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# Watson High Desert Logistics

**NOISE AND VIBRATION ANALYSIS  
TOWN OF APPLE VALLEY**

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## **LIST OF ABBREVIATED TERMS**

(1)	Reference
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
$L_{eq}$	Equivalent continuous (average) sound level
$L_{max}$	Maximum level measured over the time interval
mph	Miles per hour
NAVISP	North Apple Valley Industrial Specific Plan
PPV	Peak Particle Velocity
Project	Watson High Desert Logistics
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 noise exposure and the necessary noise mitigation measures for the proposed Watson High Desert Logistics development (Project) in the Town of Apple Valley. The Project consists of the development of three industrial warehouse and distribution buildings within two sites. This noise study has been prepared to satisfy applicable Town of Apple Valley noise standards and significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

The results of this Noise and Vibration Analysis are summarized below based on the significance criteria in Section 4 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) 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**

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	<i>Less Than Significant</i>	-
Operational Noise	9	<i>Less Than Significant</i>	-
Construction Noise	10	<i>Less Than Significant</i>	-
Nighttime Concrete Pour		<i>Less Than Significant</i>	-
Construction Vibration		<i>Less Than Significant</i>	-

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# **1 INTRODUCTION**

This Noise and Vibration Analysis has been completed to determine the noise impacts associated with the development of the Watson High Desert Logistics (“Project”). This noise and vibration analysis briefly describes the Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for noise analysis, evaluates the future exterior noise environment, potential off-site traffic impacts, the Project-related long-term stationary-source operational noise, and Project-related short-term construction noise and vibration impacts.

## **1.1 SITE LOCATION**

The Project consists of the development of three industrial warehouse and distribution buildings within two sites as shown on Exhibit 1-A. The West site is located on the northwest corner of Navajo Road and Los Padres Road, which is immediately south of the existing Big Lots distribution center facility. The East site is located on the southeast corner of Navajo Road and Johnson Road. The proposed Project is located within the North Apple Valley Industrial Specific Plan (NAVISP). The nearest existing noise-sensitive residential use is located approximately 2,083 feet east of the Project site.

## **1.2 PROJECT DESCRIPTION**

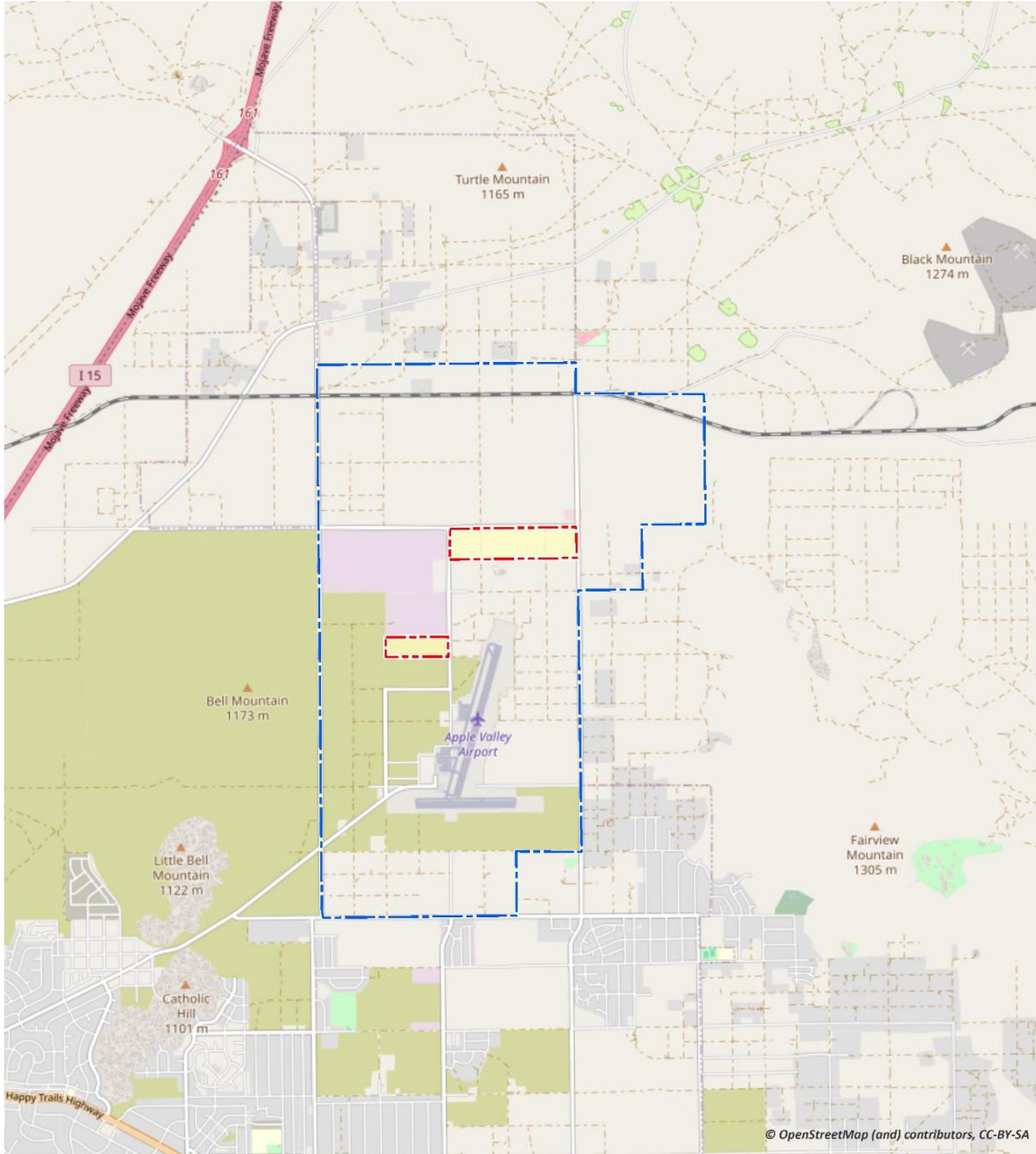
The Project consists of the development of three industrial warehouse and distribution buildings within two sites totaling 3,729,100 square feet. The West site consists of a single 896,500-square-foot warehouse building. The East site consists of two buildings (Building 1 with 1,631,800 square feet and Building 2 with 1,200,800 square feet). Preliminary site plans for the Project are shown on Exhibit 1-B for the West site and Exhibit 1-B for the East site.

## **1.3 NORTH APPLE VALLEY INDUSTRIAL SPECIFIC PLAN (NAVISP)**

On October 24, 2006, the Town of Apple Valley adopted the North Apple Valley Industrial Specific Plan (NAVISP). (2) The NAVISP Environmental Impact Report (EIR) included an assessment of the noise environment in the Specific Plan study area included the preparation of a noise study by Urban Crossroads, Inc. (3) The noise study examined the existing noise environment in the Specific Plan study area and estimated the future noise impacts associated with Specific Plan buildout.

According to the NAVISP EIR (2), the primary sources of noise in the Specific Plan study area include vehicular traffic on highways and major arterials, railroad activities serving the nearby quarry, and general aviation aircraft noise from overhead flights and take-off and landings Apple Valley Airport. Noise is also related to mechanical and industrial activities associated with the currently limited development located within the Specific Plan study area.

EXHIBIT 1-A: LOCATION MAP

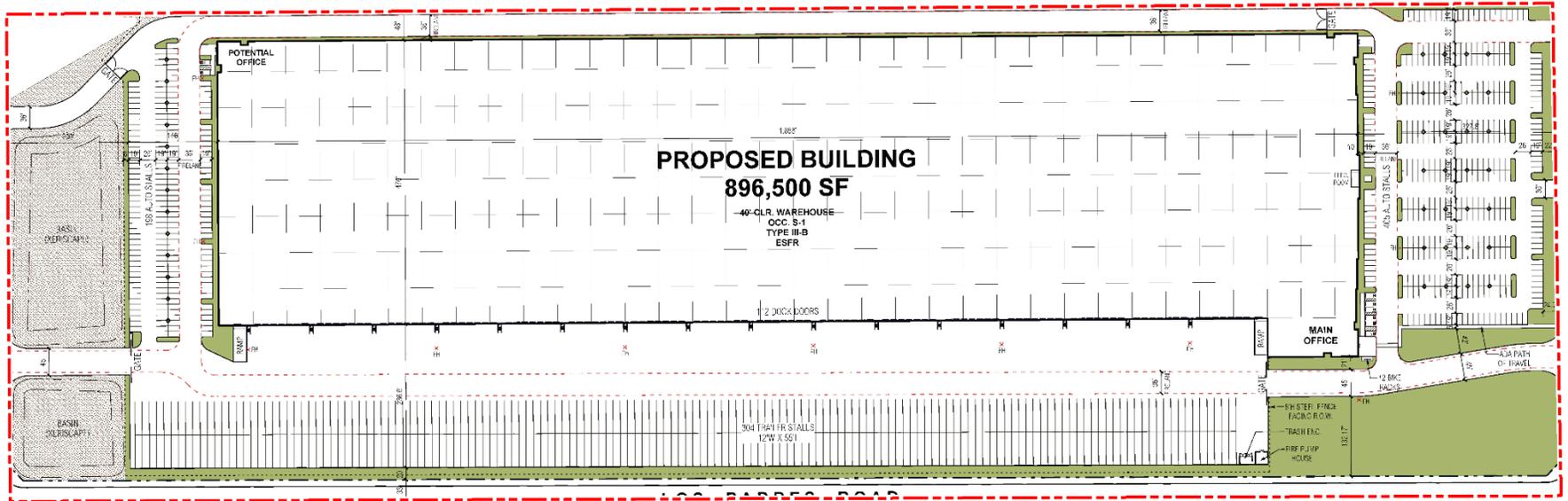


LEGEND:

[Red dashed line] Site Boundary

[Blue dashed line] North Apple Valley Industrial Specific Plan (NAVISP)

EXHIBIT 1-B: PRELIMINARY SITE PLAN – WEST SITE



LEGEND:

 Site Boundary



## 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). A-weighted 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**

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

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. (4) 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. (5) 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 A-weighted 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  $L_{eq}$  sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA  $L_{eq}$  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 Town of Apple Valley 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. (4)

### 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. (6)

### **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. (4)

### **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. (7)

## **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

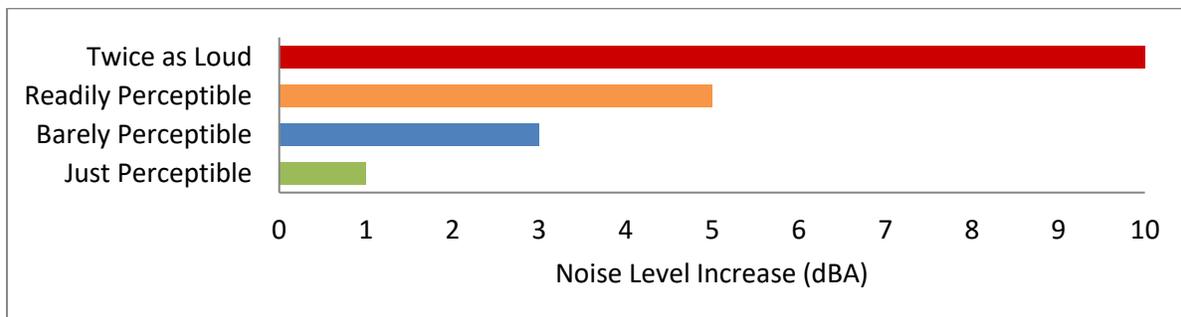
Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, 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. (8)

## 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. (9 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. (10) According to research originally published in the Noise Effects Handbook (9), 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. (6)

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



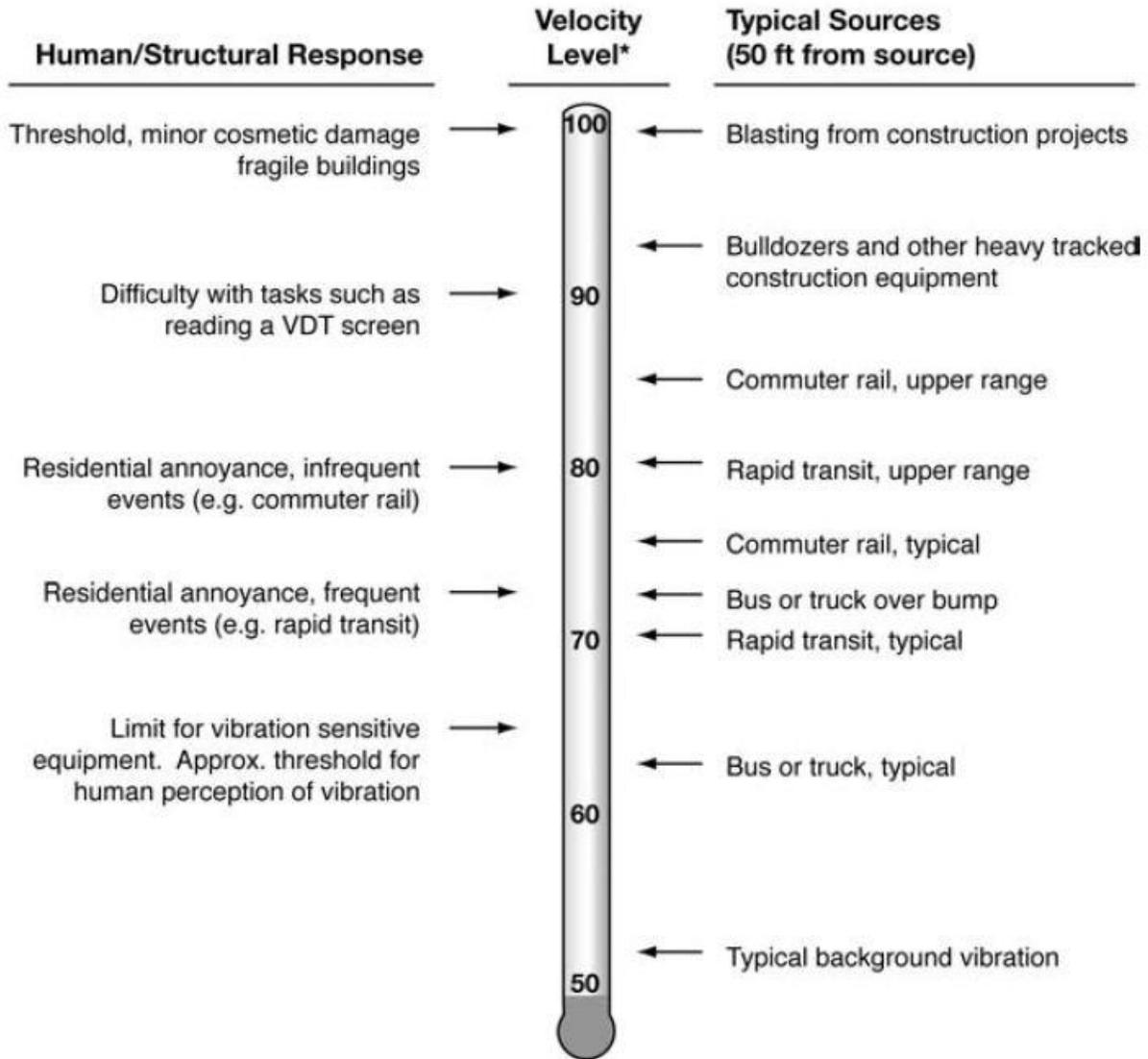
## 2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual*, 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. Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon (10). Therefore, the effects of vibrations should only be evaluated at a structure and the effects of the building structure on the vibration should be considered. Wood-frame buildings, such as typical residential structures, are more easily excited by ground vibration than heavier buildings. In contrast, large masonry buildings with spread footings have a low response to ground vibration (10). In general, the heavier a building is, the lower the response will be to the incident vibration energy. However, all structures reduce vibration levels due to the coupling of the building to the soil.

