHV	VAY NOI	SE PREDIO	CTION N	10DEL (9/1	12/2021)		
Scenario Road Name Road Segmen	e: Chino Av.	ld Av.			.,	Name: Rid lumber: 14	ch Haven Sp 822	ecific	Plan
	PECIFIC IN	PUT DATA					DEL INPU	JTS	
Highway Data				Site Cor	nditions	(Hard = 10	), Soft = 15)		
Average Daily 1	raffic (Adt):	8,054 vehicles	3			Au	tos: 15		
Peak Hour F	Percentage:	7.91%				ucks (2 Axl	/		
Peak Ho	our Volume:	637 vehicles		He	eavy Tru	cks (3+ Axl	les): 15		
	icle Speed:	40 mph		Vehicle	Mix				
Near/Far Lan	e Distance:	12 feet			nicleType	e Da	ay Evenin	g Ni	ght Daily
Site Data						Autos: 70	0.7% 11.8	% 1	7.5% 90.95%
Barı	rier Height:	0.0 feet		M	ledium T	rucks: 82	2.2% 3.59	% 1	4.3% 1.63%
Barrier Type (0-Wa	-	0.0			Heavy T	rucks: 70	0.8% 6.29	% 2	3.0% 7.42%
Centerline Dis	t. to Barrier:	44.0 feet		Noise S	ource E	levations (	in feet)		
Centerline Dist. to	o Observer:	44.0 feet			Auto				
Barrier Distance to	o Observer:	0.0 feet		Mediu	ım Truck		-		
Observer Height (A	,	5.0 feet			vy Truck		4 Grade	Adjust	ment: 0.0
	d Elevation:	0.0 feet			•				
	d Elevation:	0.0 feet		Lane Eq		t Distance			
R	Road Grade:	0.0%			Auto				
	Left View:	-90.0 degrees			m Truck		-		
	Right View:	90.0 degrees	3	Hea	vy Truck	s: 43.69	2		
FHWA Noise Mode	l Calculation:	5		1					
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier A	Atten	Berm Atten
Autos:	66.51	-3.70		0.75	-1.20			0.000	0.000
Medium Trucks:	77.72	-21.17		0.78	-1.20			0.000	0.000
Heavy Trucks:	82.99	-14.58	(	0.78	-1.20	-5	.50	0.000	0.000
Unmitigated Noise	Levels (with	out Topo and b	arrier att	tenuation)					
	Leq Peak Hou			Evening		Night	Ldn		CNEL
Autos:	62		1.1	59.3		56.3		3.7	64.1
Medium Trucks:	56		5.5	47.8		49.2		6.9	57.1
Heavy Trucks:	68		6.7	62.2		63.1		0.1	70.3
Vehicle Noise:	69	.3 6	8.0	64.1		64.0	7	1.1	71.4
Centerline Distance	e to Noise Co	ntour (in feet)							
				0 dBA	65	dBA	60 dBA	40	55 dBA
		_	dn:	52		113		43	524 542
		CN	EL:	54		117	2	52	542

FHWA	-RD-	77-108 HIGH	WAY	NOISE	PREDIC	CTION N	IODEL	(9/12/20	021)		
Scenario: OY Road Name: Chino A Road Segment: e/o Arch		Av.					t Name: lumber:		aven Spec	ific Plan	
SITE SPECIFIC	INP	UT DATA			Cita Car				L INPUT	S	
Highway Data					Site Cor	iaitions	(Hara -				
Average Daily Traffic (Adt		9,529 vehicle	es					Autos:	15		
Peak Hour Percentage		7.91%				edium Ti	,	,			
Peak Hour Volume		754 vehicles	3		He	eavy Tru	cks (3+	Axles):	15		
Vehicle Speed		40 mph		ľ	Vehicle	Mix					
Near/Far Lane Distance	t:	12 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Barrier Heigh	۴-	0.0 feet			М	edium 7	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-Wall, 1-Berm		0.0				Heavy 7	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dist. to Barrie	r:	44.0 feet		-	Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist. to Observe	r:	44.0 feet		-		Auto		0.000			
Barrier Distance to Observe	r:	0.0 feet			Mediu	m Truck		.297			
Observer Height (Above Pad	):	5.0 feet				vy Truck		3.004	Grade Ad	iustment	. 0.0
Pad Elevation	1:	0.0 feet			1100	y much	.5. 0		0,000,10	Juoumoni	. 0.0
Road Elevation	n:	0.0 feet			Lane Eq	uivalen	t Distar	nce (in t	feet)		
Road Grade	e:	0.0%				Auto	s: 43	3.875			
Left View	<i>r</i> :	-90.0 degree	es		Mediu	m Truck	s: 43	3.673			
Right View	<i>/:</i>	90.0 degree	es		Hea	vy Truck	s: 43	3.692			
FHWA Noise Model Calculate	ons										
VehicleType REMEL	1	raffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier Att	en Ber	m Atten
Autos: 66	51	-3.18		0.7	-	-1.20		-4.61	0.0	000	0.000
Medium Trucks: 77	72	-18.72		0.7	78	-1.20		-4.87	0.0	000	0.000
Heavy Trucks: 82	99	-12.12		0.7	78	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise Levels (w											
VehicleType Leq Peak		Leq Day	_	Leq E	vening		Night		Ldn	_	NEL
Autos:	62.9		61.6		59.8		56		64.2	_	64.6
Medium Trucks:	58.6		58.0		50.2		51		59.4		59.5
Heavy Trucks: Vehicle Noise:	70.4		69.2 70.1		64.6		65 66		72.5		72.7
Centerline Distance to Noise					55.0		50	-		-	, , , ,
Centernine Distance to Noise	con	tour (in reet)		70	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:		73		15	7	339	,	731
		CI	VEL:		76		16	3	350	1	755

Average Daily Traffic (Adt): 11,003 vehicles Autos: 15 Peak Hour Percentage: 7.91% Medium Trucks (2 Axles): 15	
Road Segment: e/o Archibald Av.           SITE SPECIFIC INPUT DATA         NOISE MODEL INPUT:           Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adt):         11,003 vehicles           Peak Hour Percentage:         7,91%           Medium Trucks (2 Axles):         15           Medium Trucks (2 Axles):         15	S
SITE SPECIFIC INPUT DATA   NOISE MODEL INPUT	S
Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adt):         11,003 vehicles           Peak Hour Percentage:         7,91%           Medium Trucks (2 Axles):         15	S
Average Daily Traffic (Adt): 11,003 vehicles Autos: 15 Peak Hour Percentage: 7.91% Medium Trucks (2 Axles): 15	
Peak Hour Percentage: 7.91% Medium Trucks (2 Axles): 15	
Peak Hour Volume: 870 vehicles Heavy Trucks (3+ Axles): 15	
Vehicle Speed: 40 mph	
Near/Far Lane Distance: 12 feet VehicleType Day Evening	Night Daily
Site Data Autos: 70.7% 11.8%	17.5% 86.53%
Barrier Height: 0.0 feet Medium Trucks: 82.2% 3.5%	14.3% 2.42%
Barrier Type (0-Wall, 1-Berm): 0.0 Heavy Trucks: 70.8% 6.2%	23.0% 11.05%
Centerline Dist. to Barrier: 44.0 feet Noise Source Elevations (in feet)	
Centerline Dist. to Observer: 44.0 feet Autos: 0.000	
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297	
	justment: 0.0
Pad Elevation: 0.0 feet	
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)	
Road Grade: 0.0% Autos: 43.875	
Left View: -90.0 degrees Medium Trucks: 43.673	
Right View: 90.0 degrees Heavy Trucks: 43.692	
FHWA Noise Model Calculations	
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atte	
	0.00
	0.00
	0.00
Unmitigated Noise Levels (without Topo and barrier attenuation)	
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn	CNEL
Autos: 63.5 62.2 60.5 57.4 64.8	0 60:
Autos:         63.5         62.2         60.5         57.4         64.8           Medium Trucks:         59.2         58.6         50.9         52.2         60.0	
Autos:         63.5         62.2         60.5         57.4         64.8           Medium Trucks:         59.2         58.6         50.9         52.2         60.0           Heavy Trucks:         71.1         69.8         65.3         66.2         73.2	2 73.
Autos:         63.5         62.2         60.5         57.4         64.8           Medium Trucks:         59.2         58.6         50.9         52.2         60.6           Heavy Trucks:         71.1         69.8         65.3         66.2         73.2           Vehicle Noise:         72.0         70.8         66.6         66.9         73.9	2 73.
Autos:     63.5     62.2     60.5     57.4     64.8       Medium Trucks:     59.2     58.6     50.9     52.2     60.0       Heavy Trucks:     71.1     69.8     65.3     66.2     73.2       Vehicle Noise:     72.0     70.8     66.6     66.9     73.9       Centerline Distance to Noise Contour (in feet)	2 73. 9 74.
Autos:         63.5         62.2         60.5         57.4         64.8           Medium Trucks:         59.2         58.6         50.9         52.2         60.0           Heavy Trucks:         71.1         69.8         65.3         66.2         73.2           Vehicle Noise:         72.0         70.8         66.6         66.9         73.9           Centerline Distance to Noise Contour (In feet)         70 dBA         65 dBA         60 dBA	2 73. 9 74.
Autos:         63.5         62.2         60.5         57.4         64.8           Medium Trucks:         59.2         58.6         50.9         52.2         60.0           Heavy Trucks:         71.1         69.8         65.3         66.2         73.2           Vehicle Noise:         72.0         70.8         66.6         66.9         73.9           Centerline Distance to Noise Contour (in feet)	2 73. 9 74. 55 dBA

		D-77-108 HIGI						•			
	o: OY+P								aven Spec	ific Plan	
Road Name Road Segmen	e: Chino Av.	alal A.				Job N	umber:	14822			
Road Segmen	t. e/o Archida	ald AV.									
SITE S Highway Data	PECIFIC II	NPUT DATA			0:4- 0				L INPUT	S	
					Site Cor	iaitions	(Hara -				
Average Daily	, ,	12,173 vehicl	es					Autos:	15		
Peak Hour I	-	7.91%				edium Tr		,			
	our Volume:	963 vehicle	s		He	eavy True	cks (3+	Axles):	15		
	icle Speed:	40 mph			Vehicle	Mix					
Near/Far Lar	e Distance:	12 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						-	Autos:	70.7%	11.8%	17.5%	89.469
Bar	rier Height:	0.0 feet			M	edium T	rucks:	82.2%	3.5%	14.3%	1.899
Barrier Type (0-Wa	-	0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	8.65
Centerline Dis	t. to Barrier:	44.0 feet			Noise S	ourco El	ovatio	ne (in fo	not)		
Centerline Dist. t	o Observer:	44.0 feet			NOISE 3	Auto.		0.000	eij		
Barrier Distance t	o Observer:	0.0 feet			Modiu	m Truck		297			
Observer Height (	Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iustment	. 0 0
Pa	d Elevation:	0.0 feet			1100	vy mach	J. C	.004	0/440 / 14	Juotimom	. 0.0
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent	Distar	nce (in t	eet)		
F	Road Grade:	0.0%				Auto.	s: 43	3.875			
	Left View:	-90.0 degre	es			m Truck		3.673			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 43	3.692			
FHWA Noise Mode	I Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	66.51	-1.97	,	0.	75	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	77.72	-18.72	2	0.	78	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-12.12	2	0.	78	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise			barri	er atte	nuation)						
	Leq Peak Ho		_	Leq I	Evening		Night		Ldn		NEL
Autos:	-	4.1	62.8		61.0		58		65.4		65
Medium Trucks:	-	8.6	58.0		50.2		51		59.4		59
Heavy Trucks:		0.4	69.2		64.6		65		72.	-	72
Vehicle Noise:	7	1.6	70.3		66.3		66	.4	73.	5	73
Centerline Distanc	e to Noise C	ontour (in fee	t)					1		ı	
			Į	70	dBA	65	dBA		i0 dBA		dBA
		-	Ldn:		75		16	_	348		75
					78		16		360		77

Friday, October 14, 2022

	FHWA-RD	-77-108 HIGH	WAY N	IOISE	PREDIC	TION M	ODEL	(9/12/2	(021)		
Road Nam	io: HY+P e: Chino Av. nt: e/o Archibal	d Av.						Rich I 14822	Haven Spec	ific Plan	
	SPECIFIC IN	PUT DATA			0:4- 0				L INPUT	S	
Highway Data					Site Con	aitions	(Hara				
Average Daily	. ,	13,647 vehicle	:S		Мо	dium Tru	iaka (2	Autos			
	Percentage: lour Volume:	7.91% 1.080 vehicles				avy Truc					
	hicle Speed:	40 mph	,				,no (0+	Axies)	. 13		
Near/Far Lai		12 feet		L	Vehicle l						
	ne Distance.	12 1661			Veh	icleType		Day	Evening	Night	Daily
Site Data							lutos:	70.79		17.5%	
Bar	rier Height:	0.0 feet				edium Ti		82.29		14.3%	
Barrier Type (0-W	'all, 1-Berm):	0.0			F	Heavy Ti	rucks:	70.89	6.2%	23.0%	8.91%
Centerline Dis	st. to Barrier:	44.0 feet		- t	Noise Sc	ource El	evatio	ns (in t	eet)		
Centerline Dist.		44.0 feet		ı		Auto:		0.000	,		
Barrier Distance		0.0 feet			Mediu	m Truck:		2.297			
Observer Height (	,	5.0 feet			Heav	y Trucks	s: 8	3.004	Grade Ad	justmen	: 0.0
	ad Elevation:	0.0 feet		-		•					
	ad Elevation:	0.0 feet		H	Lane Eq				feet)		
F	Road Grade:	0.0%				Auto		3.875			
	Left View:	-90.0 degree				m Truck		3.673			
	Right View:	90.0 degree	es.		Heav	y Truck:	s: 43	3.692			
FHWA Noise Mode	el Calculations	i									
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fres		Barrier Att		rm Atten
Autos:	66.51	-1.49		0.7		-1.20		-4.61		000	0.000
Medium Trucks:	77.72	-18.09		0.7		-1.20		-4.87		000	0.000
Heavy Trucks:	82.99	-11.50		0.7	-	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise VehicleType	Leq Peak Hou				uation) vening	100	Night	1	Ldn		NFL.
Autos:	Ley reak nou		63.3	Loy E	61.5	Leq	ivigrit 58	5	65.1		66.3
Medium Trucks:	59		58.6		50.9		52		60.0		60.2
Heavy Trucks:	71	_	69.8		65.3		66		73.	-	73.3
Vehicle Noise:	72		70.9		66.9		67		74.		74.3
Centerline Distanc	e to Noise Co	ntour (in feet)									
				70	dBA	65	dBA		60 dBA		dBA
			Ldn:		82		17		382		823
		CI	VEL:		85		18	3	395	,	851

	FHWA-RD	-77-108 HIGH	IWAY	NOISE	PREDIC	CTION M	ODEL	(9/12/2	021)		
	io: E e: Ontario Ran nt: w/o Archibal						Name: umber:		aven Spec	cific Plan	1
	SPECIFIC IN	PUT DATA			2:4- 0				L INPUT	S	
Highway Data					site Con	nditions	(Hara =				
Average Daily	. ,	13,582 vehicle	es					Autos:			
	Percentage:	7.91%				edium Tru		/			
		1,074 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
	hicle Speed:	55 mph		١	/ehicle	Mix					
Near/Far La	ne Distance:	154 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						- A	Autos:	70.7%	11.8%	17.59	6 86.53%
Rai	rier Height:	0.0 feet			М	ledium Tr	rucks:	82.2%	3.5%	14.39	6 2.42%
Barrier Type (0-W	'all, 1-Berm):	0.0				Heavy Tr	rucks:	70.8%	6.2%	23.09	6 11.05%
Centerline Di		84.0 feet		1	Voise S	ource Ele	evation	ıs (in fe	eet)		
Centerline Dist.	to Observer:	84.0 feet				Autos	s: 0	.000			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks	s: 2	297			
Observer Height (	Above Pad):	5.0 feet				vy Trucks		.004	Grade Ad	liustmer	t: 0.0
Pa	ad Elevation:	0.0 feet		L						,	
Roa	ad Elevation:	0.0 feet		L	.ane Eq	uivalent			feet)		
i i	Road Grade:	0.0%				Autos		.941			
	Left View:	-90.0 degree				m Trucks		.679			
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 33	.705			
FHWA Noise Mode					,						
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		rm Atten
Autos:	71.78	-3.03		2.42	_	-1.20		-4.75		000	0.000
Medium Trucks:	82.40	-18.56		2.47		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-11.97		2.47		-1.20		-5.21	0.0	000	0.000
Unmitigated Noise VehicleType	Leg Peak Hour			er atten Leg Ev		Lea	Night	1	Ldn		NEL
Autos:	70.		68.7	LUY L	66.9		63.	9	71.	_	71.7
Medium Trucks:	65.		64.5		56.8		58.	-	65.	-	66.1
Heavy Trucks:	75.		74.4		69.9		70.		77.	-	78.0
Vehicle Noise:	77.		75.8		71.8		71.		78.		79.1
Centerline Distance	e to Noise Co	ntour (in feet	)								
			T	70 c	IBA	65 (	dBA	6	60 dBA	5	5 dBA
			Ldn:		329		708	3	1,525	5	3,286
		C	NEL:		340		733	3	1,578	3	3,401

THVA	וו-ט	7-108 HIGH	WAI	NOISE	FREDIC	TION	IODEL	(3/12/2	021)		
Scenario: OY Road Name: Ontario I	Danch	Dd						Rich F	laven Spec	ific Plan	
Road Segment: w/o Arch						3001	iuiiibei.	14022			
SITE SPECIFIC	INPU	T DATA							L INPUT	3	
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily Traffic (Adt)	: 16	875 vehicle	es					Autos:	15		
Peak Hour Percentage	: 7	.91%			Me	dium Ti	ucks (2	Axles).	15		
Peak Hour Volume	1,3	35 vehicles	S		He	avy Tru	cks (3+	Axles).	15		
Vehicle Speed	:	55 mph		-	Vehicle I	Wix					
Near/Far Lane Distance	: 1	54 feet		F	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%
Barrier Height		0.0 feet			M	edium 7	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-Wall, 1-Berm)		0.0			I	Heavy 7	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dist. to Barrier	: 1	34.0 feet		l.	Noise Sc	ource E	levatio	ns (in f	eet)		
Centerline Dist. to Observer	: 1	34.0 feet		F		Auto		0.000	,		
Barrier Distance to Observer		0.0 feet			Mediu	m Truck		2.297			
Observer Height (Above Pad)		5.0 feet				y Truck		3.004	Grade Adj	ustment	: 0.0
Pad Elevation	-	0.0 feet									
Road Elevation	-	0.0 feet		1	Lane Eq				feet)		
Road Grade		.0%				Auto		3.941			
Left View		90.0 degree	es			m Truck	-	3.679			
Right View	: 9	90.0 degree	es		Heav	ry Truck	s: 30	3.705			
FHWA Noise Model Calculati	_										
VehicleType REMEL		affic Flow	Dis	stance	Finite		Fres		Barrier Atte		rm Atten
Autos: 71.	-	-2.08		2.4	_	-1.20		-4.75	0.0		0.00
Medium Trucks: 82.		-17.62		2.4		-1.20		-4.88	0.0		0.00
Heavy Trucks: 86.	40	-11.02		2.4	7	-1.20		-5.21	0.0	100	0.00
Unmitigated Noise Levels (w										_	
VehicleType Leq Peak F		Leq Day		Leq E	vening	Leq	Night		Ldn		NEL
Autos:	70.9		69.6		67.9		64		72.2		72.
Medium Trucks:	66.1		65.4		57.7		59		66.9		67.0
Heavy Trucks: Vehicle Noise:	76.6 78.0		75.4 76.7		70.8		71 72		78.7 79.8		78.9
Centerline Distance to Noise									70.0		
	COLLEC	ui (III ieet)		70	dBA	65	dBA	Т.	60 dBA	55	dBA
Centerine Distance to Noise											
Centenine Distance to Noise			Ldn:	701	380	00	81		1.763		3.797

		D-77-108 HIGH	IVVAI	NOISE	FREDIC			'			
Scenario									laven Spec	ific Plan	
	e: Ontario Ra					Job N	umber:	14822			
Road Segmen	t: w/o Archib	ald Av.									
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions	•				
Average Daily	Traffic (Adt):	20,888 vehicl	es					Autos:			
Peak Hour I	Percentage:	7.91%				dium Tr		,			
	our Volume:	1,652 vehicle	s		He	avy Truc	cks (3+ .	Axles):	15		
	hicle Speed:	55 mph		ν	/ehicle l	Mix					
Near/Far Lar	ne Distance:	154 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.5%	90.429
Bar	rier Height:	0.0 feet			M	edium T	rucks:	82.2%	3.5%	14.3%	1.709
Barrier Type (0-Wa	-	0.0			1	Heavy T	rucks:	70.8%	6.2%	23.0%	7.87
Centerline Dis	t. to Barrier:	84.0 feet			Inisa Sr	ource El	evation	e (in f	not)		
Centerline Dist. t	to Observer:	84.0 feet		- 1	10/36 00	Auto.		000			
Barrier Distance t	o Observer:	0.0 feet			Modiu	m Truck.		297			
Observer Height (	Above Pad):	5.0 feet				/y Truck		004	Grade Ad	iustment	. 0 0
Pa	d Elevation:	0.0 feet		L	77001	ry much	3. 0.	004	0,000,10	doumont	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in :	feet)		
F	Road Grade:	0.0%				Auto.	s: 33	.941			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 33	.679			
	Right View:	90.0 degre	es		Heav	y Truck	s: 33	.705			
FHWA Noise Mode	l Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	71.78			2.42	-	-1.20		-4.75		000	0.00
Medium Trucks:	82.40			2.47		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-11.57		2.47	7	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise			barrie	er attenu	uation)						
	Leq Peak Ho		_	Leq Ev	ening	Leq	Night		Ldn		NEL
Autos:		2.0	70.8		69.0		65.	-	73.4		73
Medium Trucks:		5.5	64.8		57.1		58.	-	66.3	-	66
Heavy Trucks:		6.1	74.8		70.3		71.:		78.		78
Vehicle Noise:	77	7.8	76.6		72.8		72.	5	79.0	3	79
	e to Noise C	ontour (in fee	t)	70.			dBA		SO dBA		dBA
Centerline Distanc	e 10 140/36 O										
Centerline Distanc	e to Noise o			70 d		65					
Centerline Distanc	e to noise o		Ldn: :NEL:	70 a	368 382	65	792 822		1,707 1,771	-	3,678 3,818

Friday, October 14, 2022

	FHWA-RD	-77-108 HIGH	WAY NO	DISE F	PREDIC	TION MC	DDEL	(9/12/2	021)		
Road Nam	o: OY+P e: Ontario Ran nt: w/o Archiba					Project N Job Nu			laven Spec	ific Plan	
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (l	Hard =				
Average Daily	. ,	24,182 vehicle	:S					Autos:			
	Percentage:	7.91%				dium Truc					
Peak H	our Volume:	1,913 vehicles	3		He	avy Truck	ks (3+	Axles):	15		
Ve	hicle Speed:	55 mph		v	ehicle l	Nix					
Near/Far Lai	ne Distance:	154 feet		-		cleType		Day	Evening	Night	Daily
Site Data						Au	utos:	70.7%	11.8%	17.5%	89.89%
Ran	rier Heiaht:	0.0 feet			Me	edium Tru	icks:	82.2%	3.5%	14.3%	1.80%
Barrier Type (0-W		0.0			F	leavy Tru	icks:	70.8%	6.2%	23.0%	8.31%
Centerline Dis	. ,	84.0 feet			-: 0-	urce Ele	4!	- /:- #	41		
Centerline Dist.	to Observer:	84.0 feet		N	oise sc				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos:		.000			
Observer Height (	Above Pad):	5.0 feet				n Trucks:		.297	0	·	4. 0.0
	ad Elevation:	0.0 feet			Heav	y Trucks:	8	.004	Grade Ad	justmen	r: U.U
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent l	Distan	ce (in	feet)		
F	Road Grade:	0.0%				Autos:	33	.941			
	Left View:	-90.0 degree	s		Mediui	n Trucks:	33	.679			
	Right View:	90.0 degree	es.		Heav	y Trucks:	33	.705			
FHWA Noise Mode	l Calculations	1									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fres	-	Barrier Att	en Be	rm Atten
Autos:	71.78	-0.36		2.42		-1.20		-4.75	0.0	000	0.000
Medium Trucks:	82.40	-17.33		2.47		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-10.70		2.47		-1.20		-5.21	0.0	000	0.000
Unmitigated Noise											
	Leq Peak Hou			eq Eve		Leq N	-		Ldn		NEL
Autos:	72.	6	71.4		69.6		66.	6	74.0	-	74.4
Medium Trucks:	66.	-	65.7		58.0		59.		67.	_	67.3
Heavy Trucks:	77.		75.7		71.2		72.	-	79.	_	79.2
Vehicle Noise:	78.	6	77.4		73.6		73.	3	80.4	4	80.7
Centerline Distanc	e to Noise Co	ntour (in feet)						_			
				70 dl		65 di			60 dBA		dBA
			Ldn:		416		897		1,933		4,165
		CI	VEL:		432		930	)	2,004		4,318