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 (10). 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 (10). However, the RMS amplitude and PPV are related mathematically, and the RMS amplitude of equipment is typically calculated from the PPV reference level. The RMS amplitude is approximately 70% of the PPV (11). Thus, either can be used in the description of vibration impacts.

While not universally accepted, vibration decibel notation (VdB) is another vibration notation developed and used by the FTA in their guidance manual to describe vibration levels and provide a background of common vibration levels and set vibration limits. (10) Decibel notation (VdB) serves to reduce the range of numbers used to describe vibration levels and is used in this report to describe vibration levels. As stated in the FTA guidance manual, 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

**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

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. 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). (12) 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 TOWN OF APPLE VALLEY GENERAL PLAN NOISE ELEMENT

The Town of Apple Valley has adopted a Noise Element of the General Plan to consider the land use patterns of the Land Use Element in the context of the noise it will generate. (13) The state and federal government regulate sources of noise from transportation sources or the workplace. Therefore, the Town of Apple Valley works to control noise through the following policies:

- Policy 1.A The Town shall adhere to the standards of "Land Use Compatibility for Community Environments."*
- Policy 1.B New development projects shall assure that exterior noise levels in back yards and/or usable open space do not exceed 65 dBA CNEL, and that interior noise levels are consistent with the requirements of the Building Code.*
- Policy 1.C The Town shall assure low levels of traffic within neighborhoods by assigning truck routes to major roadways only.*
- Policy 1.D The development review and environmental review process shall require all development proposals within the noise impact area of U.S. I-15, State Route 18, the High Desert Corridor or the railroads to mitigate both noise and vibration to acceptable levels through the preparation of focused studies.*
- Policy 1.E The Town shall coordinate with adjoining jurisdictions to ensure noise-compatible land uses across jurisdictional boundaries.*
- Policy 1.F The Town shall ensure that flight paths and airport improvements adhere to all local, state and federal noise regulations.*

- Policy 1.G*      *The Town shall monitor bus route expansions to assure that any expansion on a collector or local street does not significantly impact the noise levels of adjacent sensitive receptors.*
- Policy 1.H*      *The Town shall coordinate, to the greatest extent possible, with the owners of the two rail lines to assure that significant increases in train activity do not occur.*

### **3.2.1 LAND USE COMPATIBILITY**

The *Land Use Compatibility for Community Noise Environments* identified in the Town of Apple Valley Noise Element (Table IV-4) are guidelines to evaluate the land use compatibility of transportation related noise. The compatibility criteria, shown on Exhibit 3-A, provides the Town with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. The *Land Use Compatibility for Community Noise Environments* matrix describes categories of compatibility and not specific noise standards. Noise sensitive residential designated land uses in the Project study area are considered *normally acceptable* with exterior noise levels below 60 dBA CNEL, and *conditionally acceptable* with exterior noise levels of up to 70 dBA CNEL. The non-noise sensitive Project warehouse/industrial land use is considered *normally acceptable* with unmitigated exterior noise levels of less than 75 dBA CNEL and *conditionally acceptable* with exterior noise levels ranging from 70 to 80 dBA CNEL based on the *Industrial, Manufacturing, Utilities, Agriculture* land use as shown on Exhibit 3-A. (13)

### **3.3 OPERATIONAL NOISE STANDARDS**

To analyze noise impacts originating from a designated fixed location or private property such as the Watson High Desert Logistics Project, stationary-source (operational) noise such as the expected loading dock activity, tractor trailer storage activity, roof-top air conditioning units, parking lot vehicle movements, trash enclosure activity, and truck movements are typically evaluated against standards established under a jurisdiction's Municipal Code or General Plan. The Town of Apple Valley Municipal Code, Table 9.73.050-A, establishes the exterior noise level limits by the receiving land use as shown on Table 3-1.

For noise-sensitive residential properties, the Town of Apple Valley Municipal Code, Table 9.73.050-A, identifies a base daytime (7:00 a.m. to 10:00 p.m.) exterior noise level limit of 50 dBA  $L_{eq}$  and 40 dBA  $L_{eq}$  during the nighttime (10:00 p.m. to 7:00 a.m.) hours. In addition, Section 9.73.050 [A][1][c], states that in the event the measured ambient noise level exceeds the base exterior noise level limit, the allowable noise exposure standard shall be adjusted in five dBA increments in each category as appropriate to encompass or reflect said ambient noise level. In effect, when the ambient noise levels exceed the base exterior noise level limits, the noise level standard shall be adjusted as appropriate to encompass or reflect the ambient noise level.

**EXHIBIT 3-A: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS**

Land Uses	CNEL (dBA)						
	50	55	60	65	70	75	80
Residential - Single Family Dwellings, Duplex, Mobile Homes	A	B			C		D
Residential – Multiple Family	A	B			C		D
Transient Lodging: Hotels and Motels	A	B			C		D
School Classrooms, Libraries, Churches, Hospitals, Nursing Homes and Convalescent Hospitals	A	B			C		D
Auditoriums, Concert Halls, Amphitheaters		B			C		
Sports Arenas, Outdoor Spectator Sports		B			C		
Playgrounds, Neighborhood Parks	A				C		D
Golf Courses, Riding Stables, Water Recreation, Cemeteries	A				C		D
Office Buildings, Business, Commercial and Professional	A			B			D
Industrial, Manufacturing, Utilities, Agriculture	A			B			D

Source: California Department of Health Services, "Guidelines for the Preparation and Content of the Noise Element of the General Plan," 1990



Normally Acceptable: With no special noise reduction requirements assuming standard construction.



Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design



Normally Unacceptable: New construction is discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Town of Apple Valley General Plan Noise Element, Table IV-4.

**TABLE 3-1: TOWN OF APPLE VALLEY OPERATIONAL NOISE STANDARDS**

Receiving Land Use	Time Period	Base Noise Level Limit (dBA L <sub>eq</sub> ) <sup>1</sup>	Exterior Noise Standards (dBA) <sup>2</sup>				
			L <sub>50</sub> (30 mins)	L <sub>25</sub> (15 mins)	L <sub>8</sub> (5 mins)	L <sub>2</sub> (1 min)	L <sub>max</sub> (0 min)
Single-Family Residential	Daytime	50	50	55	60	65	70
	Nighttime	40	40	45	50	55	60
Multi-Family Residential	Daytime	50	50	55	60	65	70
	Nighttime	45	45	50	55	60	65
Commercial & Office	Daytime	60	60	65	70	75	80
	Nighttime	55	55	60	65	70	75
General Commercial	Daytime	65	65	70	75	80	85
	Nighttime	60	60	65	70	75	80
Light Industrial	Anytime	70	70	75	80	85	90
Heavy Industrial	Anytime	75	75	80	85	90	95

<sup>1</sup> Section 9.73.050 base exterior noise level limits of the Town of Apple Valley Municipal Code.

<sup>2</sup> Noise levels shall not exceed for the duration periods specified in Town of Apple Valley Municipal Code Section 9.73.050[A][1][b]. The percent noise level is the level exceeded "n" percent of the time during the measurement period. L<sub>50</sub> is the noise level exceeded 50% of the time. "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

The Town of Apple Valley percentile noise descriptors are provided to ensure that the duration of the noise source is fully considered. However, due to the relatively constant intensity of the Project stationary operational activities, the (base exterior noise level limit) or the average L<sub>eq</sub> noise level metric best describes the loading dock activity, tractor trailer storage activity, roof-top air conditioning units, parking lot vehicle movements, trash enclosure activity, and truck movements. The equivalent L<sub>eq</sub> noise level metric accounts for noise fluctuations over time by averaging the louder and quieter events and giving more weight to the louder events. In addition, a review of the existing ambient noise level measurements shows that the L<sub>eq</sub> is generally greater than the L<sub>50</sub>. Therefore, this noise study conservatively relies on the average L<sub>eq</sub> sound level limits to describe the Project stationary operational noise levels.

### 3.4 CONSTRUCTION NOISE STANDARDS

The Town of Apple Valley has set restrictions to control noise impacts associated with the construction of the proposed Project. Section 9.73.060[F][1], Construction/Demolition indicates that *operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7 p.m. and 7 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the Town.*

In addition, Municipal Code Section 9.73.060[F][2] requires construction activities to be conducted in such a manner that the noise levels at affected residential properties will not exceed the daytime (7:00 a.m. to 7:00 p.m.) mobile exterior noise level limit of 75 dBA L<sub>eq</sub> and 60 dBA L<sub>eq</sub> during the nighttime hours of 7:00 p.m. to 7:00 a.m. Construction projects involve various stages, and activities frequently shift from one location to another. For example, during the initial stages,

noise-generating activities might concentrate in one area, and then move to another section as construction progresses. The mobile construction noise level threshold captures these changes and ensures that noise impacts are assessed accurately throughout the entire Project site.

### **3.5 CONSTRUCTION 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. (10) To analyze vibration impacts originating from the operation and construction of the Watson High Desert Logistics, vibration-generating activities are appropriately evaluated against standards established under the Municipal Code.

The Town of Apple Valley Municipal Code, Section 9.73.060[G], states that *operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty (150) feet (46 meters) from the source if on a public space or public right-of-way.* The Town of Apple Valley Municipal Code Section 9.73.020[34] defines the vibration perception threshold to be a motion velocity of 0.01 RMS inches per second (in/sec) over the range of one to 100 Hz. An RMS of 0.01 in/sec is equivalent to a peak particle velocity (PPV) level of 0.04 in/sec.

### **3.6 APPLE VALLEY AIRPORT (APV)**

The Apple Valley Airport (APV) is located south of the Project Site. According to the Town of Apple Valley General Plan Noise Element, aircraft noise associated with the operation of the Apple Valley Airport, which is owned and operated by the County of San Bernardino, is limited to general aviation aircraft. The 60 dBA noise contour boundary for the airport has been identified as occurring within the Airport's property, and noise levels on surrounding lands are not significantly affected. While aircraft overflights may be heard within the Town, aircraft noise does not create significant noise impacts outside the immediate area.

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## 4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the State CEQA Guidelines. (14) 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 a noise impact significant*. (15) 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 level exceeds the previously existing ambient noise level, the less acceptable the new noise level will typically be judged.

Sensitive receivers are areas where humans are participating in activities that may be subject to the stress of significant interference from noise and often include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, educational facilities, and libraries. Other receivers include office and industrial buildings, which are not considered as sensitive as single-family homes, but are still protected by the Town of Apple Valley land use compatibility standards, as discussed below.

#### 4.1.1 NOISE-SENSITIVE RECEIVERS

The Federal Interagency Committee on Noise (FICON) (16) 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 ( $L_{eq}$ ).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders a noise impact significant*, based on a 2008 California Court of Appeal ruling on *Gray v. County of Madera*. (15) 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 at noise sensitive receiver locations are consistent with guidance provided by both the Federal Highway Administration (6 p. 9) and Caltrans (17 p. 2\_48).

#### 4.1.2 NON-NOISE-SENSITIVE RECEIVERS

The Town of Apple Valley General Plan Noise Element, Table IV-4, *Land Use Compatibility for Community Noise Environments* was used to establish the satisfactory noise levels of significance for 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 land use is 75 dBA CNEL. Non-noise sensitive noise levels greater than 75 dBA CNEL are considered *conditionally acceptable* per the *Land Use Compatibility for Community Noise Environments*. (13)

To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive warehouse/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 the Town of Apple Valley General Plan Noise Element, Table IV-4, *Land Use Compatibility for Community Noise Environments* 75 dBA CNEL *normally acceptable* exterior noise level criteria for warehouse/industrial land uses.

## 4.2 VIBRATION (THRESHOLD B)

As described in Section 3.5, the vibration generating activities originating from the construction of Watson High Desert Logistics, vibration-generating activities are appropriately evaluated using a peak particle velocity (PPV) level of 0.04 in/sec.

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

The closest airport which would require additional noise analysis under CEQA guideline C is the Apple Valley Airport (APV) which is located west of the Project Site. As previously indicated in Section 3.6, the 60 dBA noise contour boundary for the airport has been identified as occurring within the Airport’s property, and noise levels on surrounding lands are not significantly affected. While aircraft overflights may be heard within the Town, aircraft noise does not create significant noise impacts outside the immediate area. 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**

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site Traffic	Noise-Sensitive <sup>1</sup>	If ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		If ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		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	
Operational	Noise-Sensitive	Exterior Noise Level Standards <sup>3</sup>	50 dBA Leq	40 dBA Leq
		If ambient is < 60 dBA Leq <sup>1</sup>	≥ 5 dBA Leq Project increase	
		If ambient is 60 - 65 dBA Leq <sup>1</sup>	≥ 3 dBA Leq Project increase	
		If ambient is > 65 dBA Leq <sup>1</sup>	≥ 1.5 dBA Leq Project increase	
Construction	Noise-Sensitive	Noise Level Threshold <sup>4</sup>	75 dBA Leq	60 dBA Leq
		Vibration Level Threshold <sup>5</sup>	0.04 PPV (in/sec)	

<sup>1</sup> FICON, 1992.

<sup>2</sup> Town of Apple Valley General Plan Noise Element Table IV-4 (See Exhibit 3-A)

<sup>3</sup> Town of Apple Valley Municipal Code, Table 9.73.050-A, Single-Family Residential (Table 3-1, Appendix 3.1)

<sup>4</sup> Town of Apple Valley Municipal Code Section 9.73.060[F][2], (Appendix 3.1)

<sup>5</sup> Town of Apple Valley Municipal Code 9.73.020[34], (Appendix 3.1)

Operational: "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m. (Table 9.73.050-A)

Construction: "Daytime" = 7:00 a.m. to 7:00 p.m.; "Nighttime" = 7:00 p.m. to 7:00 a.m. (Section 9.73.060[F][2])

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## 5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at seven locations in the Project study area. The noise level measurement 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 Wednesday, May 22, 2024. Appendix 5.1 includes study area photos.

### 5.1 MEASUREMENT PROCEDURE AND CRITERIA

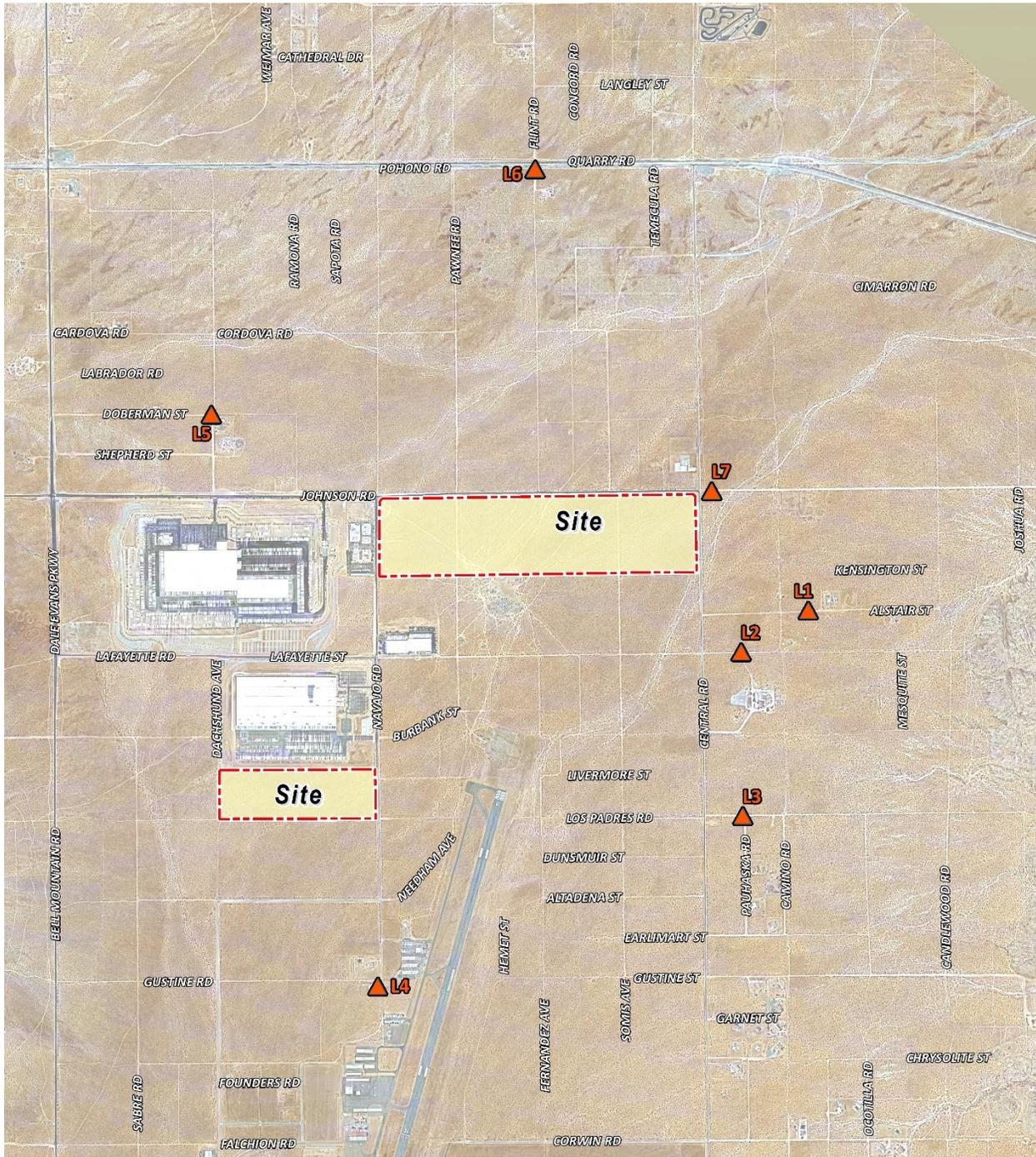
To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the equivalent daytime and nighttime hourly noise levels and calculate the 24-hour 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. (18)

### 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.* (4) 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.* (10)

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. (10) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting 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 equivalent or the energy average hourly 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: AMBIENT NOISE LEVEL MEASUREMENTS**

Location <sup>1</sup>	Description	Energy Average Noise Level (dBA $L_{eq}$ ) <sup>2</sup>		CNEL
		Daytime	Nighttime	
L1	Located east of the site near the residence at 19019 Llanto Rd	50.0	40.2	50.3
L2	Located east of the site near the residence at 18809 Central Rd.	52.3	44.4	53.4
L3	Located east of the site near the residence at 18611 Pauhaska Rd.	54.9	48.1	56.6
L4	Located south of the site near the residence at 18142 Navajo Rd.	60.9	50.3	61.0
L5	Located northwest of the site near the residence at 19493 Dachshund Av.	58.5	47.1	58.2
L6	Located north of the site near the residence at 20025 Flint Rd.	60.9	60.8	67.2
L7	Located north of the site near the vacant industrial building.	57.6	53.8	61.2

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

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

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

Table 5-1 provides the equivalent noise levels used to describe the daytime and nighttime ambient conditions for each of the measurements. A sixth measurement is included on Table 5-1 representing the Project site. 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.

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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 the Town of Apple Valley General Plan Noise Element, Table IV-4, *Land Use Compatibility for Community Noise Environments* (see Exhibit 3-A), all transportation related noise levels are presented in terms of the 24-hour CNEL's. Unlike a simple arithmetic average noise level, CNEL represents the logarithmic summation of the equivalent hourly noise levels with evening and nighttime noise penalties recognizing that noise may have different impacts on people depending on when it occurs.

### 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. (19) This methodology is commonly used to describe the off-site traffic noise levels throughout southern California. The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL) by vehicle type. REMEL represents the maximum sound level ( $L_{max}$ ) of individual vehicle "pass by" events by vehicle type when measured at a "reference distance" of 50 feet from the center of the travel lane.

In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (20) 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. (21)

### 6.2 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 14 off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the Town of Apple Valley General Plan Circulation Element, and the vehicle speeds. It is expected that the Project related off-site traffic noise level contributions on other roadway segments outside the Project study area will dissipate as traffic disperses on the roadway network. The analysis below provides off-site roadway segment analysis for the following traffic scenarios.

- Existing
- Existing with Project
- Opening Year Cumulative (OYC) (2027) without Project
- Opening Year Cumulative (OYC) (2027) with Project

To describe the Project off-site traffic impacts, the receiving land use adjacent to each roadway segment is identified as a sensitive or non-sensitive land use. Sensitive land uses are limited to the existing noise sensitive residential uses based on a review of aerial imagery. It is expected that only the existing receivers will experience a change in the ambient noise levels over time.

**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	Dale Evans Pkwy.	n/o Stoddard Wells Rd.	Major Parkway	Sensitive	71'	50
2	Dale Evans Pkwy.	s/o Stoddard Wells Rd.	Major Parkway	Non-Sensitive	71'	50
3	Dale Evans Pkwy.	n/o Johnson Rd.	Major Parkway	Sensitive	71'	50
4	Dale Evans Pkwy.	n/o Corwin Rd.	Major Parkway	Non-Sensitive	71'	50
5	Dale Evans Pkwy.	s/o Corwin Rd.	Major Parkway	Sensitive	71'	50
6	Central Rd.	s/o Johnson Rd.	Major Arterial	Sensitive	64'	50
7	Central Rd.	n/o Waalew Rd.	Major Arterial	Sensitive	64'	50
8	Central Rd.	s/o Waalew Rd.	Major Arterial	Sensitive	64'	50
9	Navajo Rd.	s/o Johnson Rd.	Secondary	Non-Sensitive	44'	50
10	Stoddard Wells Rd.	s/o Johnson Rd.	Major Arterial	Non-Sensitive	64'	50
11	Johnson Rd.	w/o Dale Evans Pkwy.	Major	Non-Sensitive	52'	50
12	Johnson Rd.	e/o Dale Evans Pkwy.	Major	Non-Sensitive	52'	50
13	Johnson Rd.	w/o Central Rd.	Major	Non-Sensitive	52'	50
14	Corwin Rd.	w/o Dale Evans Pkwy.	Major	Non-Sensitive	52'	50

<sup>1</sup> Town of Apple Valley General Plan Circulation Element.

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

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

The Project ADT volumes used in this study area presented on Table 6-2 are based on *Watson High Desert Logistics Traffic Analysis*, prepared by Urban Crossroads, Inc. (22) This off-site traffic noise analysis assumes that 15% of the total square footage will consist of High Cube Storage Warehouse. This is consistent with the December 23, 2024 *Watson High Desert Logistics Trip Generation Assessment* prepared by Urban Crossroads, Inc. (23) The General Plan Buildout ADT volumes were taken from the *Town of Apple Valley General Plan Circulation Element Traffic Study* prepared by Urban Crossroads, Inc. (23) The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of project traffic distributions. In addition, the off-site traffic noise analysis maintains a peak hour to average daily traffic (peak-to-daily) relationship of approximately 10.35%. (22) 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.

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

ID	Roadway	Segment	Average Daily Traffic Volumes <sup>1</sup>		
			Existing With Project <sup>1</sup>	Opening Year With Project <sup>1</sup>	General Plan Buildout <sup>2</sup>
1	Dale Evans Pkwy.	n/o Stoddard Wells Rd.	7,153	17,342	52,600
2	Dale Evans Pkwy.	s/o Stoddard Wells Rd.	7,124	17,311	50,600
3	Dale Evans Pkwy.	n/o Johnson Rd.	6,640	9,250	50,600
4	Dale Evans Pkwy.	n/o Corwin Rd.	4,352	10,706	63,900
5	Dale Evans Pkwy.	s/o Corwin Rd.	3,746	7,105	45,400
6	Central Rd.	s/o Johnson Rd.	4,393	13,187	23,500
7	Central Rd.	n/o Waalew Rd.	2,796	7,662	38,100
8	Central Rd.	s/o Waalew Rd.	3,234	6,766	47,500
9	Navajo Rd.	s/o Johnson Rd.	4,048	5,260	14,700
10	Stoddard Wells Rd.	s/o Johnson Rd.	5,394	25,118	54,300
11	Johnson Rd.	w/o Dale Evans Pkwy.	5,094	24,800	25,500
12	Johnson Rd.	e/o Dale Evans Pkwy.	10,374	34,015	40,500
13	Johnson Rd.	w/o Central Rd.	3,717	16,706	40,500
14	Corwin Rd.	w/o Dale Evans Pkwy.	1,253	4,288	22,100

<sup>1</sup> Watson High Desert Traffic Analysis, Urban Crossroads, Inc.

<sup>2</sup> Town of Apple Valley General Plan Circulation Element Update, Urban Crossroads, Inc. Segments 12 and 13 ADT volumes were estimated based using Theoretical General Plan Roadway Traffic Capacity as outlined in Table 3-1 of the Town of Apple Valley General Plan Circulation Element Traffic Study.

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 *Watson High Desert Logistics Traffic Analysis*. Table 6-3 presents the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-4 to 6-5 show the vehicle mixes used for the with Project traffic scenarios.

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

Time of Day	Vehicle Mix			Time of Day Split
	Autos	Medium Trucks	Heavy Trucks	
Daytime	78.21%	1.57%	0.39%	80.17%
Evening	7.57%	0.02%	0.01%	7.60%
Nighttime	11.94%	0.15%	0.15%	12.23%
Daily	97.72%	1.74%	0.54%	100.00%

<sup>1</sup> Based on the January 30, 2024, 24-hour directional vehicle classification count collected on Waalew Road west of Central Road.

"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.