	FHWA-RI	)-77-108 HIGH	WAY	NOISE	PREDIC	CTION M	ODEL	(9/12/20	021)		
Road Na	nrio: HY me: Ontario Rai ent: w/o Archiba							Rich H 14822	aven Spec	ific Plan	
	SPECIFIC IN	PUT DATA			0:4- 0				L INPUT	S	
Highway Data					Site Con	aitions	(Hara				
Average Daily	. ,	18,501 vehicle	es					Autos:	15		
Peak Hou	r Percentage:	7.91%				edium Tru		,			
Peak	Hour Volume:	1,463 vehicles	3		He	eavy Truc	cks (3+	Axles):	15		
V	ehicle Speed:	55 mph		ŀ	Vehicle i	Mix					
Near/Far L	ane Distance:	154 feet		f		icleType		Dav	Evening	Night	Dailv
Site Data							lutos:	70.7%	-	17.5%	86.53%
R	arrier Height:	0.0 feet			М	edium Ti	ucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-1		0.0			1	Heavy Ti	ucks:	70.8%	6.2%	23.0%	11.05%
Centerline D	ist. to Barrier:	84.0 feet		}	Noise So	ource El	ovatio	ne (in fa	not)		
Centerline Dist	to Observer:	84.0 feet		}	110/36 00	Auto		0.000	.01)		
Barrier Distance	e to Observer:	0.0 feet			Modiu	m Trucks		2.297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks		3.004	Grade Ad	iuctman	- 0.0
- 1	Pad Elevation:	0.0 feet			пеан	vy Trucks	s. c	5.004	Grade Au	Justinen	. 0.0
Re	oad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	nce (in i	feet)		
	Road Grade:	0.0%				Autos	s: 33	3.941			
	Left View:	-90.0 degree	es		Mediu	m Trucks	s: 33	3.679			
	Right View:	90.0 degree	es		Heav	vy Trucks	s: 33	3.705			
FHWA Noise Mod	del Calculation	S									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Be	rm Atten
Autos	: 71.78	-1.68		2.4	12	-1.20		-4.75	0.0	000	0.000
Medium Trucks	: 82.40	-17.22		2.4	17	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	: 86.40	-10.62		2.4	17	-1.20		-5.21	0.0	000	0.000
<b>Unmitigated Nois</b>	se Levels (with	out Topo and	barri	er attei	nuation)						
VehicleType	Leq Peak Hou		_	Leq E	vening		Night		Ldn		NEL
Autos			70.0		68.3		65		72.6	-	73.1
Medium Trucks	: 66	.5	65.8		58.1		59	.5	67.3	3	67.4
Heavy Trucks	: 77	.0	75.8		71.2		72	.1	79.	1	79.3
Vehicle Noise	: 78	.4	77.1		73.1		73	.1	80.2	2	80.5
Centerline Distar	ice to Noise Co	ntour (in feet)									
			L	70	dBA	65 (	dBA		0 dBA		i dBA
			Ldn:		404		87		1,874		4,037
		CI	VEL:		418		90	0	1,940		4,179

	FHWA-RI	D-77-108 HIGH	WAY N	OISE F	PREDIC	TION	MODEL (9	/12/20	21)		
Scenari Road Nam Road Segmer	e: Ontario Ra						t Name: F Number: 1		aven Speci	fic Plan	
	SPECIFIC IN	IPUT DATA							LINPUTS	3	
Highway Data				S	ite Con	ditions	(Hard = 1	10, So	ft = 15)		
Peak H	Traffic (Adt): Percentage: our Volume: hicle Speed:	16,280 vehicle 7.91% 1,288 vehicle					rucks (2 A icks (3+ A	,	15 15 15		
Near/Far Lai		55 mph 154 feet		V	ehicle i	Vlix					
Near/Far Lar	ne Distance:	154 feet			Veh	icleType	e L	Day	Evening	Night	Daily
Site Data								0.7%	11.8%	17.5%	86.53%
Bar	rier Height:	0.0 feet				edium 7		32.2%	3.5%	14.3%	2.42%
Barrier Type (0-W	all, 1-Berm):	0.0			- 1	Heavy 7	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dis	st. to Barrier:	84.0 feet		N	nisa Sr	urco F	levations	(in fo	of)		
Centerline Dist.	to Observer:	84.0 feet			0/36 00	Auto		•	ci)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck					
Observer Height (	Above Pad):	5.0 feet				v Truck			Grade Adju	istment	0.0
Pa	ad Elevation:	0.0 feet			11ca	y IIucr	13. 0.0	04	Orado riaje	300770771	0.0
Roa	ad Elevation:	0.0 feet		Li	ane Eq	uivalen	t Distanc	e (in f	eet)		
F	Road Grade:	0.0%				Auto		41			
	Left View:	-90.0 degre	es		Mediu	m Truck	ks: 33.6	79			
	Right View:	90.0 degre	es		Heav	ry Truck	ks: 33.7	05			
FHWA Noise Mode	el Calculation										
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresne		Barrier Atte		m Atten
Autos:	71.78	-2.24		2.42		-1.20		4.75	0.0		0.000
Medium Trucks:	82.40			2.47		-1.20		4.88	0.0		0.000
Heavy Trucks:	86.40			2.47		-1.20		5.21	0.0	00	0.000
Unmitigated Noise					_						
	Leq Peak Hou			eq Eve		Leq	Night		Ldn	CI	VEL
Autos:		).8	69.5		67.7		64.7		72.1		72.
Medium Trucks:		5.9	65.3		57.6		58.9		66.7		66.9
Heavy Trucks:		3.5	75.2		70.7		71.6		78.6		78.8
Vehicle Noise:		7.8	76.6		72.6		72.6		79.7		79.9
Centerline Distanc	e to Noise Co	ontour (in feet	)	70 dE	RA	65	dBA	6	0 dBA	55	dBA
			Ldn:	, 0 01	371	00	799	- 0	1.721	33	3.708
		0	NEL:		384		827		1,721		3,837
		C			004		021		1,701		0,007

		D-77-108 HIGH		10.01	- NEDIC		•				
Scenario	o: HY+P e: Ontario Ra	nah Dal					Name:   umber:		aven Spec	ific Plan	
Road Segmen						JOD IV	uniber.	14022			
	PECIFIC II	NPUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	ft = 15)		
Average Daily 7	raffic (Adt):	25,808 vehicle	es					Autos:	15		
Peak Hour F	Percentage:	7.91%				dium Tru		,			
	our Volume:	2,041 vehicle	s		He	avy Truc	cks (3+ )	Axles):	15		
	icle Speed:	55 mph		ν	ehicle	Mix					
Near/Far Lan	e Distance:	154 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						F	lutos:	70.7%	11.8%	17.5%	89.689
Barı	ier Heiaht:	0.0 feet			М	edium Tr	rucks:	82.2%	3.5%	14.3%	1.849
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy Tr	rucks:	70.8%	6.2%	23.0%	8.489
Centerline Dis	t. to Barrier:	84.0 feet		N	loise Si	ource Ele	evation	s (in fe	et)		
Centerline Dist. to	Observer:	84.0 feet			10/36 01	Autos		000	.01)		
Barrier Distance to	o Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height (A	Above Pad):	5.0 feet				v Trucks		004	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet				,					
	d Elevation:	0.0 feet		L	ane Eq	uivalent			eet)		
R	oad Grade:	0.0%				Autos		941			
	Left View:	-90.0 degre				m Trucks		679			
	Right View:	90.0 degre	es		Heav	y Trucks	s: 33.	705			
FHWA Noise Mode		-									
VehicleType	REMEL	Traffic Flow		ance		Road	Fresr		Barrier Att		m Atten
Autos:	71.78			2.42		-1.20		-4.75		000	0.00
Medium Trucks:	82.40			2.47		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40			2.47		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise			_							_	
VehicleType I	Leq Peak Ho	ur Leq Day	71.6	Leq Ev	ening 69.9		Night 66.8	<u> </u>	Ldn 74.2		NEL 74
Medium Trucks:		2.9 3.7	66.1		58.4		59.7	-	67.5	-	67
	-	7.3	76.1		71.5		72.4		79.4		-
Heavy Trucks: Vehicle Noise:		7.3	75.7		73.9		73.7		79.2		79. 81.
veriicie rvoise.					10.5		75.1		00.0	,	01
	e to Noise C	ontour (in feet	)	70 di	DΛ	65.	dBA	-	0 dBA	55	dBA
Centerline Distance											
Centerline Distance			Ldn:	70 01	439	03 (	947		2.040		4.39

Friday, October 14, 2022

	FHWA-R	D-77-108 HIGH	WAY N	OISE	PREDIC	TION M	ODEL	(9/12/2	(021)		
Road Na	ario: E+P me: Ontario Ra ent: e/o Archiba							Rich I 14822	Haven Spec	cific Plan	ı
SITE Highway Data	SPECIFIC II	NPUT DATA			ita Can				EL INPUT oft = 15)	s	
Average Dail Peak Hou	y Traffic (Adt): ir Percentage: Hour Volume:	33,653 vehicle 7.91% 2,662 vehicles			Ме	edium Tru	ucks (2	Autos Axles)	: 15 : 15		
	'ehicle Speed: ane Distance:	55 mph 154 feet		١	ehicle l				T T		T =
Site Data	ano Biotanoo.	104 1000			Veh	icleType A	Autos:	70.79	Evening 11.8%	Night 17.5%	Daily 92.98%
	arrier Height: Wall, 1-Berm):	0.0 feet 0.0				edium Ti Heavy Ti	ucks:	82.29 70.89	6 3.5%	14.3% 23.0%	1.25%
Centerline L Centerline Dis	Dist. to Barrier: t. to Observer:	84.0 feet 84.0 feet		٨	loise So	ource El		ns (in 1	eet)		
Barrier Distanc Observer Heigh		0.0 feet 5.0 feet				m Truck: //y Truck:	s: 2	2.297 3.004	Grade Ad	liustmen	t: 0.0
	Pad Elevation: oad Elevation:	0.0 feet 0.0 feet		L		uivalent				,	
	Road Grade: Left View: Right View:	0.0% -90.0 degree 90.0 degree				Auto: m Truck: /y Truck:	s: 33	3.941 3.679 3.705			
FHWA Noise Mo	del Calculation	ıs									
VehicleType Autos	REMEL 71.78	Traffic Flow 1.23	Dista	nce 2.42		Road -1.20	Fres	nel -4.75	Barrier Att	ten Be	rm Atten 0.000
Medium Trucks Heavy Trucks	82.40	-17.48		2.47	,	-1.20 -1.20 -1.20		-4.73 -4.88 -5.21	0.0	000	0.000
Unmitigated Noi			harrior			-1.20		-5.21	0.1	000	0.000
VehicleType	Leg Peak Ho			.eq Ev		Leg	Night		Ldn	С	NEL
Autos	: 74	1.2	73.0		71.2		68	.1	75.0	6	76.0
Medium Trucks			65.6		57.9		59		67.0	-	67.1
Heavy Trucks Vehicle Noise			75.5 77.7		71.0 74.2		71 73		78.9 80.1		79.1 81.0
Centerline Dista	nce to Noise C	ontour (in feet)	)								
		,		70 d	BA	65	dBA		60 dBA	55	dBA
			Ldn:		437		94		2,027		4,368
		CI	VEL:		454		97	8	2,108	3	4,541

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	TION N	ODEL (	9/12/2	021)		
Scenario Road Name Road Segmen	e: Ontario Ra						Name: umber:		aven Spec	ific Plan	
	PECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	10, Sc			
Average Daily 1	raffic (Adt):	19,855 vehicle	es					Autos:	15		
Peak Hour F	Percentage:	7.91%					ucks (2 A	,	15		
Peak Ho	our Volume:	1,570 vehicle	3		He	avy Tru	cks (3+ A	Axles):	15		
	icle Speed:	55 mph		1	Vehicle i	Wix					
Near/Far Lan	e Distance:	154 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						,	Autos:	70.7%	11.8%	17.5%	86.53%
Bari	rier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-Wa	-	0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
Centerline Dis	. ,	84.0 feet		-	Noise So	roo El	o rotio n	a (in f	not)		
Centerline Dist. t	o Observer:	84.0 feet		μ.	voise so	Auto			ei)		
Barrier Distance to	o Observer:	0.0 feet			A decedio	Auto m Truck		000 297			
Observer Height (A	Above Pad):	5.0 feet				m Truck vy Truck		297 004	Grade Ad	i ratma a m	t. 0.0
Pa	d Elevation:	0.0 feet			пеан	y IIUCK	s. o.	004	Grade Au	Justinein	. 0.0
Roa	d Elevation:	0.0 feet		I	Lane Eq	uivalent	Distant	ce (in i	feet)		
R	Road Grade:	0.0%				Auto	s: 33.	941			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 33.	679			
	Right View:	90.0 degree	es		Heav	y Truck	s: 33.	705			
FHWA Noise Mode	l Calculation	s		-							
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	nel .	Barrier Att	en Be	rm Atten
Autos:	71.78	-1.38		2.4	_	-1.20		-4.75	0.0	000	0.00
Medium Trucks:	82.40	-16.91		2.4		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-10.32		2.4	7	-1.20		-5.21	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
	Leq Peak Hou			Leq E		Leq	Night		Ldn	_	NEL
Autos:	71		70.3		68.6		65.5		72.9	-	73.4
Medium Trucks:	66		66.1		58.4		59.8		67.6	-	67.7
Heavy Trucks:			76.1		71.5		72.4		79.4		79.6
Vehicle Noise:			77.4		73.5		73.4	1	80.8	5	80.8
Centerline Distance	e to Noise Co	ontour (in feet	)							_	
			L	70 (	dBA	65	dBA		0 dBA		dBA
			Ldn:		423		912		1,964		4,232
		C	VEL:		438		944		2,033		4,380

FHWA	RD-77-108 HI	GHWAY	NOISE	PREDIC	TION	ODEL	(9/12/2	021)		
Scenario: HY Road Name: Ontario I Road Segment: e/o Arch							Rich H 14822	aven Spec	ific Plan	
SITE SPECIFIC	INPUT DAT	A						L INPUT	S	
Highway Data  Average Daily Traffic (Adt)  Peak Hour Percentage  Peak Hour Volume  Vehicle Speed  Near/Far Lane Distance	7.91% 1,564 vehi	cles		He ehicle l	dium Tr avy Tru	ucks (2 cks (3+	Autos: Axles): Axles):	15 15	Night	Daily
Site Data				VOII		Autos:	70.7%		17.5%	
Barrier Height Barrier Type (0-Wall, 1-Berm)	: 0.0	-			edium T Heavy T		82.2% 70.8%		14.3% 23.0%	2.42% 11.05%
Centerline Dist. to Barrier Centerline Dist. to Observer			٨	loise Sc	urce E	levatio	ns (in fe	eet)		
Barrier Distance to Observer Observer Height (Above Pad) Pad Elevatior Road Elevatior Road Grade Left View Right View	L	Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0  Lane Equivalent Distance (in feet)  Autos: 33.941 Medium Trucks: 33.679 Heavy Trucks: 33.705								
FHWA Noise Model Calculati	ons									
VehicleType REMEL	Traffic Flo	w Dis	tance	Finite	Road	Fres	inel	Barrier Atte	en Ber	m Atten
Autos: 71.  Medium Trucks: 82.  Heavy Trucks: 86.	40 -16.	93	2.42 2.47 2.47	,	-1.20 -1.20 -1.20		-4.75 -4.88 -5.21	0.0	000 000 000	0.000
Unmitigated Noise Levels (w.					1.20		0.27	0.0		0.00
VehicleType Leg Peak H			Leg Ev		Lea	Night		Ldn	CI	VEL
Autos:	71.6	70.3		68.6	,	65	.5	72.9	)	73.
Medium Trucks:	66.7	66.1		58.4		59	.8	67.6	6	67.
Heavy Trucks:	77.3	76.1		71.5		72	.4	79.4	ļ	79.6
Vehicle Noise:	78.6	77.4		73.4		73	.4	80.5	5	80.7
Centerline Distance to Noise	Contour (in fe	eet)								
			70 d		65	dBA		60 dBA		dBA
		Ldn:		422		90	-	1,959		4,221
		CNEL:		437		94	1	2,028		4,368

Autos: 70.7%   11.8%   17.5%   92		FHWA-R	D-77-108 HIG	WAY	NOISE	E PRED	ICTION M	IODEL	(9/12/2	021)					
	Road Name	e: Ontario Ra									ific Plan	ı			
Average Daily Traffic (Adt): 37,228 vehicles Peak Hour Percentage: 7,91% Peak Hour Percentage: 7,91% Peak Hour Volume: 2,945 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 154 feet  Barrier Height: 0.0 feet Barrier Height: 0.0 feet Barrier Height: 0.0 feet Barrier Dist. to Barrier: 84.0 feet Centerline Dist. to Barrier: 0.0 feet Barrier Dist. to Diserver: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Reflewin: 71.78 1.64 2.42 -1.20 -4.75 0.000 Heavy Trucks: 82.40 -1.667 2.47 -1.20 -4.88 0.000  Vehicle Type   Leq Peak Hour   Leq Day   Leq Evening   Night   Distance   Noise Source Elevations (in feet)  Left View: 90.0 degrees Reflewin: 71.78 1.64 2.42 -1.20 -4.75 0.000  Vehicle Type   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berria Autos: 71.78 1.64 2.42 -1.20 -4.75 0.000  Vehicle Type   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL   Autos: 74.6 73.4 71.6 68.5 76.0 66.4 58.7 60.0 67.8 Heavy Trucks: 79.6 76.4 71.8 72.7 79.7 Vehicle Noise: 79.6 78.4 74.8 74.3 81.4  Centerline Distance to Noise Contour (in feet)  70 dBA   65 dBA   60 dBA   55 dBA   60 dBA   55 dBA   Conton   Trucks   Tr		SPECIFIC II	NPUT DATA			0					s				
Peak Hour Percentage: 7.91%   Medium Trucks (2 Axles): 15	• •														
Peak Hour Volume:		. ,	- , -	es		****									
Vehicle   Speed   155 mph   154 feet   Vehicle   Mix   Vehic									,						
Near/Far Lane Distance: 154 feet   VehicleType   Day   Evening   Night   Day   Night			,	s		F	leavy Tru	cks (3+	Axles):	15					
Site Data   Sarrier Height:   0.0   feet   Barrier Height:   0.0   feet   Barrier Type (0-Wall, 1-Berm):   0.0   Heavy Trucks:   82.2%   3.5%   14.3%   1   Heavy Trucks:   70.8%   6.2%   23.0%   6.2%						Vehicle	e Mix								
Barrier Height:   0.0   feet   Heavy Trucks:   82.2%   3.5%   14.3%   1   Heavy Trucks:   70.8%   6.2%   23.0%   6   Moise Source Elevations (in feet)	Near/Far Lar	ne Distance:	154 feet		ı	Ve	hicleType		Day	Evening	Night	Daily			
Barrier Type (0-Weil, 1-Berm): 0.0   Heavy Trucks: 70.8% 6.2% 23.0% 6.2	Site Data						/	Autos:	70.7%	11.8%	17.5%	92.36			
Barrier Type (0-Wall, 1-Berm):	Bar	rier Heiaht:	0.0 feet				Medium T	rucks:	82.2%	3.5%	14.3%	1.36			
Role							Heavy T	rucks:	70.8%	6.2%	23.0%	6.28			
Centerline Dist. to Observer: 84.0 feet   Barrier Distance to Observer: 9.0 of feet   Barrier Distance to Observer: 9.0 of feet   Distance for Heavy Trucks: 2.297   Heavy Trucks: 2.297   Heavy Trucks: 33.04   Grade Adjustment: 0.0 feet   Canada Elevation: 0.0 feet   Canada			84.0 feet			Noise :	Source El	evation	s (in f	eet)					
Barrier Distance to Observer: 0.0 feet   Observer Height (Above Pad): 5.0 feet   Pad Elevation: 0.0 feet   Road Elevation: 0.0 feet   Road Glevation: 0.0 feet   Road Glevation: 0.0 feet   Road Grade: 0.0%   Autos: 33.941   Medium Trucks: 33.679   Heavy Trucks: 33.679   Heavy Trucks: 33.705   Heavy Trucks: 47.76   74.6   74.7   1.20   -4.75   0.000   Heavy Trucks: 47.76   74.6   74.7   1.20   -5.21   0.000   Heavy Trucks: 47.76   74.6   74.8   74.8   74.3   81.4   Heavy Trucks: 47.76   74.8   74.	Centerline Dist. t	to Observer:	84.0 feet							,					
Pad Elevation:	Barrier Distance t	to Observer:	0.0 feet			Med	ium Truck								
Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Autos:         33.941           Left View:         90.0 degrees         Medium Trucks:         33.679           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         71.78         1.64         2.42         -1.20         -4.75         0.000         Medium Trucks:         82.40         -16.67         2.47         -1.20         -4.88         0.000         Medium Trucks:         86.40         -10.04         2.47         -1.20         -5.21         0.000         Medium Trucks:         86.40         -10.04         2.47         -1.20         -5.21         0.000         Medium Trucks:         8.64         -10.04         2.47         -1.20         -5.21         0.000         Medium Trucks:         66.4         5.7         6.0         6.5         76.0         Medium Trucks:         6.5         76.0         CNEL           Unmitigated Noise Levels (without Topo and barrier attenuation)         Leq Evening         Leq Night         Ldn         CNEL           Medium Trucks:         67.0         66.4 <td>Observer Height (</td> <td>Above Pad):</td> <td></td> <td></td> <td></td> <td>He</td> <td>avv Truck</td> <td>s: 8</td> <td>.004</td> <td>Grade Ad</td> <td>iustmen</td> <td>t: 0.0</td>	Observer Height (	Above Pad):				He	avv Truck	s: 8	.004	Grade Ad	iustmen	t: 0.0			
Road Grade:   0.0%															
Left View:						Lane E				feet)					
	F														
FHWA Noise Model Calculations   VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Berrn			-												
VehicleType   REMEL   Traffic Flow   Distance   Finite Road   Fresnel   Barrier Atten   Bern A		Right View:	90.0 degre	es		He	avy Truck	s: 33	.705						
Autos: 71.78   1.64   2.42   -1.20   -4.75   0.000	FHWA Noise Mode		7												
Medium Trucks:   82.40   -16.67   2.47   -1.20   -4.88   0.000   Heavy Trucks:   86.40   -10.04   2.47   -1.20   -5.21   0.000   Heavy Trucks:   86.40   -10.04   2.47   -1.20   -5.21   0.000   Heavy Trucks:   86.40   -10.04   2.47   -1.20   -5.21   0.000   Heavy Trucks:   86.40   1.00								Fres							
Heavy Trucks: 86.40												0.0			
Unmitigated Noise Levels (without Topo and barrier attenuation)   VehicleType   Leq Peak Hour   Leq Day   Leq Evening   Leq Night   Ldn   CNEL												0.0			
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         74.6         73.4         71.6         68.5         76.0           Medium Trucks:         67.0         66.4         58.7         60.0         67.8           Heavy Trucks:         77.6         76.4         71.8         72.7         79.7           Vehicle Noise:         79.6         78.4         74.8         74.3         81.4           Centerline Distance to Noise Contour (in feet)						• •			-5.21	0.0	000	0.00			
Autos:         74.6         73.4         71.6         68.5         76.0           Medium Trucks:         67.0         66.4         58.7         60.0         67.8           Heavy Trucks:         77.6         76.4         71.8         72.7         79.7           Vehicle Noise:         79.6         78.4         74.8         74.3         81.4           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA							, , , , , , , , , , , , , , , , , , , ,	Nicht	T	l do		NIE!			
Medium Trucks:         67.0         66.4         58.7         60.0         67.8           Heavy Trucks:         77.6         76.4         71.8         72.7         79.7           Vehicle Noise:         79.6         78.4         74.8         74.3         81.4           Centerline Distance to Noise Contour (in feet)           To dBA         65 dBA         60 dBA         55 dBA				_	Ley E				5			76			
Heavy Trucks:		-					-				-	68			
Vehicle Noise:         79.6         78.4         74.8         74.3         81.4           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA								-		-	79				
70 dBA 65 dBA 60 dBA 55 dBA												81			
	Centerline Distanc	e to Noise C	ontour (in fee	t)											
Ldn: 485 1.046 2.253 4					70	dBA	65	dBA		60 dBA	55	dBA			
				Ldn:		48	5	1,046	3	2,253	}	4,85			
CNEL: 504 1,087 2,341 5			C	NEL:		50	4	1,087	7	2,341		5,04			

Friday, October 14, 2022

	FHWA-R	D-77-108 HIC	HWAY	/ NOISI	PREDIC	TION MO	ODEL	(9/12/2	021)		
	io: HY+P e: Ontario Ra nt: e/o Archiba							Rich F 14822	laven Spec	cific Plan	
SITE	SPECIFIC II	IPUT DATA	١			N	OISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions (	Hard :	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	37,147 vehi	cles					Autos.	15		
Peak Hour	Percentage:	7.91%			Ме	dium Tru	cks (2	Axles).	15		
Peak H	our Volume:	2,938 vehic	les		He	avy Truc	ks (3+	Axles).	15		
Ve	hicle Speed:	55 mph			Vehicle I	Miv					
Near/Far La	ne Distance:	154 feet				icleType		Dav	Evenina	Night	Daily
Site Data							utos:	70.79		17.5%	
	rier Heiaht:	0.0 feet			Me	edium Tri		82.29		14.3%	
Barrier Type (0-W		0.0 reet			F	Heavy Tri	ucks:	70.89	6.2%	23.0%	6.27%
Centerline Dis	. ,	84.0 feet									
Centerline Dist.		84.0 feet			Noise Sc				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos		0.000			
Observer Height (	Above Pad):	5.0 feet				m Trucks	-	.297	0	···	
	ad Elevation:	0.0 feet			Heav	y Trucks	: 8	1.004	Grade Ad	yustment	. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	nce (in	feet)		
1	Road Grade:	0.0%				Autos	: 33	3.941			
	Left View:	-90.0 degi	rees		Mediui	m Trucks	: 33	3.679			
	Right View:	90.0 degi	rees		Heav	y Trucks	: 33	3.705			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow		istance	Finite		Fres		Barrier Att		m Atten
Autos:	71.78			2.4	-	-1.20		-4.75		000	0.000
Medium Trucks:	82.40			2.4		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-10.0	)6	2.4	47	-1.20		-5.21	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo an	d barr	ier atte	nuation)						
	Leq Peak Ho		,	Leq E	ening	Leq N	_		Ldn		NEL
Autos:		1.6	73.4		71.6		68		76.0		76.4
Medium Trucks:	-	7.0	66.4		58.7		60		67.	-	67.9
Heavy Trucks:		7.6	76.3		71.8		72		79.		79.9
Vehicle Noise:	79	9.6	78.4		74.8		74	.3	81.4	4	81.7
Centerline Distand	e to Noise C	ontour (in fe	et)					,		_	
					dBA	65 a			60 dBA		dBA
			Ldn:		484		1,04		2,248		4,844
			CNEL:		503		1,08	4	2,336	6	5,032