**TABLE 6-4: EXISTING WITH PROJECT VEHICLE MIX**

ID	Roadway	Segment	With Project <sup>1</sup>			Total <sup>2</sup>
			Autos	Medium Trucks	Heavy Trucks	
1	Dale Evans Pkwy.	n/o Stoddard Wells Rd.	91.65%	2.53%	5.81%	100.00%
2	Dale Evans Pkwy.	s/o Stoddard Wells Rd.	91.63%	2.54%	5.83%	100.00%
3	Dale Evans Pkwy.	n/o Johnson Rd.	91.19%	2.60%	6.22%	100.00%
4	Dale Evans Pkwy.	n/o Corwin Rd.	95.43%	2.08%	2.48%	100.00%
5	Dale Evans Pkwy.	s/o Corwin Rd.	96.39%	1.94%	1.67%	100.00%
6	Central Rd.	s/o Johnson Rd.	89.58%	2.96%	7.46%	100.00%
7	Central Rd.	n/o Waalew Rd.	94.12%	2.31%	3.57%	100.00%
8	Central Rd.	s/o Waalew Rd.	94.44%	2.36%	3.20%	100.00%
9	Navajo Rd.	s/o Johnson Rd.	86.44%	3.42%	10.14%	100.00%
10	Stoddard Wells Rd.	s/o Johnson Rd.	91.03%	2.89%	6.08%	100.00%
11	Johnson Rd.	w/o Dale Evans Pkwy.	90.64%	2.96%	6.41%	100.00%
12	Johnson Rd.	e/o Dale Evans Pkwy.	89.10%	3.03%	7.87%	100.00%
13	Johnson Rd.	w/o Central Rd.	88.10%	3.18%	8.72%	100.00%
14	Corwin Rd.	w/o Dale Evans Pkwy.	93.75%	2.33%	3.91%	100.00%

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

**TABLE 6-5: OYCP (2027) WITH PROJECT VEHICLE MIX**

ID	Roadway	Segment	With Project <sup>1</sup>			Total <sup>2</sup>
			Autos	Medium Trucks	Heavy Trucks	
1	Dale Evans Pkwy.	n/o Stoddard Wells Rd.	95.22%	2.07%	2.71%	100.00%
2	Dale Evans Pkwy.	s/o Stoddard Wells Rd.	95.21%	2.07%	2.72%	100.00%
3	Dale Evans Pkwy.	n/o Johnson Rd.	93.03%	2.36%	4.62%	100.00%
4	Dale Evans Pkwy.	n/o Corwin Rd.	96.79%	1.88%	1.33%	100.00%
5	Dale Evans Pkwy.	s/o Corwin Rd.	97.02%	1.85%	1.13%	100.00%
6	Central Rd.	s/o Johnson Rd.	95.01%	2.15%	2.85%	100.00%
7	Central Rd.	n/o Waalew Rd.	96.40%	1.95%	1.65%	100.00%
8	Central Rd.	s/o Waalew Rd.	96.15%	2.04%	1.81%	100.00%
9	Navajo Rd.	s/o Johnson Rd.	89.03%	3.04%	7.93%	100.00%
10	Stoddard Wells Rd.	s/o Johnson Rd.	96.28%	1.99%	1.73%	100.00%
11	Johnson Rd.	w/o Dale Evans Pkwy.	96.26%	1.99%	1.74%	100.00%
12	Johnson Rd.	e/o Dale Evans Pkwy.	95.09%	2.14%	2.78%	100.00%
13	Johnson Rd.	w/o Central Rd.	95.58%	2.06%	2.36%	100.00%
14	Corwin Rd.	w/o Dale Evans Pkwy.	96.56%	1.92%	1.53%	100.00%

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

## 7 OFF-SITE TRAFFIC NOISE ANALYSIS

As described in Section 4.1, the off-site traffic noise impacts are evaluated based on a comparison of the Project traffic noise levels to the General Plan Buildout conditions outlined *Town of Apple Valley General Plan Circulation Element Traffic Study* prepared by Urban Crossroads, Inc. (23)

### 7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental 24-hour dBA CNEL traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours included in Appendix 7.1 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 CNEL 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 include noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-3 present a summary of the exterior traffic noise levels.

### 7.2 OFF-SITE TRUCK TRAFFIC

Consistent with the *Watson High Desert Logistics Traffic Analysis*, the Project truck trips will be primarily limited to the major roadways that include Dale Evans Parkway, Central Road, Stoddard Wells Road, Johnson Road and Corwin Road. The noise level calculations included in Appendix 7.1, present the maximum sound levels ( $L_{max}$ ) of individual "pass by" events (REMEL) by vehicle type for each of the study area roadway segments. To demonstrate compliance with the Town of Apple Valley *Land Use Compatibility for Community Noise Environments* guidelines, all exterior noise levels are first expressed using the equivalent hourly noise levels for the peak, daytime, evening, and nighttime hours. This approach permits the calculation of the 24-hour CNEL necessary to demonstrate compliance with the established thresholds of significance.

CNEL is commonly used for planning purposes and to assess changes in the long-term traffic noise exposure in a way that reflects its impact on communities over time, considering both daytime and nighttime periods when people may be more sensitive to noise. Since the CNEL noise levels include penalties for the evening and nighttime hours, the CNEL level will always be higher than any of the equivalent hourly noise levels. Both the Town of Apple Valley Noise Element and the *General Plan Guidelines* published by the Governor's Office of Planning and Research (OPR) (12) rely on the CNEL noise metric to assess land use noise compatibility.

TABLE 7-1: EXISTING WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>2</sup>	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Dale Evans Pkwy.	n/o Stoddard Wells Rd.	Sensitive	70.1	72	156	336
2	Dale Evans Pkwy.	s/o Stoddard Wells Rd.	Non-Sensitive	70.1	72	156	336
3	Dale Evans Pkwy.	n/o Johnson Rd.	Sensitive	70.0	71	153	330
4	Dale Evans Pkwy.	n/o Corwin Rd.	Non-Sensitive	65.7	RW	79	169
5	Dale Evans Pkwy.	s/o Corwin Rd.	Sensitive	64.2	RW	RW	135
6	Central Rd.	s/o Johnson Rd.	Sensitive	69.5	RW	128	276
7	Central Rd.	n/o Waalew Rd.	Sensitive	65.3	RW	67	145
8	Central Rd.	s/o Waalew Rd.	Sensitive	65.7	RW	71	153
9	Navajo Rd.	s/o Johnson Rd.	Non-Sensitive	71.8	58	126	271
10	Stoddard Wells Rd.	s/o Johnson Rd.	Non-Sensitive	69.8	RW	133	286
11	Johnson Rd.	w/o Dale Evans Pkwy.	Non-Sensitive	70.5	57	122	262
12	Johnson Rd.	e/o Dale Evans Pkwy.	Non-Sensitive	74.3	101	217	467
13	Johnson Rd.	w/o Central Rd.	Non-Sensitive	70.2	54	115	249
14	Corwin Rd.	w/o Dale Evans Pkwy.	Non-Sensitive	63.0	RW	RW	82

<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.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-2: OYCP (2027) WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>2</sup>	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Dale Evans Pkwy.	n/o Stoddard Wells Rd.	Sensitive	71.9	95	204	439
2	Dale Evans Pkwy.	s/o Stoddard Wells Rd.	Non-Sensitive	71.9	94	204	438
3	Dale Evans Pkwy.	n/o Johnson Rd.	Sensitive	70.5	77	166	358
4	Dale Evans Pkwy.	n/o Corwin Rd.	Non-Sensitive	68.3	RW	119	256
5	Dale Evans Pkwy.	s/o Corwin Rd.	Sensitive	66.3	RW	87	187
6	Central Rd.	s/o Johnson Rd.	Sensitive	71.5	80	173	373
7	Central Rd.	n/o Waalew Rd.	Sensitive	68.0	RW	101	217
8	Central Rd.	s/o Waalew Rd.	Sensitive	67.6	RW	95	206
9	Navajo Rd.	s/o Johnson Rd.	Non-Sensitive	72.1	61	131	283
10	Stoddard Wells Rd.	s/o Johnson Rd.	Non-Sensitive	73.2	105	226	486
11	Johnson Rd.	w/o Dale Evans Pkwy.	Non-Sensitive	74.0	97	208	449
12	Johnson Rd.	e/o Dale Evans Pkwy.	Non-Sensitive	76.4	139	299	645
13	Johnson Rd.	w/o Central Rd.	Non-Sensitive	72.9	82	176	379
14	Corwin Rd.	w/o Dale Evans Pkwy.	Non-Sensitive	66.2	RW	62	134

<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.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

**TABLE 7-3: GENERAL PLAN BUILDOUT WITH PROJECT CONTOURS**

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>2</sup>	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Dale Evans Pkwy.	n/o Stoddard Wells Rd.	Sensitive	76.7	198	427	919
2	Dale Evans Pkwy.	s/o Stoddard Wells Rd.	Non-Sensitive	76.5	193	416	896
3	Dale Evans Pkwy.	n/o Johnson Rd.	Sensitive	77.9	240	516	1112
4	Dale Evans Pkwy.	n/o Corwin Rd.	Non-Sensitive	76.1	181	391	842
5	Dale Evans Pkwy.	s/o Corwin Rd.	Sensitive	74.4	139	300	646
6	Central Rd.	s/o Johnson Rd.	Sensitive	74.0	118	254	548
7	Central Rd.	n/o Waalew Rd.	Sensitive	74.9	136	294	632
8	Central Rd.	s/o Waalew Rd.	Sensitive	76.1	163	350	754
9	Navajo Rd.	s/o Johnson Rd.	Non-Sensitive	76.6	121	260	561
10	Stoddard Wells Rd.	s/o Johnson Rd.	Non-Sensitive	76.6	175	377	813
11	Johnson Rd.	w/o Dale Evans Pkwy.	Non-Sensitive	74.2	98	212	457
12	Johnson Rd.	e/o Dale Evans Pkwy.	Non-Sensitive	77.2	156	336	725
13	Johnson Rd.	w/o Central Rd.	Non-Sensitive	76.8	147	318	684
14	Corwin Rd.	w/o Dale Evans Pkwy.	Non-Sensitive	73.3	86	185	400

<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.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.

### 7.3 OFF-SITE PROJECT NOISE LEVELS

Table 7-4 shows that the Existing with Project conditions CNEL noise levels are expected to range from 63.0 to 74.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows the Opening Year with Project conditions will range from 66.2 to 76.4 dBA CNEL and the General Plan Buildout conditions will range from 73.3 to 77.9 dBA CNEL. As shown on Table 7-4, the Existing and Opening Year with Project conditions will not exceed the approved General Plan off-site traffic noise conditions. Therefore, since the Project off-site traffic noise levels are less than the approved General Plan, the off-site traffic noise levels generated by the Project are considered *less than significant*.

TABLE 7-4: OFF-SITE TRAFFIC NOISE LEVEL SUMMARY

ID	Road	Segment	Receiving Land Use <sup>1</sup>	CNEL at Receiving Land Use (dBA) <sup>2</sup>			Exceeds General Plan Buildout Noise Levels
				Existing With Project	Opening Year With Project	General Plan Buildout	
1	Dale Evans Pkwy.	n/o Stoddard Wells Rd.	Sensitive	70.1	71.9	76.7	No
2	Dale Evans Pkwy.	s/o Stoddard Wells Rd.	Non-Sensitive	70.1	71.9	76.5	No
3	Dale Evans Pkwy.	n/o Johnson Rd.	Sensitive	70.0	70.5	77.9	No
4	Dale Evans Pkwy.	n/o Corwin Rd.	Non-Sensitive	65.7	68.3	76.1	No
5	Dale Evans Pkwy.	s/o Corwin Rd.	Sensitive	64.2	66.3	74.4	No
6	Central Rd.	s/o Johnson Rd.	Sensitive	69.5	71.5	74.0	No
7	Central Rd.	n/o Waalew Rd.	Sensitive	65.3	68.0	74.9	No
8	Central Rd.	s/o Waalew Rd.	Sensitive	65.7	67.6	76.1	No
9	Navajo Rd.	s/o Johnson Rd.	Non-Sensitive	71.8	72.1	76.6	No
10	Stoddard Wells Rd.	s/o Johnson Rd.	Non-Sensitive	69.8	73.2	76.6	No
11	Johnson Rd.	w/o Dale Evans Pkwy.	Non-Sensitive	70.5	74.0	74.2	No
12	Johnson Rd.	e/o Dale Evans Pkwy.	Non-Sensitive	74.3	76.4	77.2	No
13	Johnson Rd.	w/o Central Rd.	Non-Sensitive	70.2	72.9	76.8	No
14	Corwin Rd.	w/o Dale Evans Pkwy.	Non-Sensitive	63.0	66.2	73.3	No

<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>3</sup> Does the Project traffic noise level exceed the General Plan Buildout traffic noise levels.

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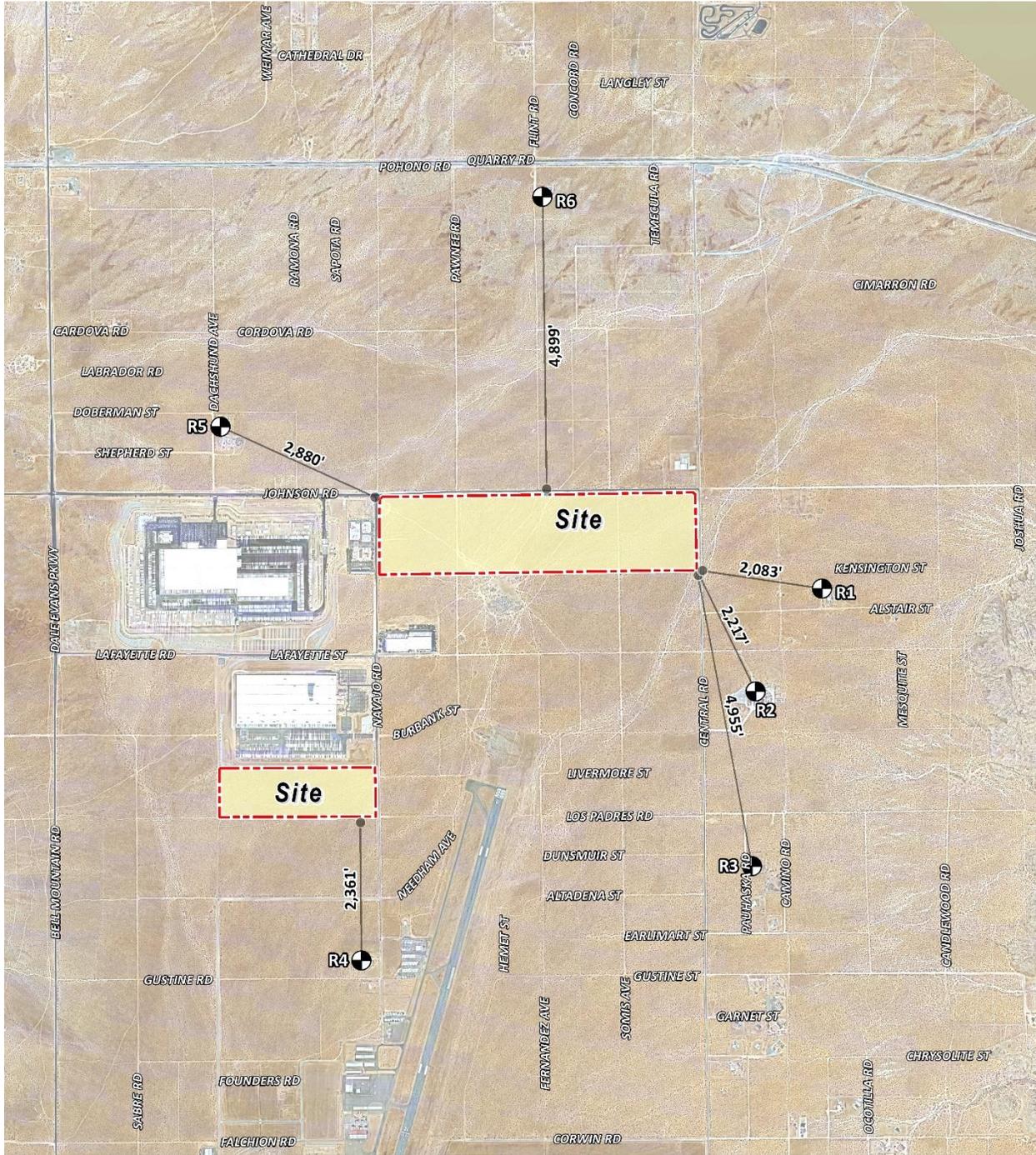
## 8 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following sensitive receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. 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. 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, six receiver locations in the vicinity of the Project site were identified. 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 existing noise sensitive residence at 19019 Llanto Road, approximately 2,083 feet east of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R1 is placed at the building façade. 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 18809 Central Road, approximately 2,217 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R2 is placed at the building façade. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing noise sensitive residence at 18611 Pauhaska Road., approximately 4,995 feet southeast of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R3 is placed at the building façade. 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 18142 Navajo Road, approximately 2,361 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R4 is placed at the building façade. A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.