	FHWA-R	D-77-108 HIGI	HWAY	NOISE	PREDIC	TION N	IODEL	(9/12/2	021)		
	rio: E ne: Ontario Ra ent: w/o Haven						Name: lumber:		laven Spec	ific Plan	
	SPECIFIC II	NPUT DATA			0				L INPUT	S	
Highway Data					Site Con	aitions	(Hard =				
Average Daily	Traffic (Adt):	18,294 vehic	les					Autos:			
Peak Hou	r Percentage:	7.91%				dium Tr		,			
Peak I	Hour Volume:	1,447 vehicle	es		He	avy Tru	cks (3+	Axles).	15		
Ve	ehicle Speed:	55 mph		-	Vehicle I	Wix					
Near/Far La	ane Distance:	154 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.7%	-	17.5%	86.53%
Rs	arrier Height:	0.0 feet			M	edium T	rucks:	82.2%	3.5%	14.3%	2.42%
Barrier Type (0-V		0.0			- 1	Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%
*, ,	ist. to Barrier:	84.0 feet		-	Noise Sc			- /:- #	41		
Centerline Dist.	to Observer:	84.0 feet		ŀ	Noise 30	Auto		.000	eet)		
Barrier Distance	to Observer:	0.0 feet			14-40-	Auto m Truck		.000			
Observer Height (Above Pad): 5.0 feet						m Truck vy Truck		.004	Grade Ad	otmon	t- 0 0
F	Pad Elevation:	0.0 feet			neav	ry Iruck	S: 8	.004	Grade Adj	usunem	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 33	.941			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 33	.679			
	Right View:	90.0 degre	es		Heav	y Truck	s: 33	.705			
FHWA Noise Mod	lel Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite		Fres		Barrier Att	en Be	rm Atten
Autos:				2.4	-	-1.20		-4.75		000	0.000
Medium Trucks:				2.4		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-10.67	,	2.4	17	-1.20		-5.21	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er attei	nuation)						
VehicleType	Leq Peak Ho	ur Leq Da	y	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:		1.3	70.0		68.2		65.	2	72.6	6	73.0
Medium Trucks:	66	5.4	65.8		58.1		59.	4	67.2	2	67.4
Heavy Trucks:		7.0	75.7		71.2		72.		79.		79.3
Vehicle Noise:	78	3.3	77.1		73.1		73.	1	80.2	2	80.4
Centerline Distan	ce to Noise C	ontour (in fee	t)								
				70	dBA	65	dBA		60 dBA	55	dBA
			Ldn:		401		863	3	1,860		4,007
		C	NEL:		415		894	1	1,925		4,148

	FHWA-RI	D-77-108 HIGH	WAY NO	ISE PREDIC	TION N	10DEL (9/12/	2021)	
Scenario Road Name Road Segmen	e: Ontario Ra					Name: Rich lumber: 1482		ic Plan
SITE S	SPECIFIC IN	IPUT DATA			1	IOISE MOD	EL INPUTS	
Highway Data				Site Cond	ditions	(Hard = 10, S	oft = 15)	
Average Daily	Traffic (Adt):	22,078 vehicle	es			Autos	: 15	
Peak Hour I	Percentage:	7.91%		Med	dium Tr	ucks (2 Axles	): 15	
Peak Ho	our Volume:	1,746 vehicle	s	Hea	avy Tru	cks (3+ Axles,	: 15	
Vel	hicle Speed:	55 mph		Vehicle N	liv			
Near/Far Lar	ne Distance:	154 feet			cleType	Day	Evening	Night Daily
Site Data				70777		Autos: 70.7	-	17.5% 86.53%
	rier Heiaht:	0.0 feet		Me	dium T			14.3% 2.42%
Barrier Type (0-Wa		0.0 reet 0.0			leavy T			23.0% 11.05%
Centerline Dis	. ,	84.0 feet						
Centerline Dist. t		84.0 feet		Noise So		levations (in	feet)	
Barrier Distance t		0.0 feet			Auto			
Observer Height (		5.0 feet		Mediun				
	d Elevation:	0.0 feet		Heav	y Truck	s: 8.004	Grade Adju	stment: 0.0
Roa	d Elevation:	0.0 feet		Lane Equ	ivalen	t Distance (in	feet)	
F	Road Grade:	0.0%			Auto	s: 33.941		
	Left View:	-90.0 degre	es	Mediun	n Truck	s: 33.679		
	Right View:	90.0 degre	es	Heavy	y Truck	s: 33.705		
FHWA Noise Mode	l Calculation	s						
VehicleType	REMEL	Traffic Flow	Distan			Fresnel	Barrier Atte	
Autos:	71.78	-0.92		2.42	-1.20	-4.75		
Medium Trucks:	82.40			2.47	-1.20	-4.88		
Heavy Trucks:	86.40			2.47	-1.20	-5.21	0.00	0.00
Unmitigated Noise								
	Leq Peak Hou		70.8	q Evening	Leq	Night	Ldn 73.4	CNEL
Autos: Medium Trucks:		?.1 7.2	70.8 66.6	69.0 58.9		66.0 60.3	73.4 68.0	73.8 68.2
Heavy Trucks:			76.5	72.0		72.9	79.9	80.
Vehicle Noise:	· · · · · · · · · · · · · · · · · · ·		77.9	73.9		73.9	81.0	81.2
			1					
Centerline Distanc	e to Noise Co	ontour (in feet						
Centerline Distanc	e to Noise Co	ontour (in feet		70 dBA	65	dBA	60 dBA	55 dBA
Centerline Distanc	e to Noise Co	ontour (in feet	Ldn:	70 dBA 454	65	dBA 979	60 dBA 2,108	55 dBA 4,542

	THWA-R	D-77-108 HIGH	TWAT	NOISE	- PREDIC	HON WIC	PEE (	JI 1212(	721)				
Scenario Road Name Road Segmen	e: Ontario Ra					Project N Job Nu			aven Spec	ific Plan			
	PECIFIC II	NPUT DATA							L INPUT	s			
Highway Data					Site Con	ditions (F	lard =	10, Sc	ft = 15)				
Average Daily 1	raffic (Adt):	39,277 vehicl	es		Autos: 15								
Peak Hour I	-	7.91%			Medium Trucks (2 Axles): 15								
	our Volume:	3,107 vehicle	s		He	avy Truck	s (3+ A	(xles	15				
	icle Speed:	55 mph		l	Vehicle I	Mix							
Near/Far Lan	e Distance:	154 feet		ı	Veh	icleType		Day	Evening	Night	Daily		
Site Data						AL	itos:	70.7%	11.8%	17.5%	93.29		
Ban	rier Height:	0.0 feet			M	edium Tru	cks:	82.2%	3.5%	14.3%	1.20		
Barrier Type (0-Wa	-	0.0			I	Heavy Tru	cks:	70.8%	6.2%	23.0%	5.51		
Centerline Dis	t. to Barrier:	84.0 feet		İ	Noise So	ource Ele	vations	s (in fe	et)				
Centerline Dist. t		84.0 feet		ı		Autos:		000	,				
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks:		297					
Observer Height (A	,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	iustment	: 0.0		
	d Elevation:	0.0 feet											
	d Elevation:	0.0 feet		-	Lane Eq	uivalent L			eet)				
F	Road Grade:	0.0%				Autos:							
	Left View:	-90.0 degre				m Trucks:							
	Right View:	90.0 degre	es		Heav	y Trucks:	33.	/05					
FHWA Noise Mode		7											
VehicleType	REMEL	Traffic Flow		tance		Road	Fresn	_	Barrier Att		rm Atter		
Autos:	71.78			2.4		-1.20		-4.75		000	0.0		
Medium Trucks:	82.40			2.4		-1.20		-4.88		000	0.00		
Heavy Trucks:	86.40			2.4	•••	-1.20		-5.21	0.0	000	0.00		
Unmitigated Noise													
VehicleType Autos:	Leq Peak Ho	ur Leq Da 4.9	73.6	Leq E	vening 71.9	Leq N	1gnt 68.8		Ldn 76.:	_	NEL 76		
Medium Trucks:		4.9 6.7	66.0		71.9 58.3		59.7		67.	_	67		
Heavy Trucks:	-	o. <i>1</i> 7.3	76.0		71.5		72.4		79.4	-	79		
Vehicle Noise: 79.5 78.3			71.5		74.1		81.3		79 81				
					74.0		, 4		01.		- 01		
Centerline Distance	e to Noise C	ontour (in fee	y	70	dBA	65 dl	BA	6	0 dBA	55	dBA		
			Ldn:		474		1,022		2,202		4,74		

	FHWA-RE	-77-108 HIGH	WAY	NOISE	PREDIC	TION M	DDEL	9/12/2	021)		
Road Nam	o: OY+P e: Ontario Rar nt: w/o Haven					Project i Job Nu			laven Spec	ific Plan	
	SPECIFIC IN	PUT DATA			0				L INPUT	s	
Highway Data					Site Con	aitions (	Hard =				
Average Daily	. ,	43,061 vehicle	es					Autos:			
	Percentage:	7.91%				dium Tru					
	our Volume:	3,406 vehicles	3		He	avy Truc	ks (3+	Axles):	15		
	hicle Speed:	55 mph		-	Vehicle I	Mix					
Near/Far Lai	ne Distance:	154 feet		ŀ		icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	70.7%	11.8%	17.5%	92.70%
Rai	rier Heiaht:	0.0 feet			Me	edium Tri	ıcks:	82.2%	3.5%	14.3%	1.30%
Barrier Type (0-W		0.0			F	Heavy Tri	ıcks:	70.8%	6.2%	23.0%	6.00%
Centerline Dis	. ,	84.0 feet		-	Noise Sc		4!	- /:- #	41		
Centerline Dist.	to Observer:	84.0 feet		-	Noise Sc	Autos			eet)		
Barrier Distance	to Observer:	0.0 feet						.000			
Observer Height (	Above Pad):	5.0 feet				m Trucks		.297	Crada Ad	ii iatma n	
Pa	ad Elevation:	0.0 feet			Heav	y Trucks	. 8	.004	Grade Ad	jusunem	. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in	feet)		
F	Road Grade:	0.0%				Autos	: 33	.941			
	Left View:	-90.0 degree	es		Mediui	m Trucks	33	.679			
	Right View:	90.0 degree	es		Heav	y Trucks	33	.705			
FHWA Noise Mode	el Calculation:	6									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite		Fres		Barrier Att		rm Atten
Autos:	71.78	2.28		2.4	-	-1.20		-4.75		000	0.00
Medium Trucks:	82.40	-16.23		2.4		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-9.61		2.4	17	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	er atter	nuation)						
	Leq Peak Hou			Leq E	vening	Leq N	-		Ldn		NEL
Autos:	75		74.0		72.2		69.	-	76.6		77.
Medium Trucks:	67		66.8		59.1		60.	-	68.3	-	68.
Heavy Trucks:	78		76.8		72.2		73.		80.1	•	80.
Vehicle Noise:	80	.1	78.9		75.4		74.	8	81.9	9	82.
Centerline Distanc	e to Noise Co	ntour (in feet)	)					,			
				70	dBA	65 a			60 dBA		dBA
			Ldn:		524		1,129		2,431		5,238
		CI	VEL:		544		1,173	3	2,527		5,444

	FHWA-RI	D-77-108 HIGH	WAY	NOISE	E PREDIC	CTION M	ODEL	(9/12/20	021)		
Road Nar	rio: HY ne: Ontario Ra ent: w/o Haven						Name: umber:		aven Spec	ific Plai	1
	SPECIFIC IN	IPUT DATA			0:4- 0				L INPUT	S	
Highway Data					Site Con	laitions	(Hara =				
Average Daily	. ,	52,058 vehicle	es					Autos:			
	r Percentage:	7.91%				edium Tri		,			
	Hour Volume:	4,118 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
	ehicle Speed:	55 mph			Vehicle	Mix					
Near/Far L	ane Distance:	154 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	70.7%	11.8%	17.59	6 86.53%
R	arrier Height:	0.0 feet			М	edium Ti	rucks:	82.2%	3.5%	14.39	6 2.42%
Barrier Type (0-V		0.0				Heavy Ti	rucks:	70.8%	6.2%	23.09	6 11.05%
Centerline D	ist. to Barrier:	84.0 feet			Noise S	ource El	evation	ns (in fe	eet)		
Centerline Dist		84.0 feet 0.0 feet		İ		Auto	s: 0	.000			
Barrier Distance		Mediu	m Truck	s: 2	.297						
	Observer Height (Above Pad): 5.0 feet						s: 8	.004	Grade Ad	justmer	t: 0.0
	Pad Elevation:	0.0 feet									
Ro	oad Elevation:	0.0 feet			Lane Eq			_ •	feet)		
	Road Grade:	0.0%				Auto		.941			
	Left View:	-90.0 degree				m Truck		.679			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 33	.705			
FHWA Noise Mod	lel Calculation	s		·							
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres		Barrier Att	en Be	rm Atten
Autos	71.78	2.81		2.4	42	-1.20		-4.75	0.0	000	0.000
Medium Trucks	82.40	-12.72		2.4	47	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	86.40	-6.13		2.4	47	-1.20		-5.21	0.0	000	0.000
Unmitigated Nois										1	
VehicleType	Leq Peak Hou			Leq E	vening	-	Night		Ldn		NEL
	Autos: 75.8 74.5						69.		77.	-	77.5
	Medium Trucks: 71.0 70.3					62.6 64.0 71.8					71.9
Heavy Trucks Vehicle Noise			80.3		75.7 77.6		76. 77.		83.0		83.8 84.9
Centerline Distan								-	01.		01.0
Centernine Distan	10 10 NOISE C	mour (III leet,		70	dBA	65	dBA	6	60 dBA	5	5 dBA
Ldn:					805 1,734 3,735			8,047			
	CNEL:					833 1,794 3,866				8,329	

Friday, October 14	2022
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	FHWA-RI	D-77-108 HIGH	WAY	NOISE	PREDIC	TION	MODEL (9	/12/20	21)					
	io: E ne: Ontario Ra nt: e/o Haven				Project Name: Rich Haven Specific Plan Job Number: 14822									
SITE	SPECIFIC IN	IPUT DATA					NOISE N	IODEI	. INPUTS	;				
Highway Data					Site Cor	ditions	(Hard =	10, So	ft = 15)					
Peak H	Percentage: lour Volume:	23,755 vehicle 7.91% 1,879 vehicle					rucks (2 A Icks (3+ A	,	15 15 15					
	hicle Speed:	55 mph		1	/ehicle	Mix								
Near/Far La	ne Distance:	154 feet			Veh	icleTyp	e l	Day	Evening	Night	Daily			
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%			
Bai	rrier Height:	0.0 feet			М	edium 1	rucks:	82.2%	3.5%	14.3%	2.42%			
Barrier Type (0-W		0.0				Heavy 1	rucks:	70.8%	6.2%	23.0%	11.05%			
Centerline Dis		84.0 feet		1	Noise Source Elevations (in feet)									
Centerline Dist.		84.0 feet				Auto	os: 0.0	100	,					
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck								
Observer Height (	,	5.0 feet			Hear	v Truck	ks: 8.0	104	Grade Adju	ustment:	0.0			
	ad Elevation:			,										
	ad Elevation:	0.0 feet		1	ane Eq		t Distanc		eet)					
	Road Grade:	0.0%				Auto								
	Left View: Right View:	-90.0 degree				m Truck vy Truck								
			-											
FHWA Noise Mode VehicleType	REMEL	s Traffic Flow	Die	stance	Einito	Road	Fresne	a. I.	Barrier Atte	n Bon	m Atten			
Autos:	71.78	-0.60	DIS	2.4		-1.20		-4.75	0.0		0.000			
Medium Trucks:	82.40			2.4	_	-1.20		4.88	0.0		0.000			
Heavy Trucks:	86.40			2.4		-1.20		-5.21	0.0		0.000			
Unmitigated Noise	Levels (with	out Topo and	barrie	er atten	uation)									
VehicleType	Leq Peak Hou		_	Leg E		Leg	Night		Ldn	CI	VEL			
Autos:			71.1		69.4		66.3		73.7		74.1			
Medium Trucks:	67	'.5	66.9		59.2		60.6		68.4		68.5			
Heavy Trucks:	78	3.1	76.9		72.3		73.2		80.2		80.4			
Vehicle Noise:	79	).4	78.2		74.2		74.2		81.3		81.5			
Centerline Distance	e to Noise C	ontour (in feet	)											
				70 c		65	dBA	6	0 dBA	55	dBA			
			Ldn:		477		1,028		2,214		4,770			
		C	NEL:		494		1,064		2,291		4,937			

	FHWA-R	D-77-108 HIG	IWAY	NOISE	PREDI	CTION M	ODEL (	9/12/2	021)		
	o: HY+P e: Ontario Ra nt: w/o Haven						Name: umber:		laven Spec	ific Plan	ı
	SPECIFIC II	NPUT DATA			0:4- 0-	N nditions			L INPUT	S	
Highway Data					Site Co	naitions	-				
Average Daily	. ,	73,041 vehicl	es					Autos:			
	Percentage:	7.91%				edium Tru	,	,			
	our Volume:	5,778 vehicle	s		Н	eavy Truc	CKS (3+	Axies):	15		
	hicle Speed:	55 mph			Vehicle	Mix					
Near/Far Lar	ne Distance:	154 feet			Ve	hicleType		Day	Evening	Night	Daily
Site Data						A	Autos:	70.7%	11.8%	17.5%	90.17
Bar	rier Heiaht:	0.0 feet			Λ	∕ledium Ti	rucks:	82.2%	3.5%	14.3%	1.76
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Ti	rucks:	70.8%	6.2%	23.0%	8.07
Centerline Dis	st. to Barrier:	84.0 feet			Noise	ource El	ovation	e (in f	oot)		
Centerline Dist.	to Observer:	84.0 feet		1	110/36 6	Auto:		000	001)		
Barrier Distance t	to Observer:	0.0 feet			Medi	ım Truck:		297			
Observer Height (	Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iustmen	t: 0.0
Pa	d Elevation:	0.0 feet			7700	ivy much	3. 0	004	0,000,10	, 401111011	. 0.0
Roa	d Elevation:	0.0 feet			Lane E	quivalent			feet)		
F	Road Grade:	0.0%				Auto		.941			
	Left View:	-90.0 degre	es			um Truck		.679			
	Right View:	90.0 degre	es		Hea	vy Truck	s: 33	.705			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		e Road	Fresi		Barrier Att		rm Atten
Autos:	71.78			2.4	-	-1.20		-4.75		000	0.00
Medium Trucks:	82.40			2.4		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-6.02	!	2.4	17	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise						-				_	
	Leq Peak Ho		_	Leq E	vening	<del>_</del>	Night		Ldn		NEL
Autos:	-	7.5	76.2		74.		71.		78.	-	79
Medium Trucks:	-	1.0	70.4		62.		64.		71.9	-	72
Heavy Trucks:		1.6	80.4		75.	-	76.		83.		83
Vehicle Noise:		3.3	82.1		78.	3	78.	υ	85.	1	85
Centerline Distanc	e to Noise C	ontour (in fee	t)	70	dBA	65	dBA		60 dBA	T = 6	dBA
			Ldn:	70	0BA 858		ава 1.849		3.983		8.58
			NEL:		890		1,849		.,		8,58
		C	IVEL.		890		1,917		4,130	'	8,89

	FHWA-RD	-77-108 HIGH	WAY NO	ISE PREDIC	CTION MO	DEL (9.	/12/202	21)		
	o: E+P e: Ontario Rar nt: e/o Haven A				Project N Job Nui			ven Speci	fic Plan	
	SPECIFIC IN	PUT DATA		014- 0				INPUTS	3	
Highway Data				Site Con	ditions (F					
Average Daily	. ,	49,864 vehicle	es				utos:	15		
	Percentage:	7.91%			edium Truc			15		
	our Volume:	3,944 vehicles	3	He	avy Truck	s (3+ A	xles):	15		
	hicle Speed:	55 mph		Vehicle	Mix					
Near/Far La	ne Distance:	154 feet		Veh	icleType	I	Day I	Evening	Night	Daily
Site Data					Au	itos: 7	0.7%	11.8%	17.5%	93.24%
Rai	rier Heiaht:	0.0 feet		М	edium Tru	cks: 8	32.2%	3.5%	14.3%	1.21%
Barrier Type (0-W		0.0			Heavy Tru	cks: 7	0.8%	6.2%	23.0%	5.55%
Centerline Dis	. ,	84.0 feet		Majaa C	ource Elev	otiono	(in for	×41		
Centerline Dist.	to Observer:	84.0 feet		Noise 3	Autos:		•	<i>:U)</i>		
Barrier Distance	to Observer:	0.0 feet		A deceller	m Trucks:	0.0 2.2				
Observer Height (	Above Pad):	5.0 feet						Grade Adj	uctment	. 0.0
Pa	d Elevation:	0.0 feet		Heat	y Trucks:	8.0	U4 (	Staue Auj	usuneni	0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent E	Distance	e (in fe	et)		
ı	Road Grade:	0.0%			Autos:	33.9	41			
	Left View:	-90.0 degree	es	Mediu	m Trucks:	33.6	79			
	Right View:	90.0 degree	es	Hear	y Trucks:	33.7	05			
FHWA Noise Mode	l Calculations	5								
VehicleType	REMEL	Traffic Flow	Distanc		Road	Fresne		Barrier Atte		m Atten
Autos:	71.78	2.95		2.42	-1.20		4.75	0.0		0.000
Medium Trucks:	82.40	-15.93		2.47	-1.20		4.88	0.0		0.000
Heavy Trucks:	86.40	-9.30		2.47	-1.20	-	5.21	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrier at	tenuation)						
VehicleType	Leq Peak Hou			q Evening	Leq N		I	Ldn		VEL
Autos:	75		74.7	72.9		69.9		77.3		77.7
Medium Trucks:	67		67.1	59.4		60.8		68.6		68.7
Heavy Trucks:	78		77.1	72.5		73.4		80.4		80.6
Vehicle Noise:	80	.6	79.3	75.8		75.2		82.3		82.6
Centerline Distanc	e to Noise Co	ntour (in feet)	_							
				70 dBA	65 dE		60	) dBA	55	dBA
			Ldn:	558		1,202		2,590		5,579
		CI	VEL:	580		1,250		2,693		5,802

FHWA-F	RD-77-108 HIGH\	VAY N	IOISE	PREDIC	CTION N	MODEL	(9/12/2	021)					
Scenario: OY Road Name: Ontario R Road Segment: e/o Haven			Project Name: Rich Haven Specific Plan Job Number: 14822										
SITE SPECIFIC I	NPUT DATA							L INPUT	S				
Highway Data			S	ite Con	ditions	(Hard							
Average Daily Traffic (Adt):	27,304 vehicles	S					Autos:	15					
Peak Hour Percentage:	7.91%				edium Tr		,						
Peak Hour Volume:	2,160 vehicles			He	eavy Tru	icks (3+	Axles):	15					
Vehicle Speed:	55 mph		V	ehicle l	Mix								
Near/Far Lane Distance:	154 feet		Ė		icleType	9	Day	Evening	Night	Daily			
Site Data						Autos:	70.7%	11.8%	17.5%	86.53%			
Barrier Height:	0.0 feet			М	edium T	rucks:	82.2%	3.5%	14.3%	2.42%			
Barrier Type (0-Wall, 1-Berm):	0.0			-	Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%			
Centerline Dist. to Barrier:	84.0 feet		٨	loise So	ource E	levatio	ns (in fe	eet)					
Centerline Dist. to Observer:	84.0 feet				Auto		0.000	,					
Barrier Distance to Observer:	0.0 feet			Medium Trucks: 2.297									
Observer Height (Above Pad):	5.0 feet				vy Truck		3.004	Grade Adj	ustment	0.0			
Pad Elevation:	0.0 feet												
Road Elevation:	0.0 feet		L	ane Eq	uivalen	t Distai	nce (in i	feet)					
Road Grade:	0.0%				Auto		3.941						
Left View:	-90.0 degrees	S		Mediu	m Truck	rs: 30	3.679						
Right View:	90.0 degrees	S		Heav	vy Truck	(s: 30	3.705						
FHWA Noise Model Calculation	ns												
VehicleType REMEL	Traffic Flow	Dista	ance	Finite	Road	Fres	snel	Barrier Atte	en Ber	m Atten			
Autos: 71.7	B 0.01		2.42	2	-1.20		-4.75	0.0	000	0.000			
Medium Trucks: 82.4	0 -15.53		2.47	,	-1.20		-4.88	0.0	000	0.000			
Heavy Trucks: 86.4	0 -8.93		2.47	,	-1.20		-5.21	0.0	000	0.000			
Unmitigated Noise Levels (with													
VehicleType Leq Peak Ho			Leq Ev			Night		Ldn		NEL			
		1.7		70.0		66		74.3		74.7			
		7.5		59.8		61		69.0		69.1			
		7.5		72.9		73		80.8		81.0			
		8.8		74.8	i	74	.8	81.9	)	82.1			
Centerline Distance to Noise C	Contour (in feet)		70 -	DA.	65	dD A		SO ADA		dDA			
	,	dn:	70 d		05	dBA	_	60 dBA	55	dBA			
		.dn:		523		1,12		2,429		5,234			
	CN	EL:		542		1,16	1	2,514		5,417			