**EXHIBIT 8-A: RECEIVER LOCATIONS**



**LEGEND:**

- Site Boundary
- Receiver Locations
- Distance from receiver to Project site boundary (in feet)

- R5: Location R5 represents the existing noise sensitive residence at 19493 Dachshund Avenue, approximately 2,880 feet northwest of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R5 is placed at the building façade. 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 20025 Flint Road, approximately 4,899 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, receiver R5 is placed at the building façade. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.

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## 9 OPERATIONAL NOISE ANALYSIS

This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations, identified in Section 8, resulting from the operation of the proposed Watson High Desert Logistics Project. To conservatively describe the potential worst-case noise environment, Exhibits 9-A and 9-B present the noise sources used to assess the operational noise levels.

### 9.1 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. Consistent with similar warehouse and industrial uses, the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: loading dock activity, tractor trailer storage activity, roof-top air conditioning units, parking lot vehicle movements, trash enclosure activity, and truck movements.

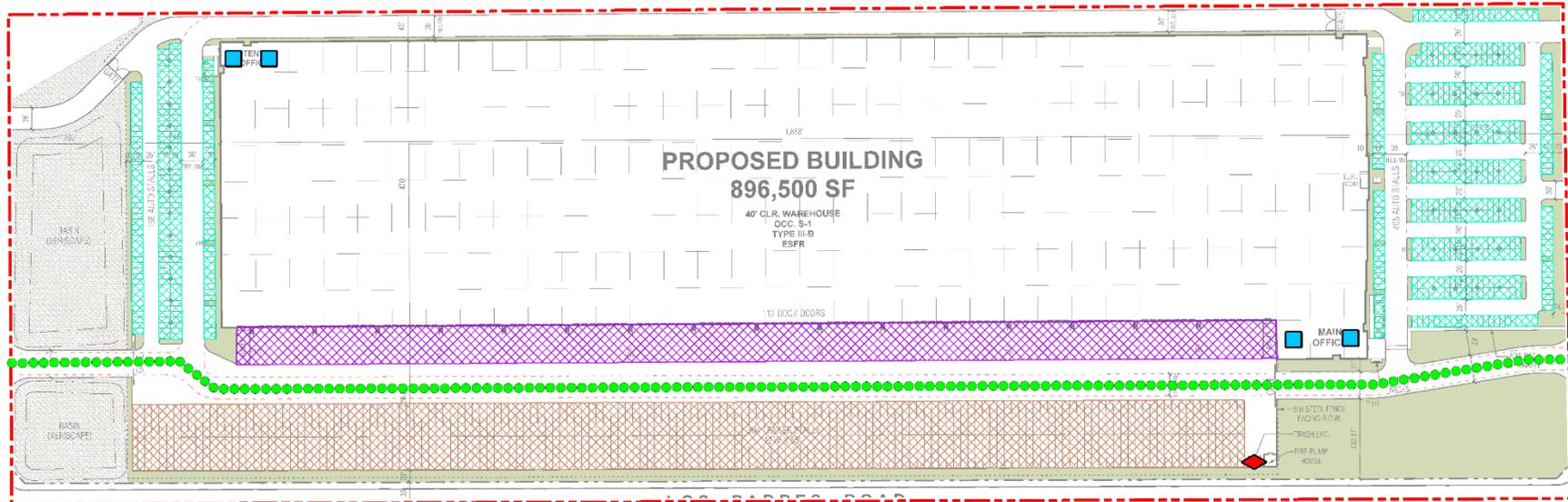
### 9.2 REFERENCE NOISE LEVELS

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 9-1 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, tractor trailer storage activity, roof-top air conditioning units, parking lot vehicle movements, trash enclosure activity, and truck movements all operating at the same time. These sources of noise activity will likely vary throughout the day.

#### 9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precision 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. (18)

**EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS – WEST SITE**



**LEGEND:**

- Site Boundary
- Tractor Trailer Storage Activity
- Roof-Top Air Conditioning Unit
- Truck Movements
- Loading Dock Activity
- Parking Lot Vehicle Movements
- ◆ Trash Enclosure Activity

EXHIBIT 9-B: OPERATIONAL NOISE SOURCE LOCATIONS – EAST SITE



LEGEND:



- Site Boundary
- Tractor Trailer Storage Activity
- Roof-Top Air Conditioning Unit
- Truck Movements
- Loading Dock Activity
- Parking Lot Vehicle Movements
- ◆ Trash Enclosure Activity

**TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS**

Reference Noise Source	Noise Source Height (Feet)	Min./ Hour <sup>1</sup>		Reference Noise Level (dBA Leq) @ 50 Feet	Sound Power Level (dBA) <sup>2</sup>
		Day	Night		
Loading Dock Activity	8'	60	60	65.7	111.5
Tractor Trailer Storage Activity	8'	60	60	62.8	103.4
Roof-Top Air Conditioning Units	5'	39	28	57.2	88.9
Parking Lot Vehicle Movements	5'	60	60	52.6	81.1
Trash Enclosure Activity	5'	60	30	57.3	89.0
Truck Movements	8'	60	60	59.8	93.2

<sup>1</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>2</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.

**9.2.2 LOADING DOCK ACTIVITY**

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 65.7 dBA Leq. 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.

**9.2.3 TRACTOR TRAILER STORAGE ACTIVITY**

To evaluate the noise levels associated with truck idling, backup alarms, trailer movements and storage activities, Urban Crossroads collected a reference noise level measurement at an existing parcel hub facility to describe the potential operational noise levels associated with Project tractor trailer storage activities. The measured reference noise level at 50 feet from activity was measured at 62.8 dBA Leq. The reference noise level measurement includes a semi-truck with trailer pass-by event, background switcher cab trailer towing, drop-off, idling, and backup alarm events. Tractor trailer activity is estimated during all the daytime, evening, and nighttime hours.

#### **9.2.4 ROOF-TOP AIR CONDITIONING UNITS**

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 level is 57.2 dBA  $L_{eq}$ . Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for an 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.

#### **9.2.5 PARKING LOT VEHICLE MOVEMENTS**

To describe the on-site parking lot activity, a long-term reference noise level measurement was collected in the center of activity within the staff parking lot of a warehouse distribution center. At 50 feet from the center of activity, the parking lot produced a reference noise level of 52.6 dBA  $L_{eq}$ . 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 to cars pulling in and out of parking spaces in combination with car doors opening and closing.

#### **9.2.6 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  $L_{eq}$  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. Typical trash enclosure activities are estimated to occur for 10 minutes per hour.

#### **9.2.7 TRUCK MOVEMENTS**

The truck movements reference noise level measurement was collected over a period of 1 hour and 28 minutes and represent 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 exiting the Project driveways and maneuvering in and out of the outdoor loading dock activity area.

### 9.3 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 noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed noise dBA  $L_{eq}$  model inputs used to estimate the Project operational noise levels presented in this section.

### 9.4 PROJECT OPERATIONAL NOISE LEVELS

Using the reference noise levels to represent the Project operations that include loading dock activity, tractor trailer storage activity, roof-top air conditioning units, parking lot vehicle movements, trash enclosure activity, and truck movements, 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 9-2 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 36.7 to 41.5 dBA  $L_{eq}$ .

**TABLE 9-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS**

Noise Source <sup>1</sup>	Operational Noise Levels by Receiver Location (dBA Leq)					
	R1	R2	R3	R4	R5	R6
Cold Storage Loading Dock Activity	39.6	40.2	35.7	40.6	36.8	36.3
Tractor Trailer Storage Activity	32.4	33.9	29.2	33.1	25.5	26.1
Roof-Top Air Conditioning Units	22.4	20.4	16.1	21.4	21.6	20.0
Parking Lot Vehicle Movements	22.2	20.8	15.1	19.6	19.7	14.8
Trash Enclosure Activity	16.5	9.0	8.7	18.2	15.0	12.6
Truck Movements	21.8	22.2	18.3	22.9	20.0	21.2
<b>Total (All Noise Sources)</b>	<b>40.6</b>	<b>41.2</b>	<b>36.7</b>	<b>41.5</b>	<b>37.4</b>	<b>36.9</b>

<sup>1</sup> See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

Table 9-3 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 existing off-site receiver locations are expected to range from 36.7 to 41.4 dBA Leq. The differences between the daytime and nighttime noise levels are largely related to the estimated duration of noise activity as outlined in Table 9-1. Appendix 9.1 includes the detailed noise model inputs.

**TABLE 9-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS**

Noise Source <sup>1</sup>	Operational Noise Levels by Receiver Location (dBA Leq)					
	R1	R2	R3	R4	R5	R6
Cold Storage Loading Dock Activity	39.6	40.2	35.7	40.6	36.8	36.3
Tractor Trailer Storage Activity	32.4	33.9	29.2	33.1	25.5	26.1
Roof-Top Air Conditioning Units	20.0	18.0	13.7	19.0	19.2	17.6
Parking Lot Vehicle Movements	22.2	20.8	15.1	19.6	19.7	14.8
Trash Enclosure Activity	15.5	8.0	7.7	17.3	14.1	11.7
Truck Movements	21.8	22.2	18.3	22.9	20.0	21.2
<b>Total (All Noise Sources)</b>	<b>40.5</b>	<b>41.2</b>	<b>36.7</b>	<b>41.4</b>	<b>37.4</b>	<b>36.9</b>

<sup>1</sup> See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

## 9.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the unmitigated Project-only operational noise levels are evaluated against exterior noise level thresholds based on the Town of Apple Valley exterior noise level standards at nearby noise-sensitive receiver locations. Table 9-4 shows the unmitigated operational noise levels associated with Watson High Desert Logistics will not exceed the exterior noise level standards, adjusted in five dBA increments to reflect the ambient noise levels (see Table 5-1) per the Town of Apple Valley Municipal Code Section 9.73.050[A][1][c]. Therefore, the stationary operational noise impacts are considered *less than significant* at the nearest noise-sensitive receiver locations.

**TABLE 9-4: OPERATIONAL NOISE LEVEL COMPLIANCE**

Receiver Location <sup>1</sup>	Project Operational Noise Levels (dBA Leq) <sup>2</sup>		Noise Level Standards (dBA Leq) <sup>3</sup>		Noise Level Standards Exceeded? <sup>4</sup>	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	40.6	40.5	50	45	No	No
R2	41.2	41.2	55	45	No	No
R3	36.7	36.7	55	50	No	No
R4	41.5	41.4	65	55	No	No
R5	37.4	37.4	60	50	No	No
R6	36.9	36.9	60	50	No	No

<sup>1</sup> See Exhibit 8-A for the receiver locations.

<sup>2</sup> Proposed Project unmitigated operational noise levels as shown on Tables 9-2 and 9-3.

<sup>3</sup> Exterior noise level standards, adjusted in five (5) dBA increments to reflect the ambient noise levels (see Table 5-1) per Town of Apple Valley Municipal Code Section 9.73.050[A][1][c].

<sup>4</sup> Do the estimated Project operational noise source activities exceed the noise level standards?  
 "Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

## 9.6 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 that may be 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. (4) Instead, they must be logarithmically added using the following base equation:

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

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. Noise levels that would be experienced at receiver locations when Project-source noise is added to the daytime and nighttime ambient conditions are presented on Tables 9-5 and 9-6, respectively. As indicated on Table 9-5, the Project will generate a daytime operational noise level increase ranging from 0.0 to 0.5 dBA Leq at the nearest receiver locations. Table 9-6 shows that the Project will generate a nighttime operational noise level increase ranging from 0.3 to 3.2 dBA Leq at the nearest receiver locations. Project-related operational noise level increases will not exceed the operational noise level increase significance criteria presented in Table 4-1. Therefore, Project related operational noise level increases at the sensitive receiver locations will be *less than significant*.

**TABLE 9-5: 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	40.6	L1	50.0	50.5	0.5	5.0	No
R2	41.2	L2	52.3	52.6	0.3	5.0	No
R3	36.7	L3	54.9	55.0	0.1	5.0	No
R4	41.5	L4	60.9	60.9	0.0	3.0	No
R5	37.4	L5	58.5	58.5	0.0	5.0	No
R6	36.9	L6	60.9	60.9	0.0	3.0	No

<sup>1</sup> See Exhibit 8-A for the receiver locations.

<sup>2</sup> Total Project daytime operational noise levels as shown on Table 9-2.

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

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

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

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

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

**TABLE 9-6: 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	40.5	L1	40.2	43.4	3.2	5.0	No
R2	41.2	L2	44.4	46.1	1.7	5.0	No
R3	36.7	L3	48.1	48.4	0.3	5.0	No
R4	41.4	L4	50.3	50.8	0.5	5.0	No
R5	37.4	L5	47.1	47.5	0.4	5.0	No
R6	36.9	L6	60.8	60.8	0.0	3.0	No

<sup>1</sup> See Exhibit 8-A for the receiver locations.

<sup>2</sup> Total Project nighttime operational noise levels as shown on Table 9-3.