FHWA-RD-7	7-108 HIGHWAY	NOISE I	PREDICTIO	N MODEL (	9/12/2021)		
Scenario: HY Road Name: Ontario Ranch Road Segment: e/o Haven Av.	Rd.			ject Name: bb Number:	Rich Haven \$ 14822	Specific	Plan
SITE SPECIFIC INPU	JT DATA				MODEL INF		
Peak Hour Percentage: 7 Peak Hour Volume: 3, Vehicle Speed:	,417 vehicles .91% 276 vehicles 55 mph 154 feet		Mediun	Trucks (2 )	,		ght Daily
Site Data			veriicie i			-	7.5% 86.53%
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 feet 0.0			m Trucks:	82.2% 3	5% 1	4.3% 2.42% 3.0% 11.05%
	84.0 feet	Ν	oise Sourc	e Elevation	s (in feet)		
Barrier Distance to Observer: Observer Height (Above Pad): Pad Elevation: Road Elevation: Road Grade: Left View:	84.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% 90.0 degrees	L	Medium Tr Heavy Tr ane Equiva	ucks: 2 ucks: 8 lent Distant utos: 33 ucks: 33		e Adjust	ment: 0.0
	90.0 degrees		ricavy ii	acns. 33.	703		
FHWA Noise Model Calculations  VehicleType REMEL To	raffic Flow Dis	stance	Finite Roa	d Fresr	nel Barrie	r Atten	Berm Atten
Autos: 71.78	1.82	2.42			-4.75	0.000	0.00
Medium Trucks: 82.40 Heavy Trucks: 86.40	-13.72 -7.12	2.47 2.47			-4.88 -5.21	0.000	0.00 0.00
Unmitigated Noise Levels (without	Topo and barrie	er attenu					
VehicleType Leq Peak Hour	Leq Day	Leq Ev		eq Night	Ldn		CNEL
Autos: 74.8	73.5		71.8	68.7		76.1	76.
Medium Trucks: 70.0 Heavy Trucks: 80.5	69.3 79.3		61.6 74.7	63.0 75.6		70.8 82.6	70. 82.
Vehicle Noise: 81.9	80.6		76.6	76.6		83.7	84.
Centerline Distance to Noise Cont	our (in feet)						
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	70 d	BA	65 dBA	60 dBA	1	55 dBA
	Ldn:		691	1,489	3	,207	6,909
	CNEL		715	1.541		.319	7.151

		D-77-108 HIGH	IWAI	NOISE	PREDIC	TION IVIC	JDEL (	9/T2/20	721)		
	o: OY+P								aven Spec	ific Plan	
	e: Ontario Ra					Job Nu	mber:	14822			
Road Segmer	it: e/o Haven	Av.									
	SPECIFIC II	IPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions (	Hard =	10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	53,412 vehicle	es					Autos:	15		
Peak Hour	Percentage:	7.91%				dium Tru		,	15		
Peak H	our Volume:	4,225 vehicle	s		He	avy Truci	ks (3+ )	Axles):	15		
	hicle Speed:	55 mph		ν	ehicle	Mix					
Near/Far Lai	ne Distance:	154 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.7%	11.8%	17.5%	92.799
Rai	rier Height:	0.0 feet			М	edium Tru	ıcks:	82.2%	3.5%	14.3%	1.299
Barrier Type (0-W		0.0				Heavy Tru	ıcks:	70.8%	6.2%	23.0%	5.929
Centerline Dis	st. to Barrier:	84.0 feet			laica S	ource Ele	wation	e (in fe	not)		
Centerline Dist.	to Observer:	84.0 feet		-	10/36 30	Autos.		000	eij		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Trucks		297			
Observer Height (	Above Pad):	5.0 feet				vy Trucks		004	Grade Ad	iustment	. 0 0
Pa	ad Elevation:	0.0 feet			77001	ry Trucks	. 0.	004	0/440 / 14	Juotimom	. 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent i	Distan	ce (in f	eet)		
F	Road Grade:	0.0%				Autos		941			
	Left View:	-90.0 degre	es			m Trucks		679			
	Right View:	90.0 degre	es		Hear	y Trucks	33.	705			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	71.78			2.42		-1.20		-4.75		000	0.00
Medium Trucks:	82.40			2.47		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-8.73		2.47	'	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise			barrie	r attenu	ıation)			_			
	Leq Peak Ho			Leq Ev		Leq N	_		Ldn		NEL
Autos:		3.2	74.9		73.2		70.		77.0	-	78.
Medium Trucks:		3.3	67.7		60.0		61.4		69.	•	69.
Heavy Trucks:		3.9	77.7		73.1		74.0		81.0		81
Vehicle Noise:		1.0	79.8		76.3		75.	/	82.8	B	83.
Centerline Distanc	e to Noise C	ontour (in feet	)	70							10.4
			,	70 d		65 d		1 -	i0 dBA		dBA
			Ldn: NFL:		601 625		1,295		2,790		6,01

Friday, October 14, 2022

	FHWA-RD-	77-108 HIGH	WAY I	NOISE	PREDIC	TION MO	DDEL (	9/12/2	021)		
Scenario: F Road Name: C Road Segment: e	ntario Ranc					Project I Job Nu			laven Spec	ific Pla	n
	CIFIC INP	UT DATA							L INPUT	s	
Highway Data					Site Con	ditions (	Hard =	10, Sc	oft = 15)		
Average Daily Traft	fic (Adt): 6	7,526 vehicle	S					Autos:	15		
Peak Hour Perd	entage:	7.91%			Me	dium Tru	cks (2	Axles):	15		
Peak Hour	Volume: 5	,341 vehicles	,		He	avy Truci	ks (3+	Axles):	15		
Vehicle	Speed:	55 mph		,	/ehicle l	Miv					
Near/Far Lane D	istance:	154 feet				icleType		Dav	Evening	Night	Daily
Site Data							utos:	70.7%	-	17.59	,
Parrier	Height:	0.0 feet			Me	edium Tru	ıcks:	82.2%	3.5%	14.39	6 1.52%
Barrier Type (0-Wall,		0.0 feet			F	leavy Tru	ıcks:	70.8%	6.2%	23.09	6.99%
Centerline Dist. to	,	84.0 feet		-							
Centerline Dist. to O		84.0 feet		,	voise Sc	ource Ele			eet)		
Barrier Distance to O	hserver	0.0 feet				Autos		000			
Observer Height (Abo		5.0 feet				m Trucks		297			
	levation:	0.0 feet			Heav	y Trucks	: 8	004	Grade Ad	justmer	nt: 0.0
	levation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
Road	d Grade:	0.0%				Autos	: 33	.941			
Le	eft View:	-90.0 degree	s		Mediui	m Trucks	: 33	679			
Rig	ht View:	90.0 degree			Heav	y Trucks	33	.705			
FHWA Noise Model Ca	lculations										
VehicleType R		Traffic Flow	Dist	ance	Finite		Fresi	-	Barrier Att	en Be	erm Atten
Autos:	71.78	4.18		2.42	2	-1.20		-4.75	0.0	000	0.000
Medium Trucks:	82.40	-13.60		2.47	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-6.99		2.47	7	-1.20		-5.21	0.0	000	0.000
Inmitigated Noise Le	/els (withoι	it Topo and	barrie	r atten	uation)						
VehicleType Leq	Peak Hour	Leq Day		Leq Ev	rening	Leq N	light		Ldn	(	CNEL
Autos:	77.2		75.9		74.1		71.		78.	5	78.9
Medium Trucks:	70.1		39.4		61.7		63.	1	70.9	9	71.0
Heavy Trucks:	80.7		79.4		74.9		75.		82.		82.9
Vehicle Noise:	82.5		31.3		77.6		77.	2	84.	3	84.6
Centerline Distance to	Noise Con	tour (in feet)									
				70 a	IBA .	65 d	BA	6	60 dBA	5	5 dBA
			Ldn:		759		1,636		3,524		7,593
		CI	IEL:		788		1,698	3	3,659	)	7,883

	FHWA-R	D-77-108 HIGH	IWAY	NOISE	PREDIC	CTION N	IODEL	(9/12/20	021)					
Scenario Road Name Road Segmen	: Ontario Ra				Project Name: Rich Haven Specific Plan Job Number: 14822									
	PECIFIC II	NPUT DATA			0:4- 0				L INPUT	S				
Highway Data					Site Cor	iaitions	(Hara =							
Average Daily T	. ,	22,522 vehicl	es					Autos:	15					
Peak Hour F		7.91%				edium Tr		,						
	our Volume:	1,781 vehicle	S		He	eavy Tru	cks (3+	Axles):	15					
	icle Speed:	55 mph			Vehicle	Mix								
Near/Far Lan	e Distance:	154 feet			Veh	icleType	9	Day	Evening	Night	Daily			
Site Data							Autos:	70.7%	11.8%	17.5%	86.53%			
Rari	ier Height:	0.0 feet			M	edium T	rucks:	82.2%	3.5%	14.3%	2.42%			
Barrier Type (0-Wa	all, 1-Berm):	0.0				Heavy T	rucks:	70.8%	6.2%	23.0%	11.05%			
Centerline Dis		84.0 feet			Noise S	ource E	levation	ıs (in fe	eet)					
Centerline Dist. to		84.0 feet				Auto	s: 0	.000						
Barrier Distance to		0.0 feet			Mediu	m Truck	s: 2	.297						
Observer Height (A		5.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	justment	0.0			
	d Elevation:	0.0 feet		ļ										
	d Elevation:	0.0 feet		ļ	Lane Eq			_ •	feet)					
R	oad Grade:	0.0%				Auto		.941						
Left View: -90.0 d						m Truck		.679						
	Right View:	90.0 degre	es		Hea	vy Truck	s: 33	.705						
FHWA Noise Model														
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten			
Autos:	71.78			2.4	-	-1.20		-4.75		000	0.000			
Medium Trucks:	82.40			2.4		-1.20		-4.88		000	0.000			
Heavy Trucks:	86.40			2.4		-1.20		-5.21	0.0	000	0.000			
Unmitigated Noise								-						
	Leq Peak Ho			Leq E	vening		Night		Ldn		NEL			
Autos:		2.2	70.9		69.1		66.		73.		73.9			
Medium Trucks:		7.3	66.7		59.0		60.	-	68.		68.3			
Heavy Trucks:		7.9	76.6		72.1		73.		80.		80.2			
Vehicle Noise:		9.2	78.0		74.0		74.	.0	81.	1	81.3			
Centerline Distance	to Noise C	ontour (in feet	)	70	AD A	6"	dD A	-	O ADA		dDA			
			I dn:	70	dBA	05	dBA		60 dBA		dBA			
		_	Ldn:		460		992	_	2,137		4,603			
		C	NEL:		476		1,02	0	2,211		4,764			

	FHWA-RI	D-77-108 HIG	HWAY	NOISE	PREDIC	TION	MODEL	(9/12/2	021)		
Scenario Road Namo Road Segmen	e: Ontario Ra						t Name: lumber:		aven Spec	ific Plan	
	SPECIFIC IN	NPUT DATA							L INPUT	s	
Peak He Vel	Percentage: our Volume: hicle Speed:	33,350 vehic 7.91% 2,638 vehicl 55 mph				edium Ti eavy Tru	ucks (2	Autos: Axles):	15 15		
Near/Far Lar	ne Distance:	154 feet			Veh	icleTyp	9	Day	Evening	Night	Daily
Site Data Bar Barrier Type (0-W	rier Height: fall, 1-Berm):	0.0 feet 0.0				edium 1		70.7% 82.2% 70.8%	3.5%	17.5% 14.3% 23.0%	86.539 2.429 11.059
	to Observer: to Observer: Above Pad): ad Elevation:	84.0 feet 84.0 feet 0.0 feet 5.0 feet 0.0 feet			Hea	Auto m Truck vy Truck	os: ( (s: 2 (s: 8	0.000 2.297 3.004	Grade Ad	justment	: 0.0
	nd Elevation: Road Grade: Left View: Right View:	0.0 feet 0.0% -90.0 degr 90.0 degr				Auto m Truck vy Truck	s: 33	3.941 3.679 3.705	icety		
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		stance		Road -1.20	Fres		Barrier Att		m Atten
Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40	-14.6	6	2.4 2.4 2.4	7	-1.20 -1.20 -1.20		-4.75 -4.88 -5.21	0.0	000 000	0.00 0.00 0.00
Unmitigated Noise	Levels (with	out Topo an	d barri	ier atten	uation)						
VehicleType	Leq Peak Hou	ur Leq Da	ay	Leq E	vening		Night		Ldn		VEL
Autos: Medium Trucks: Heavy Trucks:	69	3.9 9.0 9.6	72.6 68.4 78.3		70.8 60.7 73.8		67 62 74	.0	75.1 69.1 81.1	В	75. 70. 81.
Vehicle Noise:		).9	79.7		75.7		75		82.6		83.
Centerline Distanc	e to Noise Co	ontour (in fe	e <i>t</i> )								
outermie Distanc			,	70 (	dBA	65	dBA	- 6	60 dBA	55	dBA
			Ldn:	,,,,	598	1 00	1,28		2,776		5,980
			CNEL:		619		1,33	3	2,873		6,189

Scenario: E+P Road Name: Ontario R Road Segment: w/o Hamr					Project Na Job Num			aven Spec	ific Plan	
SITE SPECIFIC I					NOI	SE MO	DEL	. INPUT	s	
Highway Data				Site Con	ditions (Ha	rd = 10	, Soi	ft = 15)		
Average Daily Traffic (Adt):	54.967 vehi	cles				Au	tos:	15		
Peak Hour Percentage:	7.91%			Ме	dium Truck	s (2 Axle	es):	15		
Peak Hour Volume:	4,348 vehic	les		He	avy Trucks	(3+ Axl	es):	15		
Vehicle Speed:	55 mph		-	Vehicle I			_			
Near/Far Lane Distance:	154 feet		ŀ		icleType	Da		Evening	Night	Dailv
Site Data				VEIII	Auto		.7%	11.8%	17.5%	. ,
	0.0 feet			Me	edium Truck		2%	3.5%	14.3%	
Barrier Height:	0.0 reet			F	leavy Truck		.8%	6.2%	23.0%	
Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier:	0.0 84.0 feet		L						20.070	0.007
Centerline Dist. to Barrier:	84.0 feet		L	Noise Sc	ource Eleva	tions (i	in fe	et)		
Barrier Distance to Observer:	0.0 feet				Autos:	0.000	)			
Observer Height (Above Pad):	5.0 feet			Mediui	m Trucks:	2.297				
Pad Elevation:	0.0 feet			Heav	y Trucks:	8.004	1	Grade Ad	iustment	. 0.0
Road Elevation:	0.0 feet		1	I ane Fo	uivalent Di	stance	(in fe	oet)		
Road Grade:	0.0%		1	Lano Lq	Autos:	33.94	_	300		
Left View:	-90.0 degr	200		Mediu	m Trucks:	33.679				
Right View:	90.0 degr				y Trucks:	33.70	-			
ragin view.	30.0 dog.	000			,					
FHWA Noise Model Calculatio										
VehicleType REMEL	Traffic Flow	_	stance			resnel		Barrier Att		rm Atten
Autos: 71.7		-	2.4	-	-1.20		75		000	0.00
Medium Trucks: 82.4			2.4		-1.20		88		000	0.00
Heavy Trucks: 86.4	8.8- 0	08	2.4	17	-1.20	-5.	21	0.0	000	0.00
Unmitigated Noise Levels (wit	hout Topo an	d barri	ier atter	nuation)						
VehicleType Leq Peak He	our Leq D	ay	Leq E	vening	Leq Nig	ht		Ldn	С	NEL
Autos:	6.4	75.1		73.3		70.3		77.7		78.
Medium Trucks: 6	88.2	67.5		59.8		61.2		69.0	)	69.
	8.9	77.6		73.1		73.9		80.9	9	81.
Vehicle Noise: 8	31.0	79.8		76.3		75.7		82.8	3	83.
Centerline Distance to Noise (	Contour (in fe	et)								
		Ť	70	dBA	65 dBA	1	60	0 dBA	55	dBA
		Ldn:		600		.293		2.786		6.00
		Luii.		000		,293		2,700		0,000

Friday, October 14, 2022

	FHWA-RD-	-77-108 HIGH	WAY N	DISE F	PREDIC	TION MO	DDEL	9/12/2	021)		
Scenario. Road Name. Road Segment	: Ontario Ran					Project I Job Nu			laven Spec	cific Plai	1
	PECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions (	Hard =				
Average Daily Ti	. ,	55,795 vehicle	S					Autos:			
Peak Hour P		7.91%				dium Tru					
		5,204 vehicles			He	avy Truci	ks (3+	Axles):	15		
	icle Speed:	55 mph		V	ehicle l	Mix					
Near/Far Lane	e Distance:	154 feet				icleType		Day	Evening	Night	Daily
Site Data						A	utos:	70.7%	11.8%	17.59	6 92.04%
Barri	ier Heiaht:	0.0 feet			Me	edium Tru	ıcks:	82.2%	3.5%	14.39	6 1.41%
Barrier Type (0-Wa		0.0			F	leavy Tru	ıcks:	70.8%	6.2%	23.09	6.55%
Centerline Dist.	. ,	84.0 feet		A/	oioo Ce	urce Ele	. ratio	o (in f	n o é l		
Centerline Dist. to	Observer:	84.0 feet		/4	uise sc	Autos			eu)		
Barrier Distance to	Observer:	0.0 feet						.000			
Observer Height (A	bove Pad):	5.0 feet				m Trucks		.297	Crada As	livotmov	st: 0.0
Pad	l Elevation:	0.0 feet			Heav	y Trucks	. 8	.004	Grade Ad	jusimer	it. 0.0
Road	l Elevation:	0.0 feet		L	ane Eq	uivalent	Distan	ce (in	feet)		
Ro	oad Grade:	0.0%				Autos	: 33	.941			
	Left View:	-90.0 degree	s		Mediui	m Trucks	33	.679			
,	Right View:	90.0 degree	S		Heav	y Trucks	33	.705			
FHWA Noise Model	Calculations										
VehicleType	REMEL	Traffic Flow	Distai	nce	Finite	Road	Fres	-	Barrier Att	en Be	erm Atten
Autos:	71.78	4.09		2.42		-1.20		-4.75		000	0.000
Medium Trucks:	82.40	-14.06		2.47		-1.20		-4.88	0.	000	0.000
Heavy Trucks:	86.40	-7.38		2.47		-1.20		-5.21	0.	000	0.000
Inmitigated Noise I	Levels (witho	ut Topo and I	barrier a	attenu	ation)						
VehicleType L	eq Peak Hour.	Leq Day	L	eq Eve	ening	Leq N	light		Ldn	(	CNEL
Autos:	77.	1 7	75.8		74.1		71.	-	78.		78.8
Medium Trucks:	69.6	6 (	39.0		61.3		62.	6	70.		70.6
Heavy Trucks:	80.3		79.0		74.5		75.	•	82.		82.5
Vehicle Noise:	82.2	2 8	31.0		77.4		76.	9	84.	0	84.3
Centerline Distance	to Noise Cor	ntour (in feet)									
				70 dl	BA	65 d	BA	-	60 dBA	5	5 dBA
			Ldn:		723		1,558		3,358		7,234
		CN	IEL:		751		1,619	9	3,488	3	7,514

	FHWA-RI	D-77-108 HIGH	WAY	' NOISI	E PREDIC	CTION M	IODEL	(9/12/20	021)					
Road Nar	rio: HY ne: Ontario Ra ent: w/o Hamne				Project Name: Rich Haven Specific Plan Job Number: 14822									
	SPECIFIC IN	IPUT DATA			0:: 0				L INPUT	s				
Highway Data					Site Cor	aitions	(Hara :		iπ = 15)					
Average Daily	Traffic (Adt):	45,327 vehicle	es					Autos:	15					
Peak Hou	r Percentage:	7.91%				edium Tru		,						
Peak	Hour Volume:	3,585 vehicle	S		He	eavy Truc	cks (3+	Axles):	15					
V	ehicle Speed:	55 mph			Vehicle	Mix								
Near/Far L	ane Distance:	154 feet			Veh	icleType		Day	Evening	Night	Daily			
Site Data							Autos:	70.7%		17.59				
R:	arrier Height:	0.0 feet			М	edium Ti	rucks:	82.2%	3.5%	14.39	6 2.42%			
Barrier Type (0-V		0.0				Heavy Ti	rucks:	70.8%	6.2%	23.09	6 11.05%			
Centerline D	ist. to Barrier:	84.0 feet			Noise S	ource El	evatio	ns (in fe	eet)					
Centerline Dist		84.0 feet			Autos: 0.000									
Barrier Distance		0.0 feet			Medium Trucks: 2.297									
Observer Height	. ,	5.0 feet			Hear	vy Trucks	s: 8	.004	Grade Ad	justmer	nt: 0.0			
	Pad Elevation:	0.0 feet												
Ro	oad Elevation:	0.0 feet			Lane Eq				feet)					
Road Grade: 0.0%						Autos		3.941						
	Left View:	-90.0 degree				m Trucks		1.679						
	Right View:	90.0 degree	es		Hea	vy Trucks	s: 33	3.705						
FHWA Noise Mod	lel Calculation	s												
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres		Barrier Att	en Be	erm Atten			
Autos	71.78	2.21		2.	42	-1.20		-4.75	0.0	000	0.000			
Medium Trucks	82.40	-13.33		2.	47	-1.20		-4.88	0.0	000	0.000			
Heavy Trucks	86.40	-6.73		2.	47	-1.20		-5.21	0.0	000	0.000			
Unmitigated Nois								1		1				
VehicleType	Leq Peak Hou		_	Leq E	vening		Night		Ldn		CNEL			
	Autos: 75.2 73.9				72.2		69		76.	-	76.9			
	Medium Trucks: 70.3 69.7				62.0		63		71.2	_	71.3			
Heavy Trucks Vehicle Noise			79.7 81.0		75.1 77.0		76 77		83.0	-	83.2 84.3			
Centerline Distan			)											
Contonine Distan		mou. (m reet,		70	dBA	65 (	dBA	6	0 dBA	5	5 dBA			
			Ldn:		734		1,58	1	3,406	i	7,338			
		C	NEL:		759		1,63	6	3,525		7,594			

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	FHWA-RI	D-77-108 HIGI	HWAY	NOISE	PREDIC	CTION	MODEL	(9/12/2	021)		
Scenario Road Name Road Segmen	e: Ontario Ra							: Rich H : 14822	aven Spec	ific Plan	
	PECIFIC IN	IPUT DATA							L INPUT	S	
Veh	Percentage: our Volume: nicle Speed:	27,822 vehicl 7.91% 2,201 vehicle 55 mph				edium Ti eavy Tru	rucks (2	Autos: Axles): Axles):	15 15		
Near/Far Lan	e Distance:	154 feet		Ī	Veh	icleType	е	Day	Evening	Night	Daily
Site Data Barri Barrier Type (0-Wa	rier Height: all, 1-Berm):	0.0 feet 0.0				edium 1 Heavy 1		70.7% 82.2% 70.8%	3.5%	17.5% 14.3% 23.0%	
Centerline Dis	t. to Barrier:	84.0 feet		-	Noise S	ource E	levatio	ns (in fe	eet)		
Roai R	o Observer:	84.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		-	Hea Lane Eq Mediu	Auto m Truck vy Truck uivalen Auto m Truck vy Truck	ks: 2 ks: 8 <b>t Dista</b> ss: 30	0.000 2.297 3.004 <b>nce (in</b> : 3.941 3.679 3.705	Grade Adj	justment	: 0.0
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos: Medium Trucks: Heavy Trucks:	71.78 82.40 86.40		5	2.4 2.4 2.4	7	-1.20 -1.20 -1.20		-4.75 -4.88 -5.21	0.0	000 000 000	0.00 0.00 0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
	Leq Peak Hou				vening	Leq	Night		Ldn	C	NEL
Autos:	73	3.1	71.8		70.0		67	.0	74.4	4	74.
Medium Trucks:	68	3.2	67.6		59.9		61	.3	69.0	0	69.
Heavy Trucks:		3.8	77.5		73.0		73		80.9		81.
Vehicle Noise:	80	).1	78.9		74.9		74	.9	82.0	)	82.
Centerline Distance	e to Noise Co	ontour (in fee	t)								
			Ţ	70 (		65	dBA		60 dBA		dBA
			Ldn:		530		1,14		2,460		5,300
		C	NEL:		549		1,18	12	2,546		5,485

Scenario: HY+P					Proiect N	ame:	Rich H	aven Spec	ific Plan	
Road Name: Ontario R	anch Rd.				Job Nui					
Road Segment: w/o Hamn	er Av.									
SITE SPECIFIC I	NPUT DATA							LINPUT	s	
Highway Data			S	ite Con	ditions (F	lard =	10, So	ft = 15)		
Average Daily Traffic (Adt):	77,772 vehicle	S					Autos:	15		
Peak Hour Percentage:	7.91%			Me	dium Truc	ks (2 /	Axles):	15		
Peak Hour Volume:	6,152 vehicles			He	avy Truck	s (3+ /	Axles):	15		
Vehicle Speed:	55 mph		v	ehicle I	Лix					
Near/Far Lane Distance:	154 feet		Ė	Vehi	cleType		Day	Evening	Night	Daily
Site Data					Au	tos:	70.7%	11.8%	17.5%	91.20
Barrier Height:	0.0 feet			Me	edium Tru	cks:	82.2%	3.5%	14.3%	1.56
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy Tru	cks:	70.8%	6.2%	23.0%	7.24
Centerline Dist. to Barrier:	84.0 feet		N	loise So	urce Elev	ation.	s (in fe	et)		
Centerline Dist. to Observer:	84.0 feet		-		Autos:		000	/		
Barrier Distance to Observer:	0.0 feet			Mediu	n Trucks:		297			
Observer Height (Above Pad):	5.0 feet				v Trucks:		004	Grade Ad	iustment	0.0
Pad Elevation:	0.0 feet		L		,					
Road Elevation:	0.0 feet		Li	ane Equ	uivalent E	istan	ce (in t	eet)		
Road Grade:	0.0%				Autos:	33.	941			
Left View:	-90.0 degree	s		Mediur	n Trucks:	33.	679			
Right View:	90.0 degree	S		Heav	y Trucks:	33.	705			
FHWA Noise Model Calculation	ns									
VehicleType REMEL	Traffic Flow	Distan		Finite		Fresr	_	Barrier Att		m Atter
Autos: 71.78			2.42		-1.20		-4.75		000	0.00
Medium Trucks: 82.4			2.47		-1.20		-4.88		000	0.00
Heavy Trucks: 86.4	-6.22		2.47		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise Levels (with										
VehicleType Leq Peak Ho			q Eve	ening	Leq N	_		Ldn	_	NEL
		6.5		74.7		71.7		79.		79
		0.2		62.5		63.8	-	71.6	-	71
Heavy Trucks: 8		30.2		75.6		76.5		83.5		83
,	3.3	32.0		78.3		77.9	J	85.	1	85
Vehicle Noise: 8										
	ontour (in feet)		70 di	DΛ	65 41	21	6	0 484	55	AD A
Vehicle Noise: 8	, ,	dn:	70 dl	BA 848	65 dE	3 <i>A</i> 1.828		0 dBA 3.938		dBA 8.48

FHWA-I	RD-77-108 HIGH	WAY NOI	ISE PREDIC	CTION MO	ODEL (	9/12/2	021)		
Scenario: E+P Road Name: Ontario R Road Segment: e/o Hamr					Name: umber:		laven Spec	ific Plan	ı
SITE SPECIFIC	NPUT DATA		Site Co.	Nonditions (			L INPUT	S	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume: Vehicle Speed:	55 mph		Ме	edium Tru eavy Truc	cks (2 /	Autos: Axles):	15 15		
Near/Far Lane Distance:	154 feet		Veh	icleType		Day	Evening	Night	Daily
Site Data Barrier Height: Barrier Type (0-Wall, 1-Berm):				A ledium Tri Heavy Tri	ucks:	70.7% 82.2% 70.8%	3.5%	17.5% 14.3% 23.0%	1.51%
Centerline Dist. to Barrier:	84.0 feet		Noise S	ource Ele	evation.	s (in f	eet)		
Centerline Dist. to Observer: Barrier Distance to Observer: Observer Height (Above Pad):	0.0 feet 5.0 feet		Mediu	Autos m Trucks vy Trucks	0. 2.	000 297 004	Grade Ad	iustmen	t: 0.0
Pad Elevation:	0.0 1001				D:-4	/:	£4)		
Road Elevation: Road Grade: Left View: Right View:	0.0% -90.0 degree		Mediu	Autos M Trucks Vy Trucks	33.	941 679 705	ieetj		
FHWA Noise Model Calculation	ns								
VehicleType REMEL	Traffic Flow	Distanc	e Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos: 71.7	8 3.04		2.42	-1.20		-4.75	0.0	000	0.000
Medium Trucks: 82.4	0 -14.79		2.47	-1.20		-4.88	0.0	000	0.000
Heavy Trucks: 86.4	0 -8.10		2.47	-1.20		-5.21	0.0	000	0.000
Inmitigated Noise Levels (wit	hout Topo and	barrier at	tenuation)						
VehicleType Leq Peak H			q Evening	Leq N			Ldn		NEL
		74.8	73.0		70.0		77.4		77.8
		68.3	60.6		61.9	-	69.7		69.8
	***	78.3 80.2	73.7 76.5		74.6 76.1		81.6		81.8 83.5
vernole rioise.		70.5		70.		00.2	-	00.0	
0 / II DI / /		1							
Centerline Distance to Noise	contour (in reet)		70 dBA	65.0	IRA		SO dBA	55	dBA
Centerline Distance to Noise	, ,		70 dBA 639	65 a	<i>IBA</i> 1,376		50 dBA 2.965		6,389

	FHWA-RI	0-77-108 HIGH	WAY	NOISE	E PREDIC	CTION M	IODEL	(9/12/20	021)				
Road Nar	rio: OY ne: Ontario Ra ent: e/o Hamne						Name: lumber:		aven Spec	ific Plar	1		
	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	s			
Highway Data					Site Con	laitions	(Hara -						
Average Daily	. ,	38,968 vehicle	es					Autos:	15				
	r Percentage:	7.91%				edium Tri		,					
	Hour Volume:	3,082 vehicles	S		He	eavy Truc	cks (3+	Axles):	15				
	ehicle Speed:	55 mph			Vehicle	Mix							
Near/Far L	ane Distance:	154 feet			Veh	icleType		Day	Evening	Night	Daily		
Site Data							Autos:	70.7%	11.8%	17.59	86.53%		
	arrier Height:	0.0 feet			М	edium Ti	rucks:	82.2%	3.5%	14.39	2.42%		
Barrier Type (0-V		0.0				Heavy Ti	rucks:	70.8%	6.2%	23.09	11.05%		
Centerline D	ist. to Barrier:	84.0 feet			Noise S	ource El	evatio	ns (in fe	eet)				
Centerline Dist		84.0 feet		İ	Autos: 0.000								
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	.297					
Observer Height	. ,	5.0 feet			Hear	vy Truck	s: 8	.004	Grade Ad	justmen	t: 0.0		
	Pad Elevation:	0.0 feet											
Ro	oad Elevation:	0.0 feet			Lane Eq				feet)				
	Road Grade:	0.0%				Auto		3.941					
	Left View:	-90.0 degrees				m Truck		1.679					
	Right View:	90.0 degree		Heavy Trucks: 33.705									
FHWA Noise Mod	lel Calculation	s		·									
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fres		Barrier Att	en Be	rm Atten		
Autos		1.55		2.4		-1.20		-4.75		000	0.000		
Medium Trucks		-13.98		2.4		-1.20		-4.88		000	0.000		
Heavy Trucks		-7.39		2.4		-1.20		-5.21	0.0	000	0.000		
Unmitigated Nois					1		1						
VehicleType	Leq Peak Hou			Leq E	vening	-	Night		Ldn		NEL		
Autos			73.3 69.1		71.5		68	-	75.9	-	76.3		
	Medium Trucks: 69				61.4		62		70.	-	70.6		
	Heavy Trucks: 80.3 Vehicle Noise: 81.6				74.5 76.4		75 76		82.4		82.5 83.7		
Centerline Distan													
Contonine Distan		mou. (m reet)		70	dBA	65	dBA	6	0 dBA	5	5 dBA		
			Ldn:		663 1,429 3,079			6,634					
								6,866					

Friday,	October	14,	2022	

F	HWA-RD	-77-108 HIGH	WAY	NOISE	PREDIC	TION N	MODEL (9	/12/202	21)		
Scenario: H' Road Name: O Road Segment: e/	ntario Ran						t Name: F lumber: 1		ven Specifi	ic Plan	
SITE SPE	CIFIC INI	PUT DATA					NOISE M	ODEL	INPUTS		
Highway Data				S	ite Cor	ditions	(Hard = 1	0, Sof	t = 15)		
Average Daily Traffi Peak Hour Perc Peak Hour V Vehicle	entage: /olume: Speed:	50,098 vehicle 7.91% 3,963 vehicle 55 mph		v		avy Tru	rucks (2 A		15 15 15		
Near/Far Lane Di	stance:	154 feet			Veh	icleType	e <i>L</i>	Day I	Evening	Night	Daily
Site Data  Barrier I  Barrier Type (0-Wall, 1-		0.0 feet 0.0				edium 1 Heavy 1	rucks: 8	70.7% 32.2% 70.8%	11.8% 3.5% 6.2%	17.5% 14.3% 23.0%	86.53% 2.42% 11.05%
Centerline Dist. to	Barrier:	84.0 feet			laica S	urco E	levations	(in foo	( <del>f</del> )		
Road Ele Road Le	oserver: re Pad): evation:	84.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degree		L	Hea ane Eq Mediu	Auto m Truck ry Truck uivalen Auto m Truck ry Truck	(s: 2.2 (s: 8.0 t Distanc (s: 33.9 (s: 33.6	97 04 ( e (in fe 41 79	Grade Adju <b>et)</b>	stment:	0.0
FHWA Noise Model Cal	lculations										
VehicleType RI	EMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	el B	arrier Atter	n Berm	Atten
Autos:	71.78	2.64		2.42	!	-1.20	-	4.75	0.00	00	0.000
Medium Trucks: Heavy Trucks:	82.40 86.40	-12.89 -6.30		2.47 2.47		-1.20 -1.20		4.88 5.21	0.00		0.000
Unmitigated Noise Lev	els (witho	ut Topo and	barrie	er attenu	ıation)						
VehicleType Leq	Peak Hour	Leq Day	′	Leq Ev	ening	Leq	Night	I	_dn	CNI	EL
Autos:	75.0	6	74.4		72.6		69.6		77.0		77.4
Medium Trucks:	70.	8	70.2		62.5		63.8		71.6		71.7
Heavy Trucks:	Heavy Trucks: 81.4				75.6		76.4		83.4		83.6
Vehicle Noise:	7	81.5	77.5 77.4 84.6						84.8		
Centerline Distance to	Noise Co	ntour (in feet	)								
				70 d	BA	65	dBA	60	dBA	55 d	BA
			Ldn:		784		1,690		3,641		7,844
		C	NEL:		812 1,749 3,768 8,118						8,118

Secreti	io: OY+P					Project A	lama:	Dich III	aven Spec	ific Dlan	
	o: Ot+P e: Ontario Rar	ob Dd				Job Nu			aven Spec	ilic Plan	
	nt: e/o Hamnei					JOD IVU	iliber.	14022			
	SPECIFIC IN					NC	NISE N	IODE	L INPUT	s	
Highway Data	or Lon to m	TOTBAIA			Site Con	ditions (F					
Average Daily	Traffic (Adt):	63,124 vehicles					,	Autos:	15		
Peak Hour	Percentage:	7.91%			Me	dium Truc	ks (2 A	(xles):	15		
Peak H	our Volume:	4,993 vehicles			He	avy Truck	s (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		,	Vehicle I	Miv					
Near/Far Lai	ne Distance:	154 feet		- F		icleType		Dav	Evening	Night	Daily
Site Data							ıtos:	70.7%		17.5%	90.60
Rar	rier Heiaht:	0.0 feet			Me	edium Tru	cks:	82.2%	3.5%	14.3%	1.67
Barrier Type (0-W		0.0			F	Heavy Tru	cks:	70.8%	6.2%	23.0%	7.73
Centerline Dis	. ,	84.0 feet		١,	Maiaa Ca	urce Ele	ration	in fo	net)		
Centerline Dist.	to Observer:	84.0 feet		,	worse so	Autos:		000	el)		
Barrier Distance	to Observer:	0.0 feet			Modius	n Trucks:		297			
Observer Height (	Above Pad):	5.0 feet				v Trucks:		004	Grade Ad	iustment	0.0
Pa	ad Elevation:	0.0 feet				,				doumont	. 0.0
Roa	ad Elevation:	0.0 feet		I	Lane Equ	uivalent L			eet)		
F	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degrees				m Trucks:					
	Right View:	90.0 degrees			Heav	y Trucks:	33.	705			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el .	Barrier Att	en Ber	m Atte
Autos:	71.78	3.85		2.42	-	-1.20		-4.75		000	0.0
Medium Trucks:	82.40	-13.50		2.4		-1.20		-4.88		000	0.0
Heavy Trucks:	86.40	-6.84		2.4	7	-1.20		-5.21	0.0	000	0.0
Unmitigated Noise											
VehicleType	Leq Peak Hou			Leg E	vening	Leq N	•		Ldn		NEL
Autos:	76		5.6		73.8		70.8		78.2	-	78
Medium Trucks:	70	-	9.5		61.8		63.2		71.0	-	71
Heavy Trucks:	80		9.5		75.0		75.9		82.9		83
Vehicle Noise:	82		1.3		77.6		77.2	!	84.4	1	84
Centerline Distanc	e to Noise Co	ntour (in feet)		70		05.0					
		,		70 c		65 dl		6	0 dBA		dBA
			dn:		762		1,642		3,537		7,62
		CN	=4.:		791		1,703		3,669		7,90

	FHWA-RD-	77-108 HIGH	WAY N	OISE	PREDIC	TION M	ODEL (	9/12/2	021)				
Scenario: H Road Name: ( Road Segment: e	Ontario Rand						Name: ımber:		laven Spec	ific Plan	ı		
	CIFIC INP	UT DATA							L INPUT	S			
Highway Data				3	ite Con	ditions (							
Average Daily Trat	. ,	4,255 vehicle	S					Autos:					
Peak Hour Per		7.91%				dium Tru							
Peak Hour		5,874 vehicles			He	avy Truc	ks (3+ /	Axles):	15				
	e Speed:	55 mph		١	ehicle I	/lix							
Near/Far Lane L	Distance:	154 feet			Vehi	cleType		Day	Evening	Night	Daily		
Site Data						Α	utos:	70.7%	11.8%	17.5%	89.99%		
Barrie	Heiaht:	0.0 feet			Me	edium Tr	ucks:	82.2%	3.5%	14.3%	1.78%		
Barrier Type (0-Wall,		0.0			F	leavy Tr	ucks:	70.8%	6.2%	23.0%	8.23%		
Centerline Dist. to	,	84.0 feet			Noise Source Elevations (in feet)								
Centerline Dist. to C	bserver:	84.0 feet		-	ioise so	Autos			eu)				
Barrier Distance to C	bserver:	0.0 feet			Autos: 0.000 Medium Trucks: 2.297								
Observer Height (Abo	ve Pad):	5.0 feet											
Pad E	levation:	0.0 feet			, , , , , , , , , , , , , , , , , , , ,								
Road E	levation:	0.0 feet		L	ane Equ	ıivalent	Distan	ce (in	feet)				
Roa	d Grade:	0.0%				Autos	: 33.	941					
L	eft View:	-90.0 degree	s		Mediur	n Trucks	: 33.	679					
Rig	ght View:	90.0 degree		Heav	y Trucks	33.	705						
FHWA Noise Model C	alculations												
,,		Traffic Flow	Dista	ance	Finite		Fresi	-	Barrier Att		rm Atten		
Autos:	71.78	4.52		2.42	-	-1.20		-4.75		000	0.000		
Medium Trucks:	82.40	-12.51		2.47		-1.20		-4.88		000	0.000		
Heavy Trucks:	86.40	-5.87		2.47	,	-1.20		-5.21	0.0	000	0.000		
Inmitigated Noise Le	vels (withou	ut Topo and	barrier	atteni	uation)								
VehicleType Lec	Peak Hour	Leq Day		Leq Ev	ening	Leq I	light		Ldn	С	NEL		
Autos:	77.5	5	76.2		74.5		71.4	4	78.	В	79.3		
Medium Trucks:	2	70.5		62.8		64.2	2	72.0	D	72.1			
Heavy Trucks:		30.5		76.0		76.9	-	83.9	-	84.1			
Vehicle Noise:	83.4		32.2		78.4		78.	1	85.3	3	85.		
Centerline Distance to	Noise Con	tour (in feet)											
			I	70 d	BA	65 c	IBA	6	60 dBA	55	dBA		
			Ldn:		876		1,887		4,065	,	8,758		
		CI	IEL:		908		1,956		4,215	;	9,081		

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## **APPENDIX 10.1:**

**CADNAA OPERATIONAL NOISE MODEL INPUTS** 



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# 14822 - Rich Haven Specific Plan CadnaA Noise Prediction Model: 14822-02A.cna

Date: 17.10.22 Analyst: B. Lawson

**Calculation Configuration** 

Parameter   Value	Configurat	ion
Max. Error (dB) 0.00  Max. Search Radius (#(Unit,LEN)) 2000.01  Min. Dist Src to Rcvr 0.00  Partition 0.50  Max. Length of Section (#(Unit,LEN)) 999.99  Min. Length of Section (#(Unit,LEN)) 1.01  Min. Length of Section (#(Unit,LEN)) 0.00  Proj. Line Sources 0n  Proj. Area Sources 0n  Ref. Time 0.00  Reference Time Day (min) 960.00  Reference Time Night (min) 480.00  Daytime Penalty (dB) 0.00  Recr. Time Penalty (dB) 10.00  Dinth 10.00  DTM 5  Standard Height (m) 0.00  Model of Terrain Triangulation  Reflection max. Order of Reflection 2		
Max. Search Radius (#(Unit,LEN)) 2000.01  Min. Dist Src to Rcvr 0.00  Partition  Raster Factor 0.50  Max. Length of Section (#(Unit,LEN)) 999.99  Min. Length of Section (#(Unit,LEN)) 1.01  Min. Length of Section (%) 0.00  Proj. Line Sources On  Proj. Area Sources On  Ref. Time  Reference Time Day (min) 960.00  Reference Time Night (min) 480.00  Daytime Penalty (dB) 0.00  Recr. Time Penalty (dB) 10.00  DTM  Standard Height (m) 0.00  Model of Terrain Triangulation  Reflection  max. Order of Reflection 2	General	
Min. Dist Src to Rcvr 0.00  Partition 0.50  Raster Factor 0.50  Max. Length of Section (#(Unit,LEN)) 999.99  Min. Length of Section (#(Unit,LEN)) 1.01  Min. Length of Section (%) 0.00  Proj. Line Sources On  Proj. Area Sources On  Ref. Time  Reference Time Day (min) 960.00  Reference Time Night (min) 480.00  Daytime Penalty (dB) 0.00  Recr. Time Penalty (dB) 5.00  Night-time Penalty (dB) 10.00  DTM  Standard Height (m) 0.00  Model of Terrain Triangulation  Reflection  max. Order of Reflection 2	Max. Error (dB)	0.00
Partition  Raster Factor  0.50  Max. Length of Section (#(Unit,LEN)) 999.99  Min. Length of Section (#(Unit,LEN)) 1.01  Min. Length of Section (%) 0.00  Proj. Line Sources  On  Proj. Area Sources  On  Ref. Time  Reference Time Day (min) 960.00  Reference Time Night (min) 480.00  Daytime Penalty (dB) 0.00  Recr. Time Penalty (dB) 5.00  Night-time Penalty (dB) 10.00  DTM  Standard Height (m) 0.00  Model of Terrain Triangulation  Reflection  max. Order of Reflection 2	Max. Search Radius (#(Unit,LEN))	2000.01
Raster Factor         0.50           Max. Length of Section (#(Unit,LEN))         999.99           Min. Length of Section (#(Unit,LEN))         1.01           Min. Length of Section (%)         0.00           Proj. Line Sources         On           Proj. Area Sources         On           Ref. Time         Reference Time Day (min)         960.00           Reference Time Night (min)         480.00           Daytime Penalty (dB)         0.00           Recr. Time Penalty (dB)         5.00           Night-time Penalty (dB)         10.00           DTM         Standard Height (m)           Model of Terrain         Triangulation           Reflection         max. Order of Reflection         2	Min. Dist Src to Rcvr	0.00
Max. Length of Section (#(Unit,LEN))         999.99           Min. Length of Section (#(Unit,LEN))         1.01           Min. Length of Section (%)         0.00           Proj. Line Sources         On           Proj. Area Sources         On           Ref. Time         86.00           Reference Time Day (min)         480.00           Daytime Penalty (dB)         0.00           Recr. Time Penalty (dB)         5.00           Night-time Penalty (dB)         10.00           DTM         5tandard Height (m)           Model of Terrain         Triangulation           Reflection         max. Order of Reflection         2	Partition	
Min. Length of Section (#(Unit, LEN)) 1.01  Min. Length of Section (%) 0.00  Proj. Line Sources On  Proj. Area Sources On  Ref. Time  Reference Time Day (min) 480.00  Daytime Penalty (dB) 0.00  Recr. Time Penalty (dB) 5.00  Night-time Penalty (dB) 10.00  DTM 5tandard Height (m) 0.00  Model of Terrain Triangulation  Reflection max. Order of Reflection 2	Raster Factor	0.50
Min. Length of Section (%) 0.00  Proj. Line Sources On  Proj. Area Sources On  Ref. Time Seference Time Day (min) 960.00  Reference Time Night (min) 480.00  Daytime Penalty (dB) 0.00  Recr. Time Penalty (dB) 5.00  Night-time Penalty (dB) 10.00  DTM 5tandard Height (m) 0.00  Model of Terrain Triangulation  Reflection max. Order of Reflection 2	Max. Length of Section (#(Unit,LEN))	999.99
Proj. Line Sources         On           Proj. Area Sources         On           Ref. Time         960.00           Reference Time Day (min)         480.00           Beference Time Night (min)         480.00           Daytime Penalty (dB)         0.00           Recr. Time Penalty (dB)         5.00           Night-time Penalty (dB)         10.00           DTM         5tandard Height (m)           Standard Height (m)         0.00           Model of Terrain         Triangulation           Reflection         max. Order of Reflection         2	Min. Length of Section (#(Unit,LEN))	1.01
Proj. Area Sources         On           Ref. Time         960.00           Reference Time Day (min)         480.00           Reference Time Night (min)         480.00           Daytime Penalty (dB)         0.00           Recr. Time Penalty (dB)         5.00           Night-time Penalty (dB)         10.00           DTM         5tandard Height (m)           Standard Height (m)         0.00           Model of Terrain         Triangulation           Reflection         max. Order of Reflection	Min. Length of Section (%)	0.00
Ref. Time     960.00       Reference Time Day (min)     960.00       Reference Time Night (min)     480.00       Daytime Penalty (dB)     0.00       Recr. Time Penalty (dB)     5.00       Night-time Penalty (dB)     10.00       DTM     5tandard Height (m)       Standard Height (m)     0.00       Model of Terrain     Triangulation       Reflection     max. Order of Reflection       2	Proj. Line Sources	On
Reference Time Day (min)         960.00           Reference Time Night (min)         480.00           Daytime Penalty (dB)         0.00           Recr. Time Penalty (dB)         5.00           Night-time Penalty (dB)         10.00           DTM         Standard Height (m)           Model of Terrain         Triangulation           Reflection         max. Order of Reflection	Proj. Area Sources	On
Reference Time Night (min)         480.00           Daytime Penalty (dB)         0.00           Recr. Time Penalty (dB)         5.00           Night-time Penalty (dB)         10.00           DTM         5tandard Height (m)           Model of Terrain         Triangulation           Reflection         max. Order of Reflection	Ref. Time	
Daytime Penalty (dB)         0.00           Recr. Time Penalty (dB)         5.00           Night-time Penalty (dB)         10.00           DSTAND         0.00           Standard Height (m)         0.00           Model of Terrain         Triangulation           Reflection         max. Order of Reflection	Reference Time Day (min)	960.00
Recr. Time Penalty (dB) 5.00  Night-time Penalty (dB) 10.00  DTM  Standard Height (m) 0.00  Model of Terrain Triangulation  Reflection  max. Order of Reflection 2	Reference Time Night (min)	480.00
Night-time Penalty (dB) 10.00  DTM 0.00  Standard Height (m) 0.00  Model of Terrain Triangulation  Reflection 2	Daytime Penalty (dB)	0.00
DTM Standard Height (m) Model of Terrain Reflection max. Order of Reflection 2	Recr. Time Penalty (dB)	5.00
Standard Height (m) 0.00  Model of Terrain Triangulation  Reflection  max. Order of Reflection 2	Night-time Penalty (dB)	10.00
Model of Terrain Triangulation Reflection max. Order of Reflection 2	DTM	
Reflection 2 2	Standard Height (m)	0.00
max. Order of Reflection 2	Model of Terrain	Triangulation
	Reflection	
C	max. Order of Reflection	2
Search Radius Src   100.00	Search Radius Src	100.00
Search Radius Rcvr 100.00	Search Radius Rcvr	100.00
Max. Distance Source - Rcvr 1000.00 1000.00	Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector 1.00 1.00	Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector 0.10	Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	Industrial (ISO 9613)	
Lateral Diffraction some Obj	Lateral Diffraction	some Obj
Obst. within Area Src do not shield On	Obst. within Area Src do not shield	On
Screening Incl. Ground Att. over Barrier	Screening	Incl. Ground Att. over Barrier
Dz with limit (20/25)		Dz with limit (20/25)
Barrier Coefficients C1,2,3 3.0 20.0 0.0	Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP)) 10	Temperature (#(Unit,TEMP))	10
rel. Humidity (%) 70	rel. Humidity (%)	70
Ground Absorption G 0.50	Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED)) 3.0	Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	Roads (TNM)	
Railways (FTA/FRA)	Railways (FTA/FRA)	
Aircraft (???)	Aircraft (???)	
Strictly acc. to AzB	Strictly acc. to AzB	