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

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

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

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

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

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## 10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the on-site construction noise source activity in relation to the nearest sensitive receiver locations previously described in Section 7. Section 9.73.060[F][1] of the Town of Apple Valley Municipal Code, provided in Appendix 3.2, indicates that *operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7 p.m. and 7 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the Town.*

In addition, Municipal Code Section 9.73.060[F][2] requires construction activities to be conducted in such a manner that the noise levels at affected residential properties will not exceed the daytime (7:00 a.m. to 7:00 p.m.) mobile exterior noise level limit of 75 dBA  $L_{eq}$  and 60 dBA  $L_{eq}$  during the nighttime hours of 7:00 p.m. to 7:00 a.m.

### 10.1 CONSTRUCTION NOISE LEVELS

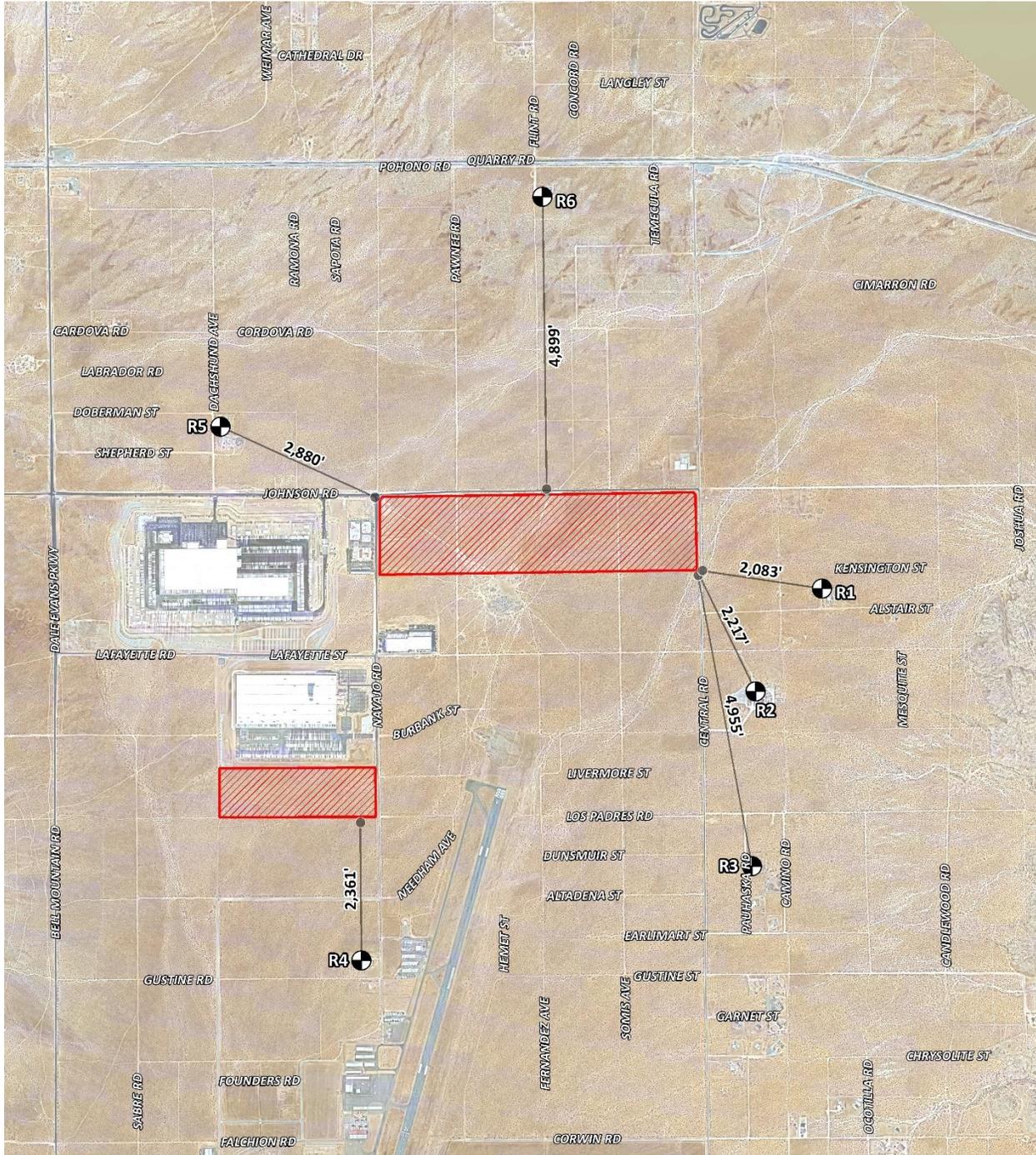
The FTA *Transit Noise and Vibration Impact Assessment Manual* recognizes that construction projects are accomplished in several different stages and outlines the procedures for assessing noise impacts during construction. Each stage has a specific equipment mix, depending on the work to be completed 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

### 10.2 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. (26) 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.

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



**LEGEND:**

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

### 10.3 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 10-1 presents the combined noise levels for the loudest construction equipment, assuming they operate at the same time. As shown on Table 10-2, the construction noise levels are expected to range from 36.1 to 51.0 dBA  $L_{eq}$  at the nearby receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

**TABLE 10-1: PCONSTRUCTION REFERENCE NOISE LEVELS**

Construction Stage	Reference Construction Equipmnet <sup>1</sup>	Reference Noise Level @ 50 Feet (dBA $L_{eq}$ )	Composite Reference Noise Level (dBA $L_{eq}$ ) <sup>2</sup>	Reference Power Level (dBA $L_w$ ) <sup>3</sup>
Site Preparation	Tractor	80	84.0	115.6
	Backhoe	74		
	Grader	81		
Grading	Scraper	80	83.3	114.9
	Excavator	77		
	Dozer	78		
Building Construction	Crane	73	80.6	112.2
	Generator	78		
	Front End Loader	75		
Paving	Paver	74	77.8	109.5
	Dump Truck	72		
	Roller	73		
Architectural Coating	Man Lift	68	76.2	107.8
	Compressor (air)	74		
	Generator (<25kVA)	70		

<sup>1</sup> FHWA Road Construction Noise Model.

<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>3</sup> Sound power level represents the total amount of acoustical energy (noise level) produced by a sound source independent of distance or surroundings.

**TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY**

Receiver Location <sup>1</sup>	Construction Noise Levels (dBA Leq)					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels <sup>2</sup>
R1	47.8	47.1	44.4	41.7	40.0	47.8
R2	48.1	47.4	44.7	42.0	40.3	48.1
R3	44.1	43.4	40.7	38.0	36.3	44.1
R4	51.0	50.3	47.6	44.9	43.2	51.0
R5	47.0	46.3	43.6	40.9	39.2	47.0
R6	43.9	43.2	40.5	37.8	36.1	43.9

<sup>1</sup> Construction noise source and receiver locations are shown on Exhibit 10-A.

<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 10.1.

### 10.4 PROJECT SITE 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 75 dBA Leq 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 75 dBA Leq significance threshold during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

**TABLE 10-3: PROJECT SITE CONSTRUCTION NOISE LEVEL COMPLIANCE**

Receiver Location <sup>1</sup>	Construction Noise Levels (dBA Leq)		
	Highest Construction Noise Levels <sup>2</sup>	Threshold <sup>3</sup>	Threshold Exceeded? <sup>4</sup>
R1	47.8	75	No
R2	48.1	75	No
R3	44.1	75	No
R4	51.0	75	No
R5	47.0	75	No
R6	43.9	75	No

<sup>1</sup> Construction noise source and receiver locations are shown on Exhibit 10-A.

<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 10-2.

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

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

## 10.5 NIGHTTIME CONCRETE POUR NOISE ANALYSIS

It is our understanding that nighttime concrete pouring activities will occur as a part of Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building pad area. Since the nighttime concrete pours will take place outside the hours permitted by Section 9.73.060 of the Town of Apple Valley Municipal Code, the Project Applicant will be required to obtain authorization for nighttime work from the Town of Apple Valley. Any nighttime construction noise activities are evaluated against the exterior construction noise level threshold of 60 dBA  $L_{eq}$  for noise sensitive residential land use.

### 10.5.1 NIGHTTIME CONCRETE POUR REFERENCE NOISE LEVEL MEASUREMENTS

To estimate the noise levels due to nighttime concrete pour activities, sample reference noise level measurements were taken during a nighttime concrete pour at a construction site. Urban Crossroads, Inc. collected short-term nighttime concrete pour reference noise level measurements during the noise-sensitive nighttime hours between 1:00 a.m. to 2:00 a.m. at 27334 San Bernardino Avenue in the City of Redlands. The reference noise levels describe the expected concrete pour noise sources that may include concrete mixer truck movements and pouring activities, concrete paving equipment, rear mounted concrete mixer truck backup alarms, engine idling, air brakes, generators, and workers communicating/whistling.

To describe the nighttime concrete pour noise levels associated with the construction of the Watson High Desert Logistics, this analysis relies on reference sound pressure level of 67.7 dBA  $L_{eq}$  at 50 feet representing a sound power level of 100.3 dBA  $L_w$ . While the Project noise levels will depend on the actual duration of activities and specific equipment fleet in use at the time of construction, the reference sound power level of 100.3 dBA  $L_w$  is used to describe the expected Project nighttime concrete pour noise activities.

### 10.5.2 NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

As shown on Table 10-4, the noise levels associated with the nighttime concrete pour activities are estimated to range from 28.6 to 35.7 dBA  $L_{eq}$ . The analysis shows that the unmitigated nighttime concrete pour activities will not exceed the 60 dBA  $L_{eq}$  nighttime residential noise level threshold at all the nearest noise sensitive receiver locations. Therefore, the noise impacts due to Project construction nighttime concrete pour noise activity are considered *less than significant* at all receiver locations with prior authorization for nighttime work from the Town of Apple Valley. Appendix 10.2 includes the CadnaA nighttime concrete pour noise model inputs.

**TABLE 10-4: NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE**

Receiver Location <sup>1</sup>	Concrete Pour Construction Noise Levels (dBA Leq)		
	Exterior Noise Levels <sup>2</sup>	Threshold <sup>3</sup>	Threshold Exceeded? <sup>4</sup>
R1	32.5	60	No
R2	32.8	60	No
R3	28.8	60	No
R4	35.7	60	No
R5	31.7	60	No
R6	28.6	60	No

<sup>1</sup> Construction noise source and receiver locations are shown on Exhibit 10-A.

<sup>2</sup> Nighttime Concrete Pour noise model inputs are included in Appendix 10.2.

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

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

## 10.6 CONSTRUCTION VIBRATION ANALYSIS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods employed. The 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 10-5. 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:  $PPV_{\text{equip}} = PPV_{\text{ref}} \times (25/D)^{1.5}$

**TABLE 10-5: 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 10-6 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 2,803 to 4,955 feet from Project construction activities, construction vibration velocity levels are estimated at less than 0.001 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.04 (in/sec), the typical Project construction vibration levels will fall below the vibration thresholds at all the sensitive receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

**TABLE 10-6: PROJECT CONSTRUCTION VIBRATION LEVELS**

Location <sup>1</sup>	Distance to Const. Activity (Feet) <sup>2</sup>	Typical Construction Vibration Levels PPV (in/sec) <sup>3</sup>						Thresholds PPV (in/sec) <sup>4</sup>	Thresholds Exceeded? <sup>5</sup>
		Small bulldozer	Jack-hammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	2,083'	0.000	0.000	0.000	0.000	0.000	0.000	0.004	No
R2	2,217'	0.000	0.000	0.000	0.000	0.000	0.000	0.004	No
R3	4,955'	0.000	0.000	0.000	0.000	0.000	0.000	0.004	No
R4	2,361'	0.000	0.000	0.000	0.000	0.000	0.000	0.004	No
R5	2,880'	0.000	0.000	0.000	0.000	0.000	0.000	0.004	No
R6	4,899'	0.000	0.000	0.000	0.000	0.000	0.000	0.004	No

<sup>1</sup> Construction noise source and receiver locations are shown on Exhibit 9-A.  
<sup>2</sup> Distance from receiver building facade to Project construction boundary (Project site boundary).  
<sup>3</sup> Based on the Vibration Source Levels of Construction Equipment (Table 9-5).  
<sup>4</sup> Town of Apple Valley Municipal Code 9.73.020[34], (Appendix 3.1)  
<sup>5</sup> Does the peak vibration exceed the acceptable vibration thresholds?  
 "PPV" = Peak Particle Velocity

Moreover, the vibration levels reported at the sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

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20. **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.

21. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
22. **Urban Crossroads, Inc.** *Watson High Desert Logistics Traffic Analysis.* June 2024.
23. —. *Watson High Desert Logistics Trip Generation Assessment.* December 23, 2024.
24. —. *Town of Apple Valley General Plan Circulation Element Traffic Study .* November 2008.
25. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning.** *FHWA Roadway Construction Noise Model.* January, 2006.
26. **California Department of Transportation Environmental Program.** *I-80 Davis OGAC Pavement Noise Study.* September 2001.
27. **Canadian Ministry of Transportation and Highways, Highway Environment Branch.** *Open-Graded Asphalt 'Quiet Pavement' - Assessment of Traffic Noise Reduction Performance.* November 1995.
28. **California Department of Transportation.** *Highway Design Manual, Chapter 1100 Highway Traffic Noise Abatement.* November 2017.

## 12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Watson High Desert Logistics 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  
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URBAN CROSSROADS, INC.  
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Newport Beach, CA 92658  
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### 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 San Diego • March, 2018  
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:**

**TOWN OF APPLE VALLEY MUNICIPAL CODE**

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## Chapter 9.73 Noise Control

### 9.73.010 Purpose

A. **Purpose.**

The purpose of this Chapter is to reduce unnecessary, excessive and annoying noise and vibration within the Town. The Town Council finds that this Chapter is necessary to prohibit such noise and vibration generated from or by all sources as specified in this Chapter. Further, the Town Council finds that this Chapter is necessary to maintain quiet in those areas which exhibit low noise levels and to implement programs aimed at reducing noise in those areas within the Town where noise levels are above acceptable values.

The Town Council also finds that certain noise levels and vibrations are detrimental to the public health, safety and welfare, and are contrary to the public interest. Therefore, the Town Council does ordain and declare that creating, maintaining, causing or allowing to be created, caused or maintained, any noise or vibration in a manner prohibited by or not in conformity with the provisions of this Chapter, shall be an infraction or misdemeanor and shall be punishable as such.