#### **Receiver Noise Levels**

Name	M.	ID		Level Lr		Lir	nit. Valı	ue		Land	Use	Height	:	Ci	oordinates	
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Υ	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	44.9	44.8	51.5	65.0	45.0	0.0				5.00	а	6161938.34	2315328.19	5.00
RECEIVERS		R2	44.8	44.7	51.4	65.0	45.0	0.0				5.00	а	6162735.95	2314875.32	5.00
RECEIVERS		R3	45.9	44.5	51.2	65.0	45.0	0.0				5.00	а	6163483.69	2310238.26	5.00
RECEIVERS		R4	42.8	42.5	49.2	65.0	45.0	0.0				5.00	а	6162048.86	2308936.45	5.00
RECEIVERS		R5	43.0	42.4	49.1	65.0	45.0	0.0				5.00	а	6161471.50	2310774.52	5.00
RECEIVERS		R6	40.0	39.4	46.1	65.0	45.0	0.0				5.00	а	6159739.11	2311421.01	5.00
RECEIVERS		R7	37.3	35.5	42.4	65.0	45.0	0.0				5.00	а	6159775.06	2314442.86	5.00
RECEIVERS		R8	33.4	33.0	39.7	65.0	45.0	0.0				5.00	а	6160277.95	2317097.00	5.00

Point Source(s)

Name	M.	ID	R	esult. PW	'L		Lw/L	i	Ope	erating Ti	ime	Height	t	Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			Х	Υ	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		TRASH26	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6161900.94	2312817.25	5.00
POINTSOURCE		TRASH25	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6161896.66	2312112.21	5.00
POINTSOURCE		TRASH24	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6161930.85	2313706.03	5.00
POINTSOURCE		TRASH23	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6161922.30	2313139.86	5.00
POINTSOURCE		TRASH22	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6161967.45	2310918.08	5.00
POINTSOURCE		TRASH21	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6162681.62	2310733.34	5.00
POINTSOURCE		TRASH20	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6162993.21	2310719.55	5.00
POINTSOURCE		TRASH19	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6162698.16	2310603.74	5.00
POINTSOURCE		TRASH18	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6163166.92	2310476.90	5.00
POINTSOURCE		TRASH17	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	а	6163588.81	2310716.79	5.00

Name	M.	ID	R	esult. PW	L		Lw / L	i	Оре	erating Ti	ime	Heigh	t	Co	pordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			Х	Υ	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)	$\sqcup$	(ft)	(ft)	(ft)
POINTSOURCE		TRASH16	89.0	89.0	89.0	Lw .	89		900.00	0.00	270.00	5.00	a	6163610.87	2310474.14	5.00
POINTSOURCE POINTSOURCE		TRASH15 TRASH14	89.0 89.0	89.0 89.0	89.0 89.0	Lw	89 89		900.00	0.00	270.00 270.00	5.00	a	6163892.12 6164272.65	2310722.31 2310711.28	5.00 5.00
POINTSOURCE		TRASH13	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6163914.18	2310/11.28	5.00
POINTSOURCE		TRASH12	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6164366.40	2310446.57	5.00
POINTSOURCE		TRASH11	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6164462.91	2310443.81	5.00
POINTSOURCE		TRASH10	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6164713.83	2310540.32	5.00
POINTSOURCE		TRASH09	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6164815.86	2310554.10	5.00
POINTSOURCE		TRASH08	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6164771.74	2310708.52	5.00
POINTSOURCE		TRASH07	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6164664.20	2310766.43	5.00
POINTSOURCE		TRASH06	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6163062.14	2310782.97	5.00
POINTSOURCE		TRASH05	89.0	89.0	89.0	Lw .	89		900.00	0.00	270.00	5.00	a	6163208.28	2311610.20	5.00
POINTSOURCE POINTSOURCE		TRASH04 TRASH03	89.0 89.0	89.0 89.0	89.0 89.0	Lw	89 89		900.00	0.00	270.00 270.00	5.00	a	6164735.89 6163842.22	2311590.89 2309695.88	5.00
POINTSOURCE		TRASH02	89.0	89.0	89.0	LW	89		900.00	0.00	270.00	5.00	a	6164810.66	2309683.88	5.00
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6164678.13	2309626.45	5.00
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163164.50	2311175.81	50.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163289.94	2311386.92	50.00
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163418.44	2311172.76	50.00
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163577.53	2311365.50	50.00
POINTSOURCE		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163693.79	2311175.81	50.00
POINTSOURCE		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163816.16	2311356.32	50.00
POINTSOURCE		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163938.54	2311160.52	50.00
POINTSOURCE		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164060.92	2311356.32	50.00
POINTSOURCE		AC09	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164186.36	2311157.46	50.00
POINTSOURCE		AC10	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164317.91	2311368.56	50.00
POINTSOURCE POINTSOURCE		AC11 AC12	88.9 88.9	88.9 88.9	88.9 88.9	Lw	88.9 88.9		585.00 585.00	0.00	252.00 252.00	5.00	g	6164446.41 6164565.73	2311166.64 2311368.56	50.00 50.00
POINTSOURCE		AC13	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164703.40	2311308.30	50.00
POINTSOURCE		AC14	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164584.08	2310976.95	50.00
POINTSOURCE		AC15	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164317.91	2310980.01	50.00
POINTSOURCE		AC16	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164051.74	2310980.01	50.00
POINTSOURCE		AC17	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163819.22	2310983.07	50.00
POINTSOURCE		AC18	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163565.29	2310989.19	50.00
POINTSOURCE		AC19	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163277.70	2310998.37	50.00
POINTSOURCE		AC20	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161720.45	2310921.88	50.00
POINTSOURCE		AC21	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161732.69	2311148.28	50.00
POINTSOURCE		AC22	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6162001.92	2311163.58	50.00
POINTSOURCE		AC23	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161864.24	2311282.89	50.00
POINTSOURCE POINTSOURCE		AC24 AC25	88.9 88.9	88.9 88.9	88.9 88.9	Lw	88.9 88.9		585.00 585.00	0.00	252.00 252.00	5.00	g	6161732.69 6161588.89	2311405.27 2312142.60	50.00
POINTSOURCE		AC25	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161695.97	2312271.09	50.00
POINTSOURCE		AC27	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161579.71	2312387.35	50.00
POINTSOURCE		AC28	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161683.73	2312567.86	50.00
POINTSOURCE		AC29	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161552.18	2312708.59	50.00
POINTSOURCE		AC30	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161503.23	2313678.44	50.00
POINTSOURCE		AC31	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161503.23	2313225.64	50.00
POINTSOURCE		AC32	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161356.37	2313302.12	50.00
POINTSOURCE		AC33	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	-	6161643.96		50.00
POINTSOURCE		AC34	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	-	6161490.99	2313433.68	50.00
POINTSOURCE		AC35	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	-	6161350.26	2313559.12	50.00
POINTSOURCE POINTSOURCE		AC36 AC37	88.9 88.9	88.9 88.9	88.9 88.9	Lw	88.9 88.9		585.00 585.00	0.00		5.00	-	6161643.96 6164757.93	2313565.24 2309454.12	50.00 30.00
POINTSOURCE		AC38	88.9	88.9	88.9	LW	88.9		585.00	0.00		5.00	-	6164760.47	2309454.12	30.00
POINTSOURCE		AC39	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164794.17	2310054.17	30.00
POINTSOURCE		AC40	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164786.67	2309796.32	30.00
POINTSOURCE		AC41	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	g	6164620.27	2309794.82	30.00
POINTSOURCE		AC42	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	-	6164378.91	2309800.81	30.00
POINTSOURCE		AC43	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164121.06	2309803.81	30.00
POINTSOURCE		AC44	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	-	6163881.20	2309814.31	30.00
POINTSOURCE		AC45	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	-	6163872.21	2310088.65	30.00
POINTSOURCE		AC46	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	-	6164942.70	2310526.53	30.00
POINTSOURCE		AC47	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	-	6164835.16	2310463.11	30.00
POINTSOURCE		AC48	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	-	6164716.59	2310460.35	30.00
POINTSOURCE POINTSOURCE		AC49 AC50	88.9 88.9	88.9 88.9	88.9 88.9	Lw	88.9 88.9		585.00 585.00	0.00	252.00 252.00	5.00	g	6164545.63 6164658.69	2310493.44 2310678.19	30.00
POINTSOURCE		AC50 AC51	88.9	88.9	88.9	LW	88.9		585.00	0.00	252.00	5.00	g	6164245.07	2310678.19	30.00
POINTSOURCE		AC52	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164189.92	2310595.47	30.00
POINTSOURCE		AC53	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164013.45	2310498.96	30.00
POINTSOURCE		AC54	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163820.43	2310689.22	30.00
POINTSOURCE		AC55	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	g	6163710.13	2310689.22	30.00
POINTSOURCE		AC56	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	-	6163519.87	2310474.14	30.00
POINTSOURCE		AC57	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163279.98	2310490.68	30.00
POINTSOURCE		AC58	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163081.44	2310680.95	30.00
POINTSOURCE		AC59	88.9	88.9	88.9	Lw	88.9		585.00	0.00		5.00	g	6162896.70		30.00
						1. 1	000	1			252.00			1 6163731 35	'	20.00
POINTSOURCE POINTSOURCE		AC60 AC61	88.9 88.9	88.9 88.9	88.9 88.9	Lw	88.9 88.9		585.00 585.00	0.00		5.00	g	6162731.25 6162579.59	2310487.93 2310620.28	30.00

Name	M.	ID	R	esult. PW	L		Lw/L	i	Оре	erating Ti	me	Heigh	t	Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	15.1		X	Y	Z
DOINTSOLIBCE		AC62	(dBA) 88.9	(dBA) 88.9	(dBA)	Lver	88.9	dB(A)	(min) 585.00	(min) 0.00	(min) 252.00	(ft) 5.00	_	(ft) 6164807.59	(ft) 2310970.47	(ft)
POINTSOURCE POINTSOURCE		AC63	88.9	88.9	88.9 88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6164804.83	2310970.47	50.00
POINTSOURCE		AC64	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6162998.72	2311006.32	50.00
POINTSOURCE		AC65	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6163106.26	2311397.87	50.00
POINTSOURCE		AC66	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161711.01	2310725.06	50.00
POINTSOURCE		AC67	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161981.23	2311428.21	50.00
POINTSOURCE		AC68	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161717.20	2312022.48	50.00
POINTSOURCE		AC69	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161548.42	2312020.34	50.00
POINTSOURCE POINTSOURCE		AC70 AC71	88.9 88.9	88.9 88.9	88.9 88.9	Lw	88.9 88.9		585.00 585.00	0.00	252.00 252.00	5.00	g	6161693.70 6161428.78	2312806.57 2312819.39	50.00
POINTSOURCE		AC72	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161345.45	2312815.35	50.00
POINTSOURCE		AC73	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161648.83	2313118.49	50.00
POINTSOURCE		AC74	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161668.06	2313782.94	50.00
POINTSOURCE		AC75	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6161341.18	2313789.35	50.00
POINTSOURCE		CAR00	81.1	81.1	81.1	Lw	81.1					5.00	a	6164757.95	2310543.07	5.00
POINTSOURCE		CAR01	81.1	81.1	81.1	Lw .	81.1					5.00	a	6164854.46	2310543.07	5.00
POINTSOURCE		CAR01	81.1	81.1	81.1	Lw	81.1					5.00	a	6164899.69	2309600.13	5.00
POINTSOURCE POINTSOURCE		CAR02 CAR02	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	a	6164818.62 6164841.97	2310661.64 2309560.23	5.00
POINTSOURCE		CAR03	81.1	81.1	81.1	Lw	81.1					5.00	a	6164895.82	2310667.16	5.00
POINTSOURCE		CAR03	81.1	81.1	81.1	Lw	81.1					5.00	a	6164892.05	2309518.64	5.00
POINTSOURCE		CAR04	81.1	81.1	81.1	Lw	81.1					5.00	а	6164950.97	2310951.17	5.00
POINTSOURCE		CAR04	81.1	81.1	81.1	Lw	81.1					5.00	а	6164847.91	2309454.12	5.00
POINTSOURCE		CAR05	81.1	81.1	81.1	Lw	81.1					5.00	a	6164953.73	2311066.98	5.00
POINTSOURCE		CAR05	81.1	81.1	81.1	Lw	81.1					5.00	a	6164880.17	2309383.66	5.00
POINTSOURCE		CARO6	81.1	81.1	81.1	Lw	81.1					5.00	a	6164956.49	2311199.34	5.00
POINTSOURCE POINTSOURCE		CAR06 CAR07	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	a	6164791.04 6164953.73	2309381.12 2311339.97	5.00
POINTSOURCE		CAR07	81.1	81.1	81.1	Lw	81.1					5.00	a	6164679.83	2309399.79	5.00
POINTSOURCE		CAR08	81.1	81.1	81.1	Lw	81.1					5.00	a	6162882.91	2310959.44	5.00
POINTSOURCE		CAR08	81.1	81.1	81.1	Lw	81.1					5.00	a	6164677.28	2309493.17	5.00
POINTSOURCE		CAR09	81.1	81.1	81.1	Lw	81.1					5.00	а	6162758.82	2310953.93	5.00
POINTSOURCE		CAR09	81.1	81.1	81.1	Lw	81.1					5.00	а	6164678.13	2309575.51	5.00
POINTSOURCE		CAR10	81.1	81.1	81.1	Lw	81.1					5.00	a	6162827.76	2311039.41	5.00
POINTSOURCE		CAR10	81.1	81.1	81.1	Lw	81.1					5.00	a	6164893.11	2310111.13	5.00
POINTSOURCE		CAR11	81.1	81.1	81.1	Lw	81.1					5.00	a	6162893.94	2311124.89	5.00
POINTSOURCE POINTSOURCE		CAR11 CAR12	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	a	6164890.11 6162472.05	2309974.71 2311237.94	5.00
POINTSOURCE		CAR12	81.1	81.1	81.1	Lw	81.1					5.00	a	6164887.11	2309842.79	5.00
POINTSOURCE		CAR13	81.1	81.1	81.1	Lw	81.1					5.00	a	6162455.51	2311339.97	5.00
POINTSOURCE		CAR13	81.1	81.1	81.1	Lw	81.1					5.00	а	6164872.12	2309700.37	5.00
POINTSOURCE		CAR14	81.1	81.1	81.1	Lw	81.1					5.00	а	6162436.21	2311464.05	5.00
POINTSOURCE		CAR14	81.1	81.1	81.1	Lw	81.1					5.00	a	6164735.70	2309704.87	5.00
POINTSOURCE		CAR15	81.1	81.1	81.1	Lw	81.1					5.00	a	6162571.32	2311466.81	5.00
POINTSOURCE		CAR15	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	a	6164582.79 6162640.26	2309709.37 2311160.74	5.00
POINTSOURCE		CAR16	81.1	81.1	81.1	Lw	81.1					5.00	a	6164444.87	2311160.74	5.00
POINTSOURCE		CAR17	81.1	81.1	81.1		81.1						-	6162670.59		5.00
POINTSOURCE		CAR17	81.1	81.1	81.1	Lw	81.1					5.00	a	6164302.45	2309709.37	5.00
POINTSOURCE		CAR18	81.1	81.1	81.1	Lw	81.1					5.00	а	6162725.74	2311386.84	5.00
POINTSOURCE		CAR18	81.1	81.1	81.1	Lw	81.1					5.00	a	6164181.03	2309710.87	5.00
POINTSOURCE		CAR19	81.1	81.1	81.1	Lw	81.1					5.00	-	6162797.43		5.00
POINTSOURCE		CAR19	81.1	81.1	81.1	Lw	81.1					5.00	-	6164035.61	2309715.37	5.00
POINTSOURCE		CAR20	81.1	81.1	81.1	Lw	81.1					5.00	-	6162778.13		5.00
POINTSOURCE POINTSOURCE		CAR20 CAR21	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	-	6163891.70 6162858.09		5.00
POINTSOURCE		CAR21	81.1	81.1	81.1	Lw	81.1					5.00	_	6163773.27	2309727.36	5.00
POINTSOURCE		CAR22	81.1	81.1	81.1	Lw	81.1					5.00	-	6162935.30		5.00
POINTSOURCE		CAR22	81.1	81.1	81.1	Lw	81.1					5.00	-	6163770.27	2309851.78	5.00
POINTSOURCE		CAR23	81.1	81.1	81.1	Lw	81.1					5.00	a	6163051.11	2311599.17	5.00
POINTSOURCE		CAR23	81.1	81.1	81.1	Lw	81.1					5.00	a	6163770.27	2309967.22	5.00
POINTSOURCE		CAR24	81.1	81.1	81.1	Lw	81.1					5.00	a	6162904.97	2311596.41	5.00
POINTSOURCE		CAR24	81.1	81.1	81.1	Lw	81.1					5.00	-	6163773.27	2310090.15	5.00
POINTSOURCE POINTSOURCE		CAR25	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	-	6162598.89	2311604.68 2310148.61	5.00
POINTSOURCE		CAR25	81.1	81.1	81.1	LW	81.1					5.00	-	6164791.17 6161923.33		5.00
POINTSOURCE		CAR26	81.1	81.1	81.1	Lw	81.1					5.00	-	6163893.19		5.00
POINTSOURCE		CAR27	81.1	81.1	81.1	Lw	81.1					5.00	-	6162229.40		5.00
POINTSOURCE		CAR27	81.1	81.1	81.1	Lw	81.1					5.00	-	6164113.57	2310154.61	5.00
POINTSOURCE		CAR28	81.1	81.1	81.1	Lw	81.1					5.00	а	6162212.86	2311304.12	5.00
POINTSOURCE		CAR28	81.1	81.1	81.1	Lw	81.1					5.00	-	6164294.96		5.00
POINTSOURCE		CAR29	81.1	81.1	81.1	Lw	81.1					5.00	-	6162113.59	2311574.35	5.00
POINTSOURCE		CAR29	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00		6164480.85	2310151.61	5.00
POINTSOURCE POINTSOURCE		CAR30 CAR30	81.1	81.1	81.1	Lw	81.1					5.00	a	6161826.82 6164635.26	2311568.83 2310156.11	5.00
POINTSOURCE		CAR31	81.1	81.1	81.1	Lw	81.1					5.00	a	6161575.89	2311577.11	5.00
POINTSOURCE		CAR31	81.1	81.1	81.1	Lw	81.1					5.00	H-	6164630.76		5.00
					•								_			

POINTSURGE   CA932	Name	M.	ID	R	esult. PW	/L		Lw/L	i	Ор	erating Ti	ime	Heigh	t	C	oordinates	
DONTSOURCE   CARSE   SLI   SLI   SLI   Low   SLI   SLI   SLI   Low   SLI   SLI   SLI   Low   SLI   SLI   SLI   Low   SLI   S					Evening	Night	Type	Value	norm.	Day	Special	Night				Υ	
POINTSURGE   CA932					(dBA)	(dBA)			dB(A)	(min)	(min)	(min)			- ' '		
POINTSURCE   CAR33																	5.00
POINTSURGE   CAR33																	5.00
POINTSURECE   CAR34																	
POINTSQUECE   CARSS   811   812   811   114																	
PIONISCURCE   CARSS   81.1																	_
POINTSURCE   CARSS   81.1   81.2   81.1   11.1																	
POINTSOURCE   CARSS   81.1																	
POINTSCURCE   CARSS   81.1																	
POINTSCURCE   CAR27   81.1																	
POINTSURECE   CAR82   81.1																	5.00
POINTSCURCE   CARSB   81.1   81.1   81.1   W   81.1   S. 00   A   G16071.86   212272.86   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   81.1   W   81.1   S. 00   A   G160205.54   2312518.14   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   81.1   W   81.1   S. 0.0   A   G160205.54   2312518.14   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   W   81.1   S. 0.0 A   G160205.54   2312518.14   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   W   81.1   S. 0.0 A   G160205.54   2312518.14   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   W   81.1   S. 0.0 A   G160205.52   2312518.14   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   W   81.1   S. 0.0 A   G160200.0   231276.64   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   W   81.1   S. 0.0 A   G160200.0   231276.64   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   W   81.1   S. 0.0 A   G160200.0   231276.64   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   W   81.1   S. 0.0 A   G160200.0   231276.64   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   W   81.1   S. 0.0 A   G160200.0   231276.64   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   W   81.1   S. 0.1   S. 0.0 A   G160200.0   231276.64   S. 0.0 POINTSCURCE   CARSB   81.1   81.1   81.1   W   81.1   S. 0.0 A   G160200.0   G16																	5.00
POINTSOURCE   CAR89   81.1   81.1   81.1   W   81.1																	5.00
POINTSOURCE   CAR93   811																	5.00
POINTSOURCE   CAR94				81.1	81.1	81.1	Lw	81.1						а			5.00
POINTSOURCE   CAR41   81.1   81.1   81.1   W   81.1     S.00   a   6169120,77   2309994,20   S.00   POINTSOURCE   CAR41   81.1   81.1   81.1   W   81.1   S.00   a   6169180,40   2312715,84   S.00   POINTSOURCE   CAR41   81.1   81.1   S.11   W   81.1   S.00   a   6169196,77   2312838,62   S.00   POINTSOURCE   CAR42   81.1   81.1   81.1   W   81.1   S.00   a   6169197,77   2312838,62   S.00   POINTSOURCE   CAR42   81.1   81.1   81.1   W   81.1   S.00   a   6169191,77   2312838,62   S.00   POINTSOURCE   CAR42   81.1   81.1   81.1   W   81.1   S.00   a   61690191,72   2312838,62   S.00   POINTSOURCE   CAR42   81.1   81.1   81.1   W   81.1   S.00   a   61690191,72   2312838,62   S.00   POINTSOURCE   CAR43   81.1   81.1   81.1   W   81.1   S.00   a   6162004,62   231273,20   S.00   POINTSOURCE   CAR43   81.1   81.1   81.1   W   81.1   S.00   a   61620404,62   231273,20   S.00   POINTSOURCE   CAR44   81.1   81.1   81.1   W   81.1   S.00   a   61620404,62   231273,20   S.00   POINTSOURCE   CAR44   81.1   81.1   S.11   W   81.1   S.00   a   61620404,62   231273,20   S.00   POINTSOURCE   CAR45   81.1   81.1   81.1   W   81.1   S.00   a   6162166,72   2313136,73   S.00   POINTSOURCE   CAR46   81.1   81.1   81.1   W   81.1   S.00   a   6162166,72   2313136,73   S.00   POINTSOURCE   CAR46   81.1   81.1   81.1   W   81.1   S.00   a   6162166,72   2313136,73   S.00   POINTSOURCE   CAR46   81.1   81.1   81.1   W   81.1   S.00   a   6162166,72   2313136,73   S.00   POINTSOURCE   CAR47   81.1   81.1   81.1   W   81.1   S.00   a   6162166,73   2313324,72   S.00   POINTSOURCE   CAR47   81.1   81.1   W   81.1   S.11   S.00   a   6162167,73   2313324,72   S.00   POINTSOURCE   CAR49   81.1   81.1   81.1   W   81.1   S.00   a   6162167,73   2313324,73   S.00   POINTSOURCE   CAR49   81.1   81.1   81.1   W   81.1   S.00   a   6162167,73   2313324,75   S.00   POINTSOURCE   CAR50   81.1   81.1   81.1   W   81.1   S.00   a   6162167,73   2313324,75   S.00   POINTSOURCE   CAR50   81.1   81.1   81.1   W   81.1   S.00   a   6162167,73   231				81.1	81.1	81.1	Lw	81.1						а			5.00
FOINTSOURCE   CAR41   81.1   81.1   81.1   1.0   81.1	POINTSOURCE		CAR40	81.1	81.1	81.1	Lw	81.1					5.00	а	6162172.27	2312573.69	5.00
POINTSOURCE   CAR41   81.1   81.1   81.1   1.0   81.1   1.0   81.1   1.0   81.1   81.1   1.0   81.1   81.1   1.0   81.1	POINTSOURCE		CAR40	81.1	81.1	81.1	Lw	81.1					5.00	а	6164112.07	2309994.20	5.00
POINTSOURCE   CARA2   81.1   81.1   81.1   1.1   81.1   1.1   5.00   a   616219.77   331288.80   5.00   POINTSOURCE   CARA2   81.1   81.1   1.	POINTSOURCE		CAR41	81.1	81.1	81.1	Lw	81.1					5.00	а	6162080.40	2312716.84	5.00
POINTSOURCE   CAR42   81.1   81.1   81.1   1.2   81.1   1.3   5.00   a   6162007.6   2312074.9   5.00   CAR43   81.1   81.1   1.2   81.1   1.3   5.00   a   6162007.6   2312074.9   5.00   CAR44   81.1   81.1   1.3   81.1   1.3   81.1   1.3   81.1   81.1   1.3   5.00   a   6162007.6   2312074.9   5.00   CAR44   81.1   81.1   1.3   81.1   1.3   81.1   81.1   1.3   5.00   a   6162007.6   2312074.9   5.00   CAR44   81.1   81.1   81.1   1.3   81.1	POINTSOURCE		CAR41	81.1	81.1	81.1	Lw	81.1					5.00	а	6164014.62	2309902.76	5.00
POINTSOURCE   CAR43	POINTSOURCE		CAR42	81.1	81.1	81.1	Lw	81.1					5.00	а	6162195.77	2312838.62	5.00
POINTSOURCE   CAR44	POINTSOURCE		CAR42	81.1	81.1	81.1	Lw	81.1					5.00	а	6164013.12	2310102.14	5.00
POINTSOURCE   CAR44	POINTSOURCE		CAR43	81.1	81.1	81.1	Lw	81.1					5.00	а	6162007.76	2312874.94	5.00
POINTSOURCE   CAR44   81.1   81.1   81.1   1.1   1.2   81.1   8	POINTSOURCE		CAR43	81.1	81.1	81.1	Lw	81.1					5.00	а	6162040.42	2310723.02	5.00
POINTSOURCE   CAR45	POINTSOURCE		CAR44	81.1	81.1	81.1	Lw	81.1					5.00	а	6162114.59	2313056.54	5.00
POINTSOURCE   CAR46   81.1   81.1   81.1   LW   81.1			CAR44	81.1	81.1	81.1	Lw	81.1						а		2310808.74	5.00
POINTSOURCE   CAR46																	5.00
POINTSOURCE   CAR46   81.1   81.1   81.1   LW   81.1																	5.00
POINTSOURCE   CAR47   81.1   81.1   81.1   LW   81.1																	5.00
POINTSOURCE   CAR47   81.1   81.1   81.1   LW   81.1																	
POINTSOURCE   CAR48																	
POINTSOURCE   CAR48																	_
POINTSOURCE   CAR49																	
POINTSOURCE   CAR49																	
POINTSOURCE   CARSO   81.1   81.1   81.1   LW   81.1																	
POINTSOURCE   CAR50																	
POINTSOURCE   CAR51																	5.00
POINTSOURCE   CARS1   81.1   81.1   81.1   Lw   81.1   S.00   a   6161970.01   2311564.93   S.00   POINTSOURCE   CARS2   81.1   81.1   R.1   Lw   81.1   S.00   a   6162229.96   2312428.41   S.00   POINTSOURCE   CARS2   S.11   S.11   S.11   Lw   S.1.1   S.00   a   6162334.64   2312567.28   S.00   POINTSOURCE   CARS3   S.11   S.11   S.11   Lw   S.1.1   S.00   a   6162334.64   2312567.28   S.00   POINTSOURCE   CARS3   S.11   S.11   S.11   Lw   S.1.1   S.00   a   6162334.64   2312567.28   S.00   POINTSOURCE   CARS3   S.11   S.11   S.11   Lw   S.1.1   S.00   a   6161584.26   2311459.31   S.00   POINTSOURCE   CARS4   S.11   S.11   S.11   Lw   S.1.1   S.00   a   6161584.26   2311459.31   S.00   POINTSOURCE   CARS4   S.11   S.11   S.11   Lw   S.1.1   S.00   a   6161587.79   2311199.08   S.00   POINTSOURCE   CARS5   S.11   S.11   S.11   Lw   S.1.1   S.00   a   6161587.79   2311199.08   S.00   POINTSOURCE   CARS5   S.11   S.11   S.11   Lw   S.11   S.00   a   6161587.32   2310920.49   S.00   POINTSOURCE   CARS5   S.11   S.11   S.11   Lw   S.11   S.00   a   6161587.32   2310920.49   S.00   POINTSOURCE   CARS5   S.11   S.11   S.11   Lw   S.11   S.00   a   6161587.32   2310920.49   S.00   POINTSOURCE   CARS5   S.11   S.11   S.11   Lw   S.11   S.00   a   6161587.32   2310920.49   S.00   POINTSOURCE   CARS5   S.11   S.11   S.11   Lw   S.11   S.00   a   6161587.32   2310920.49   S.00   POINTSOURCE   CARS7   S.11   S.11   S.11   Lw   S.11   S.00   a   6161582.73   2310690.05   S.00   POINTSOURCE   CARS7   S.11   S.11   S.11   Lw   S.11   S.00   a   6161686.82   2310599.03   S.00   POINTSOURCE   CARS7   S.11   S.11   S.11   Lw   S.11   S.00   a   6161686.82   2310599.03   S.00   POINTSOURCE   CARS8   S.11   S.11   S.11   Lw   S.11   S.00   a   6161697.54   2310505.65   S.00   POINTSOURCE   CARS9   S.11   S.11   S.11   Lw   S.11   S.11   S.11   S.00   a   6161697.48   2310505.65   S.00   POINTSOURCE   CAR60   S.11   S.11   S.11   Lw   S.11   S.11   S.00   a   6161903.73   2310500.15   S.00   POINTSOURCE   CAR61   S.11   S.11   S																	5.00
POINTSOURCE   CARS2   81.1   81.1   81.1   Lw   81.1														-			5.00
POINTSOURCE   CAR53   81.1   81.1   81.1   Lw   81.1   81.1   Lw   81.1   5.00   a   616234.64   2312567.28   5.00   FOINTSOURCE   CAR54   81.1   81.1   Lw   81.1   Lw   81.1   5.00   a   6161584.26   2311459.31   5.00   CAR54   81.1   81.1   R.1   Lw   81.1   5.00   a   616264.14   2312727.52   5.00   CAR54   81.1   81.1   R.1   Lw   81.1   S.00   a   6161585.79   2311199.08   5.00   CAR54   CAR55   R.1   81.1   S1.1   Lw   81.1   S.00   a   6161585.79   2311199.08   5.00   CAR55   CAR55   S1.1   S1.1   Lw   S1.1   S.00   a   6161587.79   23110920.49   5.00   CAR55   CAR55   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161587.32   2310920.49   5.00   CAR55   CAR55   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161587.32   2310920.49   5.00   CAR57   CAR56   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161586.28   2312917.66   5.00   CAR57   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161586.28   2312917.66   5.00   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161586.23   2310920.49   5.00   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161583.05   2310920.49   5.00   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161586.28   231099.03   5.00   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   61616366.83   2312849.30   5.00   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   61616366.83   2312849.30   5.00   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162024.85   2310950.65   5.00   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S1.1   S.00   a   6162024.85   2311950.65   5.00   CAR59   S1.1   S1.1   S1.1   Lw   S1.1   S1.1   S1.1   S.00   a   6162024.85   2311950.65   5.00   CAR59   S1.1   S1.1   S1.1   Lw   S1.1				81.1	81.1	81.1	Lw	81.1						а			5.00
POINTSOURCE   CAR53   81.1   81.1   81.1   81.1   Lw   81.1   81.1   Lw   81.1   81.1   S.00   a   6161584.26   2311459.31   S.00   POINTSOURCE   CAR54   83.1   83.1   81.1   81.1   Lw   81.1   S.00   a   6162264.14   2312727.52   S.00	POINTSOURCE		CAR52	81.1	81.1	81.1	Lw	81.1					5.00	а	6161706.72	2311567.99	5.00
POINTSOURCE   CAR54	POINTSOURCE		CAR53	81.1	81.1	81.1	Lw	81.1					5.00	а	6162334.64	2312567.28	5.00
POINTSOURCE   CARS4   81.1   81.1   81.1   Lw   81.1	POINTSOURCE		CAR53	81.1	81.1	81.1	Lw	81.1					5.00	а	6161584.26	2311459.31	5.00
POINTSOURCE   CAR55   S1.1   S1.1   S1.1   Lw   S1.1   Lw   S1.1   S.00   a   6161674.47   2313020.22   S.00     POINTSOURCE   CAR56   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161587.32   2310920.49   S.00     POINTSOURCE   CAR56   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161546.28   2312917.66   S.00     POINTSOURCE   CAR56   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161582.73   2310660.26   S.00     POINTSOURCE   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161582.73   2310660.26   S.00     POINTSOURCE   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616168.82   2310599.03   S.00     POINTSOURCE   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616268.83   2312849.30   S.00     POINTSOURCE   CAR58   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162636.83   2312849.30   S.00     POINTSOURCE   CAR58   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616267.54   2310505.65   S.00     POINTSOURCE   CAR58   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162212.86   2311958.39   S.00     POINTSOURCE   CAR59   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162212.86   2311958.39   S.00     POINTSOURCE   CAR59   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162212.86   2311958.39   S.00     POINTSOURCE   CAR60   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162024.85   23119608.21   S.00     POINTSOURCE   CAR60   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162024.85   2311960.07   S.00     POINTSOURCE   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161409.55   2311973.34   S.00     POINTSOURCE   CAR62   S1.1   S1.1   S1.1   Lw   S1.1   S1.1   S1.1   S.00   a   6161409.55   2311973.34   S.00     POINTSOURCE   CAR62   S1.1   S1.1   S1.1   Lw   S1.1   S1.1   S.00   a   6161409.57   2311973.34   S.00     POINTSOURCE   CAR62   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161409.57   2311973.34   S.00     POINTSOURCE   CAR63   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162692.69   2310565.13   S.00     POINTSOURCE   CAR64   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162692.65   2310683.70   S.	POINTSOURCE		CAR54	81.1	81.1	81.1	Lw	81.1					5.00	а	6162264.14	2312727.52	5.00
POINTSOURCE   CAR55   S1.1   S1.1   Lw   S1.1   Lw   S1.1   S.00   a   6161587.32   2310920.49   S.00   POINTSOURCE   CAR56   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161546.28   2312917.66   S.00   POINTSOURCE   CAR56   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161582.73   2310660.26   S.00   POINTSOURCE   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161582.73   2310660.26   S.00   POINTSOURCE   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161433.05   2313024.49   S.00   POINTSOURCE   CAR57   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161688.23   2312849.30   S.00   POINTSOURCE   CAR58   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616268.83   2312849.30   S.00   POINTSOURCE   CAR58   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616290.83   2312849.30   S.00   POINTSOURCE   CAR58   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616290.84   2310505.65   S.00   POINTSOURCE   CAR59   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162212.86   2311958.39   S.00   POINTSOURCE   CAR59   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616202.85   2311969.07   S.00   POINTSOURCE   CAR60   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616202.85   2311969.07   S.00   POINTSOURCE   CAR60   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616202.85   2311973.34   S.00   POINTSOURCE   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S1.	POINTSOURCE		CAR54	81.1	81.1	81.1	Lw	81.1					5.00	а	6161585.79	2311199.08	5.00
POINTSOURCE   CAR56   81.1   81.1   81.1   Lw   81.1   81.1   Lw   81.1   81.1   S.00   a   6161546.28   2312917.66   S.00   POINTSOURCE   CAR56   81.1   81.1   81.1   Lw   81.1   S.00   a   6161582.73   2310660.26   S.00   S.00   CAR57   R.11	POINTSOURCE		CAR55	81.1	81.1	81.1	Lw	81.1					5.00	а	6161674.47	2313020.22	5.00
POINTSOURCE   CAR56   S1.1   S1.1   S1.1   Lw   S1.1   S1.0   S	POINTSOURCE		CAR55	81.1	81.1	81.1	Lw	81.1					5.00	а	6161587.32		5.00
POINTSOURCE   CARS7   S1.1   S1.1   S1.1   Lw   S1.1   Lw   S1.1   S.00   a   6161433.05   2313024.49   S.00   POINTSOURCE   CARS7   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161686.82   2310599.03   S.00   POINTSOURCE   CARS8   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162368.83   2312849.30   S.00   POINTSOURCE   CARS8   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162368.83   2312849.30   S.00   POINTSOURCE   CARS8   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616297.54   2310505.65   S.00   POINTSOURCE   CARS9   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616212.86   2311958.39   S.00   POINTSOURCE   CARS9   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162024.85   2311969.07   S.00   POINTSOURCE   CAR60   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162024.85   2311969.07   S.00   POINTSOURCE   CAR60   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162002.15   2310608.21   S.00   POINTSOURCE   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6162002.15   2311973.34   S.00   POINTSOURCE   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161963.89   2310677.10   S.00   POINTSOURCE   CAR62   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   6161490.75   2311996.84   S.00   POINTSOURCE   CAR62   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616409.55   2311996.84   S.00   POINTSOURCE   CAR63   S1.1   S1.1   S1.1   Lw   S1.1   S.00   a   616409.57   2312350.15   S.00   POINTSOURCE   CAR63   S1.1   S1.1   S1.1   Lw   S1.1   S1.1   S1.1   S.00   a   6162692.94   2310565.13   S.00   POINTSOURCE   CAR64   S1.1   S1.1   S1.1   Lw   S1.1				81.1	81.1	81.1	Lw	81.1						а		2312917.66	5.00
POINTSOURCE   CAR57   81.1   81.1   81.1   Lw   81.1			CAR56	81.1	81.1	81.1	Lw	81.1									5.00
POINTSOURCE   CAR58   81.1   81.1   81.1   Lw   81.1   81.1   S.00   a   6162368.83   2312849.30   S.00																	5.00
POINTSOURCE   CAR58   81.1   81.1   81.1   Lw   81.1   81.1   S.00   a   6161697.54   2310505.65   S.00   POINTSOURCE   CAR59   81.1   81.1   81.1   Lw   81.1   S.00   a   6162212.86   2311958.39   S.00   S.00   CAR59   S.11   S.11   S.11   Lw   S.11   S.00   a   6162212.86   2311958.39   S.00   CAR59   S.11   S.11   S.11   Lw   S.11   S.00   a   616202.85   2310608.21   S.00   CAR60   S.11   S.11   S.11   Lw   S.11   S.00   a   616202.85   2311969.07   S.00   CAR60   S.11   S.11   S.11   Lw   S.11   S.00   a   616202.85   2311969.07   S.00   CAR60   S.11   S.11   S.11   S.11   Lw   S.11   S.00   a   616202.15   2310608.21   S.00   CAR61   S.11   S.11   S.11   Lw   S.11   S.00   a   6161819.75   2311973.34   S.00   CAR61   S.11   S.11   S.11   Lw   S.11   S.00   a   616189.75   2311973.34   S.00   CAR61   S.11   S.11   S.11   Lw   S.11   S.00   a   6161409.55   2311968.45   S.00   CAR61   S.00   CAR62   S.11   S.11   S.11   Lw   S.11   S.00   a   6161409.55   2311968.45   S.00   CAR62   S.11   S.11   S.11   S.11   S.00   a   6161409.55   CAR62   S.11   S.00   CAR63   S.11   S.11   S.11   S.00   CAR63   S.11   S.11   S.11   S.00   CAR63   S.11   S.11   S.11   S.00   CAR63   S.11   S.11   S.11   S.00   CAR63   S.11   S.11   S.11   S.00   CAR64   S.11   S.11   S.11   S.11   S.00   CAR64   S.11   S.11   S.11   S.00   CAR64   S.11   S.11   S.11   S.11   S.00   CAR64   S.11   S.11   S.11   S.11   S.11   S.11   S.00   CAR65   S.11   S.11   S.11   S.11   S.11   S.11   S.00   CAR65   S.11   S.11   S.11   S.11   S.11   S.11   S.00   CAR65   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.00   CAR65   S.11   S.00   CAR65   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.00   CAR65   S.00   CAR65   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.11   S.00   CAR65   S.11   S.00   CAR65   S.11   S.00   CAR65																	5.00
POINTSOURCE   CAR59   81.1   81.1   81.1   Lw   81.1   81.1   Lw   81.1   5.00   a   6162212.86   2311958.39   5.00   POINTSOURCE   CAR59   81.1   81.1   81.1   Lw   81.1   5.00   a   6161764.89   2310608.21   5.00   CAR60   R.   1.1   R.																	
POINTSOURCE   CAR60   S1.1   S1.1   Lw   S1.1   Lw   S1.1   S5.00   a   6161764.89   2310608.21   S5.00   POINTSOURCE   CAR60   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   6162024.85   2311969.07   S5.00   CAR60   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   616202.15   2310608.21   S5.00   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   616202.15   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   6161819.75   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   6161819.75   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   6161409.55   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   6161409.55   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   6161409.55   CAR61   S1.1   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   6161409.55   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   6161409.55   CAR61   S1.1   S1.1   S1.1   Lw   S1.1   S5.00   a   6161409.73   CAR61   S1.1   S1.1   S1.1   S1.1   S5.00   a   6161409.73   CAR61   S1.1   S1.1   S1.1   S1.1   S1.1   S5.00   a   616409.73   CAR61   S1.1   S1.1   S1.1   S1.1   S1.1   S5.00   a   616405.294   CAR62   CAR62   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S5.00   a   616405.294   CAR62   CAR62   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S5.00   a   616405.294   CAR62   CAR62   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S5.00   a   616405.294   CAR62   CAR62   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S5.00   a   616467.23   CAR62.294   CAR65   CAR65   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S5.00   a   6162692.65   CAR63.370   S5.00   POINTSOURCE   CAR65   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S1.1   S5.00   a   6162692.65   CAR65.370   CAR65   CAR66   S1.1																	
POINTSOURCE         CAR60         81.1         81.1         81.1         LW         81.1         5.00         a 6162024.85         2311969.07         5.00           POINTSOURCE         CAR60         81.1         81.1         81.1         LW         81.1         5.00         a 616202.15         2310608.21         5.00           POINTSOURCE         CAR61         81.1         81.1         81.1         W         81.1         5.00         a 6161819.75         2311973.34         5.00           POINTSOURCE         CAR61         81.1         81.1         81.1         W         81.1         5.00         a 6161819.75         2311973.34         5.00           POINTSOURCE         CAR62         81.1         81.1         81.1         W         81.1         5.00         a 6161963.89         2310677.10         5.00           POINTSOURCE         CAR62         81.1         81.1         81.1         W         81.1         5.00         a 6161903.37         2310530.15         5.00         6.00         6161913.37         2310530.15         5.00         6.00         6161913.37         2310530.15         5.00         6.00         6161907.37         2312154.94         5.00         6161907.37         2312154.94         5.00<																	5.00
POINTSOURCE   CAR60   81.1   81.1   81.1   Lw   81.1																	
POINTSOURCE   CAR61   81.1   81.1   81.1   Lw   81.1																	
POINTSOURCE   CAR61   81.1   81.1   81.1   Lw   81.1																	5.00
POINTSOURCE   CAR62   81.1   81.1   81.1   Lw   81.1																	5.00
POINTSOURCE         CAR62         81.1         81.1         LW         81.1         S.00         a 6161913.37         2310530.15         5.00           POINTSOURCE         CAR63         81.1         81.1         81.1         LW         81.1         5.00         a 6161490.73         2312154.94         5.00           POINTSOURCE         CAR63         81.1         81.1         81.1         LW         81.1         5.00         a 6162802.94         2310565.13         5.00           POINTSOURCE         CAR64         81.1         81.1         LW         81.1         5.00         a 6161405.27         2312310.90         5.00           POINTSOURCE         CAR64         81.1         81.1         LW         81.1         5.00         a 6162689.89         2310565.13         5.00           POINTSOURCE         CAR65         81.1         81.1         81.1         LW         81.1         5.00         a 6161467.23         2312492.51         5.00           POINTSOURCE         CAR65         81.1         81.1         81.1         W         81.1         5.00         a 6162692.65         2310683.70         5.00           POINTSOURCE         CAR66         81.1         81.1         LW         81.1 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>5.00</td>																	5.00
POINTSOURCE         CAR63         81.1         81.1         81.1         LW         81.1         5.00         a 6161490.73         2312154.94         5.00           POINTSOURCE         CAR63         81.1         81.1         81.1         LW         81.1         5.00         a 6162802.94         2310565.13         5.00           POINTSOURCE         CAR64         81.1         81.1         LW         81.1         5.00         a 6161405.27         2312310.90         5.00           POINTSOURCE         CAR64         81.1         81.1         LW         81.1         5.00         a 6162689.89         2310565.13         5.00           POINTSOURCE         CAR65         81.1         81.1         LW         81.1         5.00         a 6161467.23         2312492.51         5.00           POINTSOURCE         CAR65         81.1         81.1         81.1         W         81.1         5.00         a 6162692.65         2310683.70         5.00           POINTSOURCE         CAR66         81.1         81.1         LW         81.1         5.00         a 6162692.65         2310683.70         5.00																	5.00
POINTSOURCE         CAR63         81.1         81.1         81.1         LW         81.1         5.00         a 6162802.94         2310565.13         5.00           POINTSOURCE         CAR64         81.1         81.1         81.1         W 81.1         5.00         a 6161405.27         2312310.90         5.00           POINTSOURCE         CAR64         81.1         81.1         81.1         LW         81.1         5.00         a 6162689.89         2310565.13         5.00           POINTSOURCE         CAR65         81.1         81.1         LW         81.1         5.00         a 6161467.23         2312492.51         5.00           POINTSOURCE         CAR65         81.1         81.1         81.1         W         81.1         5.00         a 6162692.65         2310683.70         5.00           POINTSOURCE         CAR66         81.1         81.1         81.1         W         81.1         5.00         a 6161309.13         2312545.92         5.00														а			5.00
POINTSOURCE         CAR64         81.1         81.1         LW         81.1         5.00         a 6161405.27         2312310.90         5.00           POINTSOURCE         CAR64         81.1         81.1         81.1         LW         81.1         5.00         a 6162689.89         2310565.13         5.00           POINTSOURCE         CAR65         81.1         81.1         LW         81.1         5.00         a 6161467.23         2312492.51         5.00           POINTSOURCE         CAR65         81.1         81.1         LW         81.1         5.00         a 6162692.65         2310683.70         5.00           POINTSOURCE         CAR66         81.1         81.1         LW         81.1         5.00         a 6161309.13         2312545.92         5.00																	5.00
POINTSOURCE         CAR64         81.1         81.1         81.1         LW         81.1         5.00         a 6162689.89         2310565.13         5.00           POINTSOURCE         CAR65         81.1         81.1         81.1         LW         81.1         5.00         a 6161467.23         2312492.51         5.00           POINTSOURCE         CAR65         81.1         81.1         81.1         LW         81.1         5.00         a 6162692.65         2310683.70         5.00           POINTSOURCE         CAR66         81.1         81.1         LW         81.1         5.00         a 6161309.13         2312545.92         5.00																	5.00
POINTSOURCE         CAR65         81.1         81.1         81.1         LW         81.1         5.00         a 6161467.23         2312492.51         5.00           POINTSOURCE         CAR65         81.1         81.1         LW         81.1         5.00         a 6162692.65         2310683.70         5.00           POINTSOURCE         CAR66         81.1         81.1         LW         81.1         5.00         a 6161309.13         2312545.92         5.00																	5.00
POINTSOURCE         CAR65         81.1         81.1         LW         81.1         5.00         a 6162692.65         2310683.70         5.00           POINTSOURCE         CAR66         81.1         81.1         LW         81.1         5.00         a 6161309.13         2312545.92         5.00							Lw										5.00
	POINTSOURCE		CAR65	81.1	81.1	81.1	Lw	81.1					5.00	а	6162692.65	2310683.70	5.00
	POINTSOURCE		CAR66	81.1	81.1	81.1	Lw	81.1					5.00	а	6161309.13	2312545.92	5.00
POINTSOURCE CAR66 81.1 81.1 81.1 Lw 81.1 5.00 a 6162739.52 2310609.25 5.00	POINTSOURCE		CAR66	81.1	81.1	81.1	Lw	81.1					5.00	а	6162739.52	2310609.25	5.00
POINTSOURCE CAR67 81.1 81.1 81.1 Lw 81.1 5.00 a 6161298.45 2312723.25 5.00	POINTSOURCE		CAR67	81.1	81.1	81.1	Lw	81.1					5.00	а	6161298.45	2312723.25	5.00
POINTSOURCE CAR67 81.1 81.1 81.1 Lw 81.1 5.00 a 6162789.16 2310667.16 5.00	POINTSOURCE		CAR67	81.1	81.1	81.1	Lw	81.1					5.00	а	6162789.16	2310667.16	5.00
POINTSOURCE CAR68 81.1 81.1 81.1 Lw 81.1 5.00 a 6161198.04 2312815.11 5.00	POINTSOURCE		CAR68	81.1	81.1	81.1	Lw	81.1					5.00	а	6161198.04	2312815.11	5.00
														а			5.00
														-			5.00
									_								5.00
POINTSOURCE   CAR70   81.1   81.1   Lw   81.1	POINTSOURCE		CAR70	81.1	81.1	81.1	Lw	81.1					5.00	а	6162287.64	2313060.81	5.00