### 9.73.020 Definitions

A. **Definitions.** All terminology used in this ordinance, not defined below, shall be in conformance with applicable publications of the American National Standards Institute (ANSI) or its successor body.

The following words, phrases and terms as used in this Chapter shall have the meaning as indicated below:

1. **A Weighted Sound Level.** The sound level in decibels as measured on a sound level meter using the A-weighting network. The level so read is designated dBA.
2. **Agricultural Property.** A parcel of real property of not less than ten (10) contiguous acres in size, which is undeveloped for any use other than agricultural purposes.
3. **Ambient Noise Level.** The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal of existing level of environmental noise at a given location.
4. **Commercial Area.** Property which is zoned for commercial purposes, including, but not limited to, retail and wholesale businesses, personal services, and professional offices.
5. **Construction.** Any site preparation, assembly, erection, substantial repair, alteration, or similar action, for or of public or private rights-of-way, structures, utilities or similar property.
6. **Cumulative Period.** An additive period of time composed of individual time segments which may be continuous or interrupted.
7. **Decibel.** A unit for measuring the amplitude of a sound, equal to twenty (20) times the logarithm to the ratio of the sound measured to the reference pressure, which is 20 micropascals.
8. **Demolition.** Any dismantling, intentional destruction or removal of structures, utilities, public or private rights-of-way surfaces, or similar property.
9. **Emergency Work.** Any work performed for the purpose of preventing or alleviating the physical trauma or property damage threatened or caused by an emergency.

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10. **Fixed Noise Source.** A stationary device which creates sounds while fixed or motionless, including, but not limited to, residential, agricultural, industrial and commercial machinery and equipment, pumps, fans, compressors, air conditioners, and refrigeration units.
  11. **Gross Vehicle Weight Rating (GVWR).** The value specified by the manufacturer as the recommended maximum loaded weight of a single motor vehicle. In cases where trailers and tractors are separable the gross combination weight rating, which is the value specified by the manufacturer as the recommended maximum loaded weight of the combination vehicle, shall be used.
  12. **Impulsive Sound.** Sound of short duration, usually less than one (1) second, with an abrupt onset and rapid decay. Examples of sources of impulsive sound include explosions, drop forge impacts, and the discharge of firearms.
  13. **Industrial Area.** Property which is zoned for manufacturing and related uses.
  14. **Intrusive Noise.** That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency and time of occurrence, tonal or informational content, as well as the prevailing ambient noise level.
  15. **Licensed.** The possession of a formal license or a permit issued by the appropriate licensing or permitting agency; or, where no licenses or permits are issued, the sanctioning of the activity by such agency as noted in public record.
  16. **Mobile Noise Source.** Any noise source other than a fixed source.
  17. **Motor Vehicle.** Motor vehicle shall include any and all self-propelled vehicles as defined in the California Motor Vehicle Code, including all on-highway type motor vehicles subject to registration under said Code, and all off-highway type motor vehicles subject to identification under said Code.
  18. **Motorboat.** Any vessel propelled by machinery, whether or not such machinery is the principal source of propulsion, but shall not include a vessel which has a valid marine document issued by the Bureau of Customs of the United States government or any Federal agency successor thereto (Section 651(d), Harbors and Navigation Code).
  19. **Muffler or Sound Dissipating Device.** A device consisting of a series of chambers or baffle plates, or other mechanical design, for the purpose of receiving exhaust gas from an internal combustion engine, and effective in reducing noise.
  20. **Noise Control Officer (NCO).** Person or persons designated by the Director of Community Development as responsible for the enforcement of this Chapter.
  21. **Noise Disturbance.** Any sound which, as judged by the NCO, (a) endangers or injures the safety or health of human beings or animals, or (b) annoys or disturbs reasonable persons of normal sensitivities, or (c) endangers or injures personal or real property, or (d) violates the factors set forth in Section 9.73.040 of this Chapter. Compliance with the quantitative standards as listed herein shall constitute elimination of a noise disturbance.
  22. **Noise Sensitive Zone.** Any area designated in accordance with Section 9.73.060 of this Chapter for the purpose of ensuring exceptional quiet.
  23. **Noise Zone.** Any defined areas or regions of a generally consistent land use wherein the ambient noise levels are within a range of five (5) dBA.
  24. **Person.** Any individual, association, partnership, or corporation, and includes any officer, employee, department, agency or instrumentality of a State or any political subdivision of a State.

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25. **Powered Model Vehicle.** Any self-propelled, airborne, waterborne, or landborne plane, vessel, or vehicle, which is not designed to carry persons, including, but not limited to, any model airplane, boat, car, or rocket.
  26. **Public Right-of-Way.** Any street, avenue, boulevard, highway, sidewalk or alley or similar place which is owned or controlled by a governmental entity.
  27. **Public Space.** Any real property, or structures thereon, which are owned or controlled by a governmental entity.
  28. **Pure Tone.** Any sound which can be judged as audible as a single pitch or a set of single pitches by the Noise Control Officer. For the purposes of this Chapter, a pure tone shall exist if the one-third (1/3) octave band sound pressure level in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two (2) contiguous one-third (1/3) octave bands by five (5) dBA for center frequencies of 500 Hz and above, and by eight (8) dBA for center frequencies between 160 and 400 Hz, and by fifteen (15) dBA for center frequencies less than or equal to 125 Hz.
  29. **Real Property Boundary.** An imaginary line along the ground surface, and its vertical extension, which separates the real property owned by one person from that owned by another person, but not including intra-building real property divisions.
  30. **Residential Area.** Property which is zoned for residential uses.
  31. **Sound Amplifying Equipment.** Any device for the amplification of the human voice, music, or any other sound, excluding standard automobile radios when used and heard only by the occupants of the vehicle in which the radio is installed, warning devices on authorized emergency vehicles, or horns or other warning devices on any vehicle used only for traffic safety purposes.
  32. **Sound Level Meter.** An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement of sound levels. Such instrument shall meet or exceed the pertinent requirements for type S2A meters contained in the American National Standards Institute specifications for sound level meters, S1.4-1971, or the most recent revision thereof.
  33. **Sound Truck.** Any motor vehicle or any other vehicle, regardless of motive power, whether in motion or stationary, having mounted thereon, or attached thereto, any sound amplifying equipment.
  34. **Vibration Perception Threshold.** The minimum ground- or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such direct means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be a motion velocity of 0.01 in/sec over the range of 1 to 100 Hz.
  35. **Weekday.** Any day, Monday through Friday, which is not a legal holiday.

### 9.73.030 Noise Control Officer

#### A. Authority and Duties of the Noise Control Officer (NCO)

1. **Lead Agency.** The Director shall designate a Noise Control Officer (NCO) who shall be responsible for administering the noise control program established by this Chapter.
2. **Powers.** In order to implement and enforce this Chapter and for the general purpose of noise abatement and control, NCO shall have, in addition to any other vested authority, the power to:
  - a. Conduct, or cause to be conducted, studies, research, and monitoring related to noise, including joint cooperative investigation with public or private agencies, and the application for, and acceptance of, grants;

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- b. Review all public and private projects which are likely to cause noise in violation of this ordinance and which are subject to mandatory review or approval by other departments.
    - 1) Review for compliance with the intent and provisions of this ordinance.
    - 2) Require sound analyses which identify existing and projected noise sources and associated noise levels.
    - 3) Require the usage of adequate mitigation measures to avoid violation of any provision of this ordinance.
  - c. Upon presentation of proper credentials, enter and/or inspect any private property, place, report, or records at any time when granted permission by the owner or by some other person with authority to act for the owner. When permission is refused or cannot be obtained, a search warrant may be obtained from a court of competent jurisdiction upon a showing of probable cause to believe that a violation of this ordinance may exist. Such inspection may include the administration of any necessary tests.
  - d. Prepare recommendations, based upon noise survey data and analytical studies, to be approved by the Town Council, for the designation of zones of similar ambient environmental noise within regions of generally consistent land use. These zones shall be identified in terms of their day and nighttime ambient noise levels and their land use classifications as given in Table 9.73.050-A.

### 9.73.040 General Noise Regulations

- A. **General Noise Regulations.** Notwithstanding any other provision of this chapter, and in addition thereto, it shall be unlawful for any person to willfully or negligently make or continue, or cause to be made or continued, any loud, unnecessary, or unusual noise which disturbs the peace and quiet enjoyment of any neighborhood or which causes any discomfort or annoyance to any reasonable person of normal sensitivity residing in the area.

The factors which shall be considered in determining whether a violation of the provisions of this section exists shall include, but not be limited to, the following:

- 1. The sound level of the objectionable noise;
- 2. The sound level of the ambient noise;
- 3. The proximity of the noise to residential sleeping facilities;
- 4. The nature and zoning of the area within which the noise emanates;
- 5. The number of persons affected by the noise source;
- 6. The time of day or night the noise occurs;
- 7. The duration of the noise and its tonal, informational or musical content;
- 8. Whether the noise is continuous, recurrent, or intermittent;
- 9. Whether the noise is produced by a commercial or noncommercial activity.

- B. **Noise Measurement Procedure**

- 1. **Receipt of Complaint.** Upon receipt of a complaint from a citizen, the NCO shall, equipped with the appropriate sound level measurement equipment, investigate the complaint. The investigation shall consist of a measurement of the offending noise and the gathering of data to adequately define the noise problem and shall include the following:
  - a. Type of noise source;

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- b. Location of noise source relative to complainant's property;
  - c. Time period during which noise source is considered by complainant to be intrusive;
  - d. Total duration of noise produced by noise source;
  - e. Date and time of noise measurement survey.

**2. Noise Measurement Procedure**

- a. Utilizing the "A" weighting scale of the sound level meter and the "slow" meter response (use "fast" response for impulsive type sounds), the noise level shall be measured at a position or positions at any point on the receiver's property.
- b. In general, the microphone shall be located four to five feet above the ground; ten feet or more from the nearest reflective surface where possible. However, in those cases where another elevation is deemed appropriate, the latter shall be utilized. If the noise complaint is related to interior noise levels, interior noise measurements shall be made within the affected residential unit. The measurements shall be made at a point at least four feet from the wall, ceiling, or floor nearest the noise source, with windows in the normal seasonal configuration. Calibration of the measurement equipment, utilizing an acoustic calibration, shall be performed immediately prior to recording any noise data.

### **9.73.050 External and Internal Noise Standards**

**A. External Noise Standards**

**1. Maximum Permissible Sound Levels by Receiving Land Use**

- a. The noise standards for the various categories of land use identified by the Noise Control Officer as presented in Table 9.73.050-A shall, unless otherwise specifically indicated, apply to all such property within a designated zone.
- b. No person shall produce or cause to be produced any sound at any location within the incorporated Town or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, either incorporated or unincorporated, to exceed:
  - 1) The noise standard for that land use as specified in Table 9.73.050-A for a cumulative period of more than thirty (30) minutes in any hour; or
  - 2) The noise standard plus five (5) dBA for a cumulative period of more than fifteen (15) minutes in any hour; or
  - 3) The noise standard plus ten (10) dBA for a cumulative period of more than five (5) minutes in any hour; or
  - 4) The noise standard plus fifteen (15) dBA for a cumulative period of more than one (1) minute in any hour; or
  - 5) The noise standard plus twenty (20) dBA or the maximum measured ambient level, for any period of time.
- c. If the measured ambient level differs from that permissible within any of the first four noise limit categories above, the allowable noise exposure standard shall be adjusted in five (5) dBA increments in each category as appropriate to encompass or reflect said ambient noise level.

In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

- d. If the measurement location is on a boundary between two different zones, the noise level limit applicable to the lower noise zone plus five (5) dBA shall apply.
  - e. If possible, the ambient noise shall be measured at the same location along the property line utilized in paragraph 9.73.050.A.1.b of this Chapter with the alleged offending noise source inoperative. If, for any reason, the alleged offending noise source cannot be shut down, the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance such that the noise from the source is at least ten (10) dBA below the ambient in order that only the ambient level be measured. If the difference between the ambient and the noise source is five (5) to ten (10) dBA, then the level of the ambient itself can be reasonably determined by subtracting a one decibel correction to account for the contribution of the source.
2. **Correction for Character of Sound.** In the event the alleged offensive noise, as judged by the NCO, contains a steady, audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying informational content, the standard limits set forth in Table 9.73.050-A shall be reduced by five (5) dBA.

**Table 9.73.050-A Exterior Noise Limits**

EXTERIOR NOISE LIMITS (Levels Not To Be Exceeded More Than 30 Minutes In Any Hour)		
Receiving Land Use Category	Time Period	Noise Level (dBA)
Single Family Residential	10 p.m. - 7 a.m.	40
	7 a.m. - 10 p.m.	50
Multiple Dwelling Residential, Public Space	10 p.m. - 7 a.m.	45
	7 a.m. - 10 p.m.	50
Limited Commercial & Office	10 p.m. - 7 a.m.	55
	7 a.m. - 10 p.m.	60
General Commercial	10 p.m. - 7 a.m.	60
	7 a.m. - 10 p.m.	65
Light Industrial	Any Time	70
Heavy Industrial	Any Time	75

**B. Interior Noise Standards**

**1. Maximum Permissible Dwelling Interior Sound Levels**

- a. The interior noise standards for multi-family residential dwellings as presented in Table 9.73.050-B shall apply, unless otherwise specifically indicated, within all such dwellings with windows in their normal seasonal configuration.

**Table 9.73.050-B Interior Noise Limits**

INTERIOR NOISE LIMITS			
Noise Zone	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)

All	Multi-Family	10 p.m. - 7 a.m.	35
	Residential	7 a.m. - 10 p.m.	45

- b. No person shall operate or cause to be operated within a dwelling unit any source of sound or allow the creation of any noise which causes the noise level, when measured inside a neighboring receiving dwelling unit, to exceed:
    - 1) The noise standard as specified in Table 9.73.050-B for a cumulative period of more than five (5) minutes in any hour; or
    - 2) The noise standard plus five (5) dBA for a cumulative period of more than one (1) minute in any hour; or
    - 3) The noise standard plus ten (10) dBA or the maximum measured ambient, for any period of time.
  - c. If the measured ambient level differs from that permissible within any of the noise limit categories above, the allowable noise exposure standard shall be adjusted in five (5) dBA increments in each category as appropriate to reflect said ambient noise level.
2. **Correction for Character of Sound.** In the event the alleged offensive noise, as judged by the NCO, contains a steady, audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying informational content, the standard limits set forth in Table 9.73.050-B shall be reduced by five (5) dBA.