Name	M.	ID	R	esult. PW	'L		Lw/L	i	Оре	erating Ti	ime	Heigh	t	Co	oordinates	
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			Х	Υ	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		CAR70	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	a	6162940.81	2310485.17	5.00
POINTSOURCE POINTSOURCE		CAR71 CAR71	81.1	81.1	81.1	LW	81.1					5.00	a	6162373.10 6163001.48	2313223.18 2310556.86	5.00
POINTSOURCE		CAR72	81.1	81.1	81.1	Lw	81.1					5.00	a	6162272.69	2313351.37	5.00
POINTSOURCE		CAR72	81.1	81.1	81.1	Lw	81.1					5.00	а	6163006.99	2310487.93	5.00
POINTSOURCE		CAR73	81.1	81.1	81.1	Lw	81.1					5.00	а	6162368.83	2313515.88	5.00
POINTSOURCE		CAR73	81.1	81.1	81.1	Lw	81.1					5.00	а	6163084.20	2310562.38	5.00
POINTSOURCE		CAR74	81.1	81.1	81.1	Lw	81.1					5.00	а	6162274.82	2313644.07	5.00
POINTSOURCE		CAR74	81.1	81.1	81.1	Lw	81.1					5.00	а	6163097.99	2310479.65	5.00
POINTSOURCE		CAR75	81.1	81.1	81.1	Lw	81.1					5.00	a	6162366.69	2313755.16	5.00
POINTSOURCE		CAR75 CAR76	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	a	6163153.14 6162240.64	2310534.80 2313894.04	5.00
POINTSOURCE		CAR76	81.1	81.1	81.1	Lw	81.1					5.00	a	6163279.98	2310576.16	5.00
POINTSOURCE		CAR77	81.1	81.1	81.1	Lw	81.1					5.00	а	6162071.86	2313894.04	5.00
POINTSOURCE		CAR77	81.1	81.1	81.1	Lw	81.1					5.00	а	6163200.01	2310609.25	5.00
POINTSOURCE		CAR78	81.1	81.1	81.1	Lw	81.1					5.00	а	6161926.58	2313921.81	5.00
POINTSOURCE		CAR78	81.1	81.1	81.1	Lw	81.1					5.00	а	6163202.77	2310703.01	5.00
POINTSOURCE		CAR79	81.1	81.1	81.1	Lw	81.1					5.00	а	6161791.98	2313853.44	5.00
POINTSOURCE		CAR79	81.1	81.1	81.1	Lw	81.1					5.00	а	6163266.19	2310647.86	5.00
POINTSOURCE		CAR80	81.1	81.1	81.1	Lw	81.1					5.00	а	6161638.15	2313930.36	5.00
POINTSOURCE		CAR80 CAR81	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	a	6163340.64 6161488.60	2310603.74 2313874.81	5.00
POINTSOURCE		CAR81	81.1	81.1	81.1	LW	81.1					5.00	a	6163337.88	2313874.81	5.00
POINTSOURCE		CAR82	81.1	81.1	81.1	Lw	81.1					5.00	a	6161339.04	2313926.08	5.00
POINTSOURCE		CAR82	81.1	81.1	81.1	Lw	81.1					5.00	a	6163580.54	2310565.13	5.00
POINTSOURCE		CAR83	81.1	81.1	81.1	Lw	81.1					5.00	а	6161195.90	2313054.40	5.00
POINTSOURCE		CAR83	81.1	81.1	81.1	Lw	81.1					5.00	а	6163492.30	2310573.41	5.00
POINTSOURCE		CAR84	81.1	81.1	81.1	Lw	81.1					5.00	а	6161264.27	2313201.82	5.00
POINTSOURCE		CAR84	81.1	81.1	81.1	Lw	81.1					5.00	a	6163511.60	2310675.43	5.00
POINTSOURCE		CAR85	81.1	81.1	81.1	Lw	81.1					5.00	a	6161193.76	2313312.91	5.00
POINTSOURCE		CAR85 CAR86	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	a	6163599.84	2310672.67 2313481.70	5.00
POINTSOURCE POINTSOURCE		CAR86	81.1	81.1	81.1	Lw	81.1					5.00	a	6161259.99 6163677.04	2313481.70	5.00
POINTSOURCE		CAR87	81.1	81.1	81.1	Lw	81.1					5.00	a	6161200.17	2313622.70	5.00
POINTSOURCE		CAR87	81.1	81.1	81.1	Lw	81.1					5.00	a	6163754.25	2310570.65	5.00
POINTSOURCE		CAR88	81.1	81.1	81.1	Lw	81.1					5.00	а	6161255.72	2313757.30	5.00
POINTSOURCE		CAR88	81.1	81.1	81.1	Lw	81.1					5.00	а	6163759.77	2310493.44	5.00
POINTSOURCE		CAR89	81.1	81.1	81.1	Lw	81.1					5.00	а	6161206.58	2313896.17	5.00
POINTSOURCE		CAR89	81.1	81.1	81.1	Lw	81.1					5.00	а	6163831.46	2310567.89	5.00
POINTSOURCE		CAR90	81.1 81.1	81.1 81.1	81.1	Lw	81.1					5.00	a	6163853.52	2310485.17 2310548.59	5.00
POINTSOURCE POINTSOURCE		CAR91 CAR92	81.1	81.1	81.1	Lw	81.1					5.00	a	6163922.45 6163916.94	2310548.33	5.00
POINTSOURCE		CAR93	81.1	81.1	81.1	Lw	81.1					5.00	a	6164018.96	2310691.98	5.00
POINTSOURCE		CAR94	81.1	81.1	81.1	Lw	81.1					5.00	а	6164432.58	2310592.71	5.00
POINTSOURCE		CAR95	81.1	81.1	81.1	Lw	81.1					5.00	а	6164314.01	2310548.59	5.00
POINTSOURCE		CAR96	81.1	81.1	81.1	Lw	81.1					5.00	а	6164443.61	2310507.23	5.00
POINTSOURCE		CAR97	81.1	81.1	81.1	Lw	81.1					5.00	а	6164327.80	2310667.16	5.00
POINTSOURCE		CAR98	81.1	81.1	81.1		81.1							6164418.79		5.00
POINTSOURCE		CAR99	81.1	81.1	81.1	Lw	81.1					5.00	a	6164515.30		5.00
POINTSOURCE		DOCK01 DOCK02	103.4 103.4	103.4 103.4	103.4	Lw	103.4					8.00	a	6161950.11 6161996.03	2310830.17 2311076.62	8.00
POINTSOURCE		DOCK02	103.4	103.4	103.4	Lw	103.4					8.00	a	6161928.68	2311070.02	8.00
POINTSOURCE		DOCK04	103.4	103.4	103.4	Lw	103.4					8.00	a	6161847.55		8.00
POINTSOURCE		DOCK13	103.4	103.4	103.4	Lw	103.4					8.00	а	6164570.45		8.00
POINTSOURCE		DOCK14	103.4	103.4	103.4	Lw	103.4					8.00	а	6164336.07	2311590.89	8.00
POINTSOURCE		DOCK15	103.4	103.4	103.4	Lw	103.4					8.00	а	6164093.41	2311590.89	8.00
POINTSOURCE		DOCK16	103.4	103.4	103.4	Lw	103.4					8.00		6163892.12	2311593.65	8.00
POINTSOURCE		DOCK17	103.4	103.4	103.4	Lw	103.4					8.00		6163682.56		8.00
POINTSOURCE POINTSOURCE		DOCK18 DOCK19	103.4 103.4	103.4 103.4	103.4	Lw	103.4					8.00	a	6163478.51 6163285.49	2311596.41 2311596.41	8.00
POINTSOURCE		DOCK19	103.4	103.4	103.4	Lw	103.4					8.00	a	6164666.96	2311596.41	8.00
POINTSOURCE		DOCK30	103.4	103.4	103.4	Lw	103.4					8.00	a	6164435.33	2311400.81	8.00
POINTSOURCE		DOCK32	103.4	103.4	103.4	Lw	103.4					8.00	а	6164209.23	2311472.32	8.00
POINTSOURCE		DOCK33	103.4	103.4	103.4	Lw	103.4					8.00	а	6163980.36	2311477.84	8.00
POINTSOURCE		DOCK34	103.4	103.4	103.4	Lw	103.4					8.00	а	6163776.31	2311483.35	8.00
POINTSOURCE		DOCK35	103.4	103.4	103.4	Lw	103.4					8.00	а	6163577.78		8.00
POINTSOURCE		DOCK36	103.4	103.4	103.4	Lw	103.4					8.00	а	6163393.03		8.00
POINTSOURCE		DOCK38	103.4	103.4	103.4	Lw	103.4					8.00	a	6161870.94	2310876.72	8.00
POINTSOURCE POINTSOURCE		DOCK39 DOCK40	103.4 103.4	103.4 103.4	103.4	Lw	103.4					8.00	a	6162006.05 6161887.48		8.00
POINTSOURCE		DOCK40	103.4	103.4	103.4	Lw	103.4					8.00	a	6161937.26		8.00
POINTSOURCE		DOCK42	103.4	103.4	103.4	Lw	103.4					8.00	a	6161787.70		8.00
POINTSOURCE		DOCK43	103.4	103.4	103.4	Lw	103.4					8.00	а	6161937.26		8.00
POINTSOURCE		DOCK44	103.4	103.4	103.4	Lw	103.4					8.00	а	6161785.57	2312389.95	8.00
POINTSOURCE		DOCK45	103.4	103.4	103.4	Lw	103.4					8.00	а	6161939.39	2312481.82	8.00
POINTSOURCE		DOCK46	103.4	103.4	103.4	Lw	103.4					8.00	a	6161783.43	2312558.74	8.00
POINTSOURCE		DOCK47	103.4	103.4	103.4	Lw	103.4					8.00	а	6161939.39	2312676.24	8.00

Name	M.	ID	R	esult. PW	'L		Lw/L	i	Оре	erating Ti	ime	Heigh	t	Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			Х	Υ	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		DOCK48	103.4	103.4	103.4	Lw	103.4					8.00	a	6161779.16	2312742.47	8.00
POINTSOURCE		DOCK55	103.4	103.4	103.4	Lw	103.4					8.00	а	6161802.66	2313122.77	8.00
POINTSOURCE		DOCK56	103.4	103.4	103.4	Lw	103.4					8.00	a	6161740.70	2313214.64	8.00
POINTSOURCE		DOCK57	103.4	103.4	103.4	Lw	103.4					8.00	a	6161811.21	2313355.64	8.00
POINTSOURCE		DOCK58	103.4	103.4	103.4	Lw	103.4					8.00	a	6161749.25	2313468.88	8.00
POINTSOURCE		DOCK59	103.4	103.4	103.4	Lw	103.4					8.00	a	6161811.21	2313603.47	8.00
POINTSOURCE		DOCK60	103.4	103.4	103.4	Lw	103.4					8.00	a	6161762.07	2313742.35	8.00
POINTSOURCE		PARK01	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6163785.18	2309430.76	5.00
POINTSOURCE		PARK02	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6163649.65	2309423.98	5.00
POINTSOURCE		PARK03	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6163724.19	2309539.19	5.00
POINTSOURCE		PARK04	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160661.03	2309823.82	5.00
POINTSOURCE		PARK05	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160694.91	2309722.17	5.00
POINTSOURCE		PARK06	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160566.15	2309762.83	5.00
POINTSOURCE		PARK07	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160722.02	2311158.87	5.00
POINTSOURCE		PARK08	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160708.47	2311043.66	5.00
POINTSOURCE		PARK09	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160606.81	2311145.32	5.00
POINTSOURCE		PARK10	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6161054.09	2312466.82	5.00
POINTSOURCE		PARK11	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160986.32	2312358.39	5.00
POINTSOURCE		PARK12	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160935.18	2312478.06	5.00
POINTSOURCE		PARK13	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160467.36	2313605.61	5.00
POINTSOURCE		PARK14	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160465.22	2313276.59	5.00
POINTSOURCE		PARK15	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160674.60	2313225.32	5.00
POINTSOURCE		PARK16	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160460.95	2313424.01	5.00
POINTSOURCE		PARK17	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160646.82	2313609.88	5.00
POINTSOURCE		PARK18	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160283.62	2313631.25	5.00
POINTSOURCE		PARK19	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160247.30	2313270.18	5.00
POINTSOURCE		PARK20	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160832.70	2313601.34	5.00
POINTSOURCE		PARK21	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160695.96	2313398.37	5.00
POINTSOURCE		PARK22	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160841.24	2313206.09	5.00
POINTSOURCE		PARK23	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160762.19	2313037.31	5.00
POINTSOURCE		PARK24	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160516.50	2313114.22	5.00
POINTSOURCE		PARK25	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160326.35	2313030.90	5.00
POINTSOURCE		PARK26	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160012.29	2313020.22	5.00
POINTSOURCE		PARK27	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160155.43	2313101.40	5.00
POINTSOURCE		PARK28	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160012.29	2313272.32	5.00
POINTSOURCE		PARK29	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	а	6160166.12	2313473.15	5.00
POINTSOURCE		PARK30	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160022.97	2313622.70	5.00
POINTSOURCE		PARK31	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160768.60	2313789.35	5.00
POINTSOURCE		PARK32	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	а	6160610.50	2313908.99	5.00
POINTSOURCE		PARK33	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	а	6160441.72	2313793.62	5.00
POINTSOURCE		PARK34	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160319.94	2313923.95	5.00
POINTSOURCE		PARK35	81.4	81.4	81.4	Lw	81.4		900.00	0.00	0.00	5.00	a	6160166.12	2313802.17	5.00

Line Source(s)

		-15,																		
Name	M.	ID	R	esult. PW	/L	R	esult. PW	L'		Lw/L	.i	Op	erating T	me		Moving	Pt. Src		Heigl	nt
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night		Number		Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	
LINESOURCE		TRUCK01	93.2	93.2	93.2	63.8	63.8	63.8	Lw	93.2									8	а
LINESOURCE		TRUCK02	93.2	93.2	93.2	70.6	70.6	70.6	Lw	93.2									8	a
LINESOURCE		TRUCK03	93.2	93.2	93.2	64.1	64.1	64.1	Lw	93.2									8	а
LINESOURCE		TRUCK04	93.2	93.2	93.2	64.2	64.2	64.2	Lw	93.2									8	а
LINESOURCE		TRUCK05	93.2	93.2	93.2	75.8	75.8	75.8	Lw	93.2									8	a
LINESOURCE		TRUCK06	93.2	93.2	93.2	67.9	67.9	67.9	Lw	93.2									8	а

Name	ŀ	lei	ght		Coordinat	es	
	Begin		End	х	У	z	Ground
	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	8.00	а		6162426.51	2313832.08	8.00	0.00
				6161851.80	2313838.49	8.00	0.00
				6161817.62	2312031.03	8.00	0.00
				6162276.96	2312022.48	8.00	0.00
LINESOURCE	8.00	а		6161835.47	2312975.17	8.00	0.00
				6162426.51	2312964.67	8.00	0.00
LINESOURCE	8.00	а		6162372.79	2311524.72	8.00	0.00
				6165032.50	2311519.05	8.00	0.00
LINESOURCE	8.00	а		6165027.47	2310818.74	8.00	0.00
				6162441.72	2310843.63	8.00	0.00
LINESOURCE	8.00	а		6161829.58	2310452.08	8.00	0.00
				6161840.60	2310631.31	8.00	0.00
LINESOURCE	8.00	а		6162287.31	2311530.23	8.00	0.00
				6162119.10	2311439.24	8.00	0.00
				6162108.07	2310901.54	8.00	0.00
				6161840.60	2310631.31	8.00	0.00

#### Area Source(s)

Name	M.	ID	R	esult. PW	/L	Re	esult. PW	L"		Lw/L	i	Op	erating Ti	ime	Height	
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
			103.4	103.4	103.4	59.4	59.4	59.4	Lw	103.4					0	r

Name	ŀ	lei	ight			Coordinat	es	
	Begin		End		х	у	Z	Ground
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
	0.00	r	(1.0)		6163052.42	2310942.36	0.00	0.00
					6163048.57	2310782.69	0.00	0.00
					6164706.79	2310755.76	0.00	0.00
					6164710.64	2310919.28	0.00	0.00

Barrier(s)

Darrier(3)															
Name	M.	ID	Abso	rption	Z-Ext.	Cant	ilever	H	lei	ght			Coordinat	es	
			left	right		horz.	vert.	Begin		End		×	У	z	Ground
					(ft)	(ft)	(ft)	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
BARRIERPLANNED		0						14.00	а			6163036.39	2310814.91	14.00	0.00
												6163036.39	2310755.51	14.00	0.00
												6164725.56	2310743.63	14.00	0.00
												6164725.56	2310774.52	14.00	0.00
BARRIERPLANNED		0						14.00	а			6162071.52	2313792.99	14.00	0.00
												6162063.63	2313087.96	14.00	0.00
BARRIERPLANNED		0						14.00	а			6161996.13	2312835.26	14.00	0.00
												6161987.52	2312101.61	14.00	0.00
BARRIERPLANNED		0						14.00	а			6162055.58	2311097.23	14.00	0.00
												6162049.44	2310900.62	14.00	0.00
												6161876.18	2310727.36	14.00	0.00
BARRIERPLANNED		0						14.00	а			6163235.14	2311631.71	14.00	0.00
												6164719.26	2311616.25	14.00	0.00
BARRIERPLANNED		0						14.00	а			6162074.07	2313797.59	14.00	0.00
												6161912.18	2313799.97	14.00	0.00
BARRIERPLANNED		0						14.00	а			6161715.77	2313808.30	14.00	0.00
												6161800.29	2313805.92	14.00	0.00
BARRIERPLANNED		0						6.00	а			6161504.62	2311329.71	6.00	0.00
												6161503.10	2310491.48	6.00	0.00
BARRIERPLANNED		0						6.00	а			6162652.85	2310290.23	6.00	0.00
											Γ	6164170.64	2310284.46	6.00	0.00

Building(s)

Name	M.	ID	RB	Residents	Absorption	Height			Coordinat	es	
						Begin		х	У	Z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING		BUILDING00001	х	0		45.00	а	6161356.14	2312883.48	45.00	0.00
								6161753.52	2312879.21	45.00	0.00
								6161747.11	2311969.07	45.00	0.00
								6161520.64	2311975.48	45.00	0.00
								6161522.78	2312471.14	45.00	0.00
								6161356.14	2312708.29	45.00	0.00
BUILDING		BUILDING00002	х	0		45.00	а	6161279.22	2313855.58	45.00	0.00
								6161715.06	2313851.31	45.00	0.00
								6161700.11	2313067.22	45.00	0.00
								6161268.54	2313062.95	45.00	0.00
BUILDING		BUILDING00003	х	0		45.00	а	6161664.13	2311491.63	45.00	0.00
								6162050.25	2311485.75	45.00	0.00
								6162044.65	2311122.13	45.00	0.00
								6161799.24	2311127.65	45.00	0.00
								6161788.16	2310660.74	45.00	0.00
								6161642.07	2310658.89	45.00	0.00
BUILDING		BUILDING00004	х	0		45.00	а	6162960.12	2311287.58	45.00	0.00
								6163081.44	2311453.02	45.00	0.00
								6164871.01	2311436.48	45.00	0.00
								6164854.46	2310929.11	45.00	0.00
								6162957.36	2310953.93	45.00	0.00
BUILDING		BUILDING00005	х	0		25.00	а	6162557.53	2310703.01	25.00	0.00
								6162620.95	2310700.25	25.00	0.00
								6162615.44	2310543.07	25.00	0.00
								6162552.02	2310551.35	25.00	0.00
BUILDING		BUILDING00006	х	0		25.00	а	6162631.98	2310518.26	25.00	0.00
								6162825.00	2310512.74	25.00	0.00
								6162825.00	2310463.11	25.00	0.00
								6162629.23	2310465.87	25.00	0.00
BUILDING		BUILDING00007	х	0		25.00	a	6162830.52	2310686.46	25.00	0.00
								6162957.36	2310689.22	25.00	0.00
								6162954.60	2310631.31	25.00	0.00
								6162838.79	2310631.31	25.00	0.00
BUILDING		BUILDING00008	х	0		25.00	a	6163026.29	2310736.09	25.00	0.00
								6163122.80	2310741.61	25.00	0.00

Urban Crossroads, Inc.

Name	M.	ID	RB	Residents	Absorption	Height			Coordinat	es	
						Begin		х	у	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
								6163117.29	2310636.83	25.00	0.00
								6163026.29	2310636.83	25.00	0.00
BUILDING		BUILDING00009	х	0		25.00	а	6163244.13	2310512.74	25.00	0.00
								6163326.85	2310509.99	25.00	0.00
								6163329.61	2310463.11	25.00	0.00
							П	6163235.86	2310465.87	25.00	0.00
BUILDING		BUILDING00010	х	0		25.00	а	6163453.69	2310501.71	25.00	0.00
								6163583.29	2310509.99	25.00	0.00
							П	6163583.29	2310449.32	25.00	0.00
								6163448.18	2310452.08	25.00	0.00
BUILDING		BUILDING00011	х	0		25.00	а	6163652.23	2310725.06	25.00	0.00
							П	6163859.03	2310730.58	25.00	0.00
							П	6163861.79	2310639.58	25.00	0.00
							П	6163652.23	2310642.34	25.00	0.00
BUILDING		BUILDING00012	х	0		25.00	a	6163980.36	2310543.07	25.00	0.00
							П	6164027.24	2310540.32	25.00	0.00
							П	6164027.24	2310454.84	25.00	0.00
								6163991.39	2310452.08	25.00	0.00
BUILDING		BUILDING00013	х	0		25.00	a	6164165.11	2310664.40	25.00	0.00
				_			Ė	6164220.26	2310656.13	25.00	0.00
							Н	6164217.50	2310532.05	25.00	0.00
							Н	6164165.11	2310537.56	25.00	0.00
BUILDING		BUILDING00014	х	0		25.00	a	6164187.17	2310487.93	25.00	0.00
DOILDING		DOILDINGCOOL				25.00	u	6164300.22	2310493.44	25.00	0.00
							Н	6164300.22	2310438.29	25.00	0.00
							Н	6164178.89	2310441.05	25.00	0.00
BUILDING		BUILDING00015	х	0		25.00	a	6164595.26	2310741.05	25.00	0.00
DOILDING		DOILDINGGOODIS				25.00	-	6164722.11	2310716.79	25.00	0.00
							Н	6164716.59	2310634.07	25.00	0.00
							Н	6164598.02	2310639.58	25.00	0.00
BUILDING		BUILDING00016	x	0		25.00	a	6164512.54	2310529.29	25.00	0.00
DOILDING		DOILDINGGOODIG	^			25.00	u	6164567.69	2310540.32	25.00	0.00
							Н	6164567.69	2310340.32	25.00	0.00
							Н	6164520.81	2310452.08	25.00	0.00
BUILDING		BUILDING00017	х	0		25.00	a	6164669.71	2310493.44	25.00	0.00
DOILDING		DOILDINGGOODI7				25.00	-	6164749.68	2310487.93	25.00	0.00
							Н	6164749.68	2310435.54	25.00	0.00
							Н	6164672.47	2310432.78	25.00	0.00
BUILDING		BUILDING00018	х	0		25.00	a	6164791.04	2310487.93	25.00	0.00
DOILDING		DOILDINGGOODIG	^			25.00	u	6164882.04	2310479.65	25.00	0.00
							H	6164882.04	2310479.03	25.00	0.00
							Н	6164780.01	2310430.02	25.00	0.00
BUILDING		BUILDING00019	х	0		25.00	a	6164915.13	2310548.59	25.00	0.00
SOILDING		23125114000013	^	"		23.00	u	6164967.52	2310548.59	25.00	0.00
							Н	6164967.52	2310348.33	25.00	0.00
							H	6164909.61	2310487.93	25.00	0.00
BUILDING		BUILDING00020	x	0		25.00	-	6163810.74	2310498.96	25.00	0.00
BOILDING		DOILDINGUUUZU	^	"		23.00	ď	6163939.67		25.00	0.00
							Н				
							Н	6163938.17 6164696.72		25.00	0.00
							H			25.00	
	_						Н	6164699.72	2310102.14	25.00	0.00
							Н	6164860.13		25.00	0.00
							H	6164846.64	2309736.35	25.00	0.00
DI III CONT	_	DI III DIN COCCE :	-	_		25.00	H	6163807.74	2309755.84	25.00	0.00
BUILDING		BUILDING00021	Х	0		25.00	a	6164710.39	2309609.47	25.00	0.00
							Н	6164808.86	2309606.92	25.00	0.00
	_						H	6164807.16	2309401.49	25.00	0.00
								6164706.15	2309404.04	25.00	0.00

**Ground Absorption(s)** 

Name	M.	ID	G	Coord	inates
				х	у
				(ft)	(ft)
GROUND		0	0.5	6160145.98	2315191.14
				6162423.03	2315191.14
				6162416.25	2314005.18
				6160071.44	2314059.39
GROUND		0	0.5	6162599.22	2314818.41
				6163127.82	2314791.30
				6163107.49	2314188.15
				6164164.69	2314167.82
				6164130.81	2311714.58
				6162538.23	2311707.80

## **APPENDIX 11.1:**

**CADNAA CONSTRUCTION NOISE MODEL INPUTS** 



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## 14822 - Rich Haven Specific Plan

CadnaA Noise Prediction Model: 14822-02\_Construction.cna

Date: 17.10.22 Analyst: B. Lawson

**Calculation Configuration** 

Configurat	ion
Parameter	Value
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Time opeca for bill ("(offic, of LLD))	
Roads (TNM)	
Roads (TNM)	

#### **Receiver Noise Levels**

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Υ	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	56.0	-51.0	53.0	65.0	45.0	0.0				5.00	а	6161938.34	2315328.19	5.00
RECEIVERS		R2	53.3	-53.6	50.3	65.0	45.0	0.0				5.00	а	6162735.95	2314875.32	5.00
RECEIVERS		R3	63.7	-43.3	60.7	65.0	45.0	0.0				5.00	а	6163483.69	2310238.26	5.00
RECEIVERS		R4	55.8	-51.1	52.8	65.0	45.0	0.0				5.00	а	6162048.86	2308936.45	5.00
RECEIVERS		R5	63.8	-43.2	60.8	65.0	45.0	0.0				5.00	а	6161471.50	2310774.52	5.00
RECEIVERS		R6	55.1	-51.9	52.1	65.0	45.0	0.0				5.00	а	6159739.11	2311421.01	5.00
RECEIVERS		R7	54.8	-52.2	51.8	65.0	45.0	0.0				5.00	а	6159775.06	2314442.86	5.00
RECEIVERS		R8	52.5	-54.5	49.5	65.0	45.0	0.0				5.00	a	6160277.95	2317097.00	5.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Operating Time			Height	:
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)	П
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		П
SITEBOUNDARY		CONSRUCTION	122.0	15.0	15.0	58.3	-48.6	-48.6	PWL-Pt	115					8	а

Name	ŀ	lei	ght		Coordinates							
	Begin	End		х	У	Z	Ground					
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)				
SITEBOUNDARY	8.00	а			6159965.00	2316909.01	8.00	0.00				
					6161260.25	2316906.76	8.00	0.00				
					6161230.46	2315263.96	8.00	0.00				
					6162521.69	2315243.59	8.00	0.00				
					6162473.69	2311651.45	8.00	0.00				

Name	Н	eight	Coordinates							
	Begin	End	х	у	Z	Ground				
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)				
			6165033.26	2311624.61	8.00	0.00				
			6165014.25	2308981.07	8.00	0.00				
			6159855.93	2309066.93	8.00	0.00				