### 9.73.060 Prohibited Noise and Vibration

No person shall unnecessarily make, continue, or cause to be made or continued, any noise disturbance. The following acts, and the causing or permitting thereof, are declared to be in violation of this ordinance:

- A. Operating, playing or permitting the operation or playing of any radio, television, phonograph, drum, musical instrument, or similar device which produces or reproduces sound:
  - 1. Between the hours of 10 p.m. and 7 a.m. in such a manner as to create a noise disturbance across a residential or commercial real property line or at any time to violate the provisions of Section 9.73.050.A.1., except for cases in which an exception has been issued by the Town.
  - 2. In such a manner as to exceed the levels set forth for public space in Table 9.73.050-A, measured at a distance of at least fifty (50) feet from such device operating on a public right-of-way or public space.
- B. Using or operating for any purpose any loudspeaker, loudspeaker system, or similar device between the hours of 10 p.m. and 7 a.m., such that the sound therefrom creates a noise disturbance across a residential real property line, or at any time violates the provisions of Section 9.73.050.A.1., except for any noncommercial public speaking, public assembly or other activity for which an exception has been issued by the Town.
- C. Offering for sale, selling anything, or advertising by shouting or outcry within any residential or commercial area or noise sensitive zone of the Town except by variance issued by the Town. The provisions of this Section shall not be construed to prohibit the selling by outcry of merchandise, food, and beverages at licensed sporting events, parades, fairs, circuses, or other similar licensed public entertainment events.
- D. Owning, possessing or harboring any animal or bird which frequently or for long duration, howls, barks, meows, squawks, or makes other sounds which create a noise disturbance across a residential or commercial real property line or within a noise sensitive zone. This provision shall not apply to public zoos.

E. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of 10 p.m. and 7 a.m. in such a manner as to cause a noise disturbance across a residential real property line or at any time to violate the provisions of 9.73.050.A.1.

F. **Construction/Demolition**

1. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7 p.m. and 7 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the Town.
2. **Noise Restrictions at Affected Properties.** Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed those listed in the following schedule:

**Table 9.73.060-A Maximum Noise Levels**

<b>AT RESIDENTIAL PROPERTIES</b>			
<b>Mobile Equipment:</b> Maximum noise levels for nonscheduled intermittent, short-term operation (less than 10 days) of mobile equipment:			
	<b>TYPE I AREAS SINGLE-FAMILY RESIDENTIAL</b>	<b>TYPE II AREAS MULTI-FAMILY RESIDENTIAL</b>	<b>TYPE III AREAS SEMI- RESIDENTIAL/ COMMERCIAL</b>
Daily, except Sundays and Legal Holidays, 7 a.m. to 7 p.m.	75 dBA	80 dBA	85 dBA
Daily, 7 p.m. to 7 a.m. and all day Sunday and Legal Holidays	60 dBA	65 dBA	70 dBA
<b>Stationary Equipment:</b> Maximum noise levels for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:			
	<b>TYPE I AREAS SINGLE FAMILY RESIDENTIAL</b>	<b>TYPE II AREAS MULTI-FAMILY RESIDENTIAL</b>	<b>TYPE III AREAS SEMI- RESIDENTIAL/ COMMERCIAL</b>
Daily, except Sundays and Legal Holidays, 7 a.m. to 7. p.m.	60 dBA	65 dBA	70 dBA
Daily, 7 p.m. to 7 a.m. and all day Sunday and Legal Holidays	50 dBA	55 dBA	60 dBA
<b>Mobile Equipment:</b> Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment: Daily, including Sundays and legal holidays, all hours: maximum of 85 dBA.			
<b>Stationary Equipment:</b> Maximum noise levels for repetitively scheduled and relatively long-term operation of stationary equipment: Daily, including Sundays and legal holidays, all hours: maximum of 75 dBA.			

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3. All mobile or stationary internal combustion engine powered equipment or machinery shall be equipped with suitable exhaust and air intake silencers in proper working order.
- G. **Vibration.** Operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty (150) feet (46 meters) from the source if on a public space or public right-of-way.
- H. **Powered Model Vehicles.** Operating or permitting the operation of powered model vehicles:
1. Between the hours of 7 p.m. and 7 a.m. so as to create a noise disturbance across a residential or commercial real property line or at any time to violate the provisions of paragraph 9.73.050.A.1.
  2. In such a manner as to exceed the levels set forth for public space land use in Table 9.73.050-A, measured at a distance not less than 100 feet from any point on the path of a vehicle operating on public space or public right-of-way.
- I. **Stationary Nonemergency Signaling Devices**
1. Sounding or permitting the sounding of any electronically-amplified signal from any stationary bell, chime, siren, whistle, or similar device, intended primarily for nonemergency purposes, from any place for more than 10 seconds in any hourly period. Houses of religious worship shall be exempt from this provision.
  2. Sound sources covered by this provision and not exempted under subsection 1 above may be exempted by an exception issued by the Town.
- J. **Emergency Signaling Devices**
1. The intentional sounding or permitting the sounding outdoors of any fire, burglar, or civil defense alarm, siren, whistle, or similar stationary emergency signaling device, except for emergency purposes or for testing, as provided in subsection 2 below.
  2. **Testing**
    - a. Testing of a stationary emergency signaling device shall not occur before 7 a.m. or after 7 p.m. Any such testing shall use only the minimum cycle test time. In no case shall such test time exceed 60 seconds.
    - b. Testing of the complete emergency signaling system, including the functioning of the signaling device and the personnel response to the signaling device, shall not occur more than once in each calendar month. Such testing shall not occur before 7 a.m. or after 10 p.m. The time limit specified in subsection b.(1) above shall not apply to such complete system testing.
  3. Sounding or permitting the sounding of any exterior burglar or fire alarm or any motor vehicle burglar alarm unless such alarm is terminated within 15 minutes of activation.
- K. **Noise Sensitive Zones**
1. Creating or causing the creation of any sound within any noise sensitive zone, so as to exceed the specified land use noise standards set forth in Section 9.73.050.A.1., provided that conspicuous signs are displayed indicating the zone; or
  2. Creating or causing the creation of any sound within or adjacent to any noise sensitive zone containing a hospital, nursing home, school, court or other designated area, so as to interfere with the functions of such activity or annoy the occupants in the activity, provided that conspicuous signs are displayed indicating the presence of the zone.
- L. **Domestic Power Tools, Machinery**

1. Operating or permitting the operation of any mechanically powered saw, sander, drill, grinder, lawn or garden tool, or similar tool between 10 p.m. and 7 a.m., so as to create a noise disturbance across a residential or commercial real property line.
  2. Any motor, machinery, pump, such as swimming pool equipment, etc., shall be sufficiently enclosed or muffled and maintained so as not to create a noise disturbance in accordance with Section 9.73.050.
- M. **Residential Air-Conditioning or Air-Handling Equipment.** Operating or permitting the operation of any air-conditioning or air-handling equipment in such a manner as to exceed any of the following sound levels:

**Table 9.73.060-B Air Conditioning/Air Handling Equipment**

Measurement Location	Units Installed Before 1-1-80	Units Installed On Or After 1-1-80
Any point on neighboring property line, 5 feet above grade level, no closer than 3 feet from any wall	60 dBA	55 dBA
Center of neighboring patio, 5 feet above grade level, no closer than 3 feet from any wall	55 dBA	50 dBA
Outside the neighboring living area window nearest the equipment location, not more than 3 feet from the window opening, but at least 3 feet from any other surface	55 dBA	50 dBA

- N. **Places of Public Entertainment.** Operating or permitting the operation or playing of any loudspeaker, musical instrument, motorized racing vehicle, or other source of sound in any place of public entertainment that exceeds 95 dBA as read on the "slow" response of a sound level meter at any point normally occupied by a customer, without a conspicuous and legible sign stating: "WARNING! SOUND LEVELS WITHIN MAY CAUSE HEARING IMPAIRMENT!"

### 9.73.070 Motor Vehicles Operating on Public Right-Of-Way

Motor vehicle noise limits on a public rights-of-way are regulated as set forth in the California Motor Vehicle Code, Sections 23130 and 23130.5. Equipment violations which create noise problems are covered under Sections 27150 and 27151. Any peace officer of any jurisdiction in California may enforce these provisions. Therefore, it shall be the policy of the Town to enforce these sections of the California Motor Vehicle Code.

A. **Refuse Collection Vehicles**

1. No person shall collect refuse with a refuse collection vehicle between the hours of 7 p.m. and 7 a.m. within or adjacent to a residential area or noise sensitive zone.
2. No person authorized to engage in waste disposal service or garbage collection shall operate any truck-mounted waste or garbage loading and/or compacting equipment or similar device in any manner so as to create any noise which exceed4ing 80 dBA's. the following levels, measured at a distance of fifty (50) feet from the equipment in an open area.
  - a. New equipment purchased or leased on or after December 24, 1994: 80 dBA.
  - b. New equipment purchased or leased on or after September 24, 1994: 75 dBA.
  - c. Existing equipment, on or after June 24, 1999: 80 dBA.

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- B. **Motor Vehicle Horns.** It is unlawful for any person to sound a vehicular horn except as a warning signal (Motor Vehicle Code, Section 27001).
  - C. **Motorized Recreational Vehicles Operating Off Public Rights-of-Way.** No person shall operate or cause to be operated any motorized recreational vehicle off a public right-of-way in such a manner that the sound levels emitted therefrom violate the provisions of paragraph 9.73.050.A.1 of this Chapter. This Section shall apply to all motorized recreational vehicles whether or not duly licensed and registered, including but not limited to commercial or noncommercial racing vehicles, motorcycles, go carts, amphibious craft, campers, snowmobiles and dune buggies, but not including motorboats.
  - D. **Motorboats.** Operating or permitting the operation of any motorboat in any lake, river, stream, or other waterway in such a manner as to cause a noise disturbance across a residential or commercial real property line or at any time to violate the provisions of paragraph 9.73.050.A.1 of this Chapter.
  - E. **Standing Motor Vehicles.** No person shall operate or permit the operation of any motor vehicle with a gross vehicle weight rating (GVWR) in excess of ten thousand (10,000) pounds, or any auxiliary equipment attached to such a vehicle, for a period longer than fifteen (15) minutes in any hour while the vehicle is stationary, for reasons other than traffic congestion on a public right-of-way or public space within 150 feet of a residential area or designated noise sensitive zone, between the hours of 10 p.m. and 7 a.m.

### 9.73.080 Exemptions

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

- A. The emission of sound for the purpose of alerting persons to the existence of an emergency;
- B. The emission of sound in the performance of emergency work;
- C. Warning devices necessary for the protection of public safety; for example, police, fire and ambulance sirens, and train horns;
- D. Regularly scheduled school bands, school athletic and school entertainment events between the hours of 8:45 a.m. and 10:00 p.m., provided a Special Events permit is obtained for band activities on Town streets;
- E. Regularly scheduled activities conducted on public parks, public playgrounds, and public or private school grounds. However, the use of public address or amplified music systems is not permitted to exceed the exterior noise standard of adjacent property at the property line;
- F. All mechanical devices, apparatus or equipment which are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions;
- G. Mobile noise sources associated with agricultural operations, provided such operations take place on Monday through Friday, excepting legal holidays, between the hours of 7:00 a.m. and 6:00 p.m., or on holidays and weekends between the hours of 9:00 a.m. and 6:00 p.m. All other operations shall comply with this chapter;
- H. Any activity to the extent that regulation thereof has been preempted by State or Federal law.

### 9.73.090 Exceptions

- A. The NCO is authorized to grant exceptions from any provision of this ordinance, subject to limitations as to area, noise levels, time limits, and other terms and conditions as the NCO determines are appropriate to protect the public health, safety, and welfare from the noise emanating therefrom. This Section shall in no way affect the duty to obtain any permit or license required by law for such activities.

- 
- B. Any person seeking an exception to this Section shall file an application with the NCO. The application shall contain information which demonstrates that bringing the source of sound or activity for which the exception is sought into compliance with this ordinance would constitute an unreasonable hardship on the applicant, on the community, or on other persons. The application shall be accompanied by a fee. A separate application shall be filed for each noise source; provided, however, that several mobile sources under common ownership, or several fixed sources on a single property, may be combined into one application. Notice of an application for an exception shall be noticed according to Town Code. Any individual who claims to be adversely affected by allowance of the exception may file a statement with the NCO containing any information to support his claim. If at any time the NCO finds that a sufficient controversy exists regarding an application, such application shall be scheduled for a public hearing by the Planning Commission.
  - C. In determining whether to grant or deny the application, the NCO shall balance the hardship on the applicant, the community, and other persons of not granting the variance against the adverse impact on the health, safety, and welfare of persons affected, and any other adverse impacts of granting the variance. Applicants for exceptions and persons contesting exceptions may be required to submit such information as the NCO may reasonably require. In granting or denying an application, the NCO shall keep on public file a copy of the decision and the reasons for denying or granting the exception.
  - D. Exceptions shall be granted by notice to the applicant containing all necessary conditions, including a time limit on the permitted activity. The exception shall not become effective until all conditions are agreed to by the applicant. Noncompliance with any condition of the exception shall terminate such exception and subject the person holding it to those provisions of this ordinance for which the exception was granted.
  - E. An exception shall expire 365 days from the date on which it was granted. Application for extension of time limits specified in exceptions or for modification of other substantial conditions shall be treated like applications for initial exceptions under subsection B above.

**APPENDIX 5.1:**  
**STUDY AREA PHOTOS**

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**JN:14835**



**14835\_L1\_H 1.North**  
**34, 0' 17.560000", 117, 41' 45.710000"**



**14835\_L1\_H 2.South**  
**34, 0' 17.320000", 117, 41' 45.710000"**



**14835\_L1\_H 3.East**  
**34, 0' 17.320000", 117, 41' 45.710000"**



**14835\_L1\_H 4.West**  
**34, 0' 17.340000", 117, 41' 45.710000"**

**JN:14835**



**14835\_L2\_J 1.North**  
**34, 0' 7.750000", 117, 41' 21.430000"**



**14835\_L2\_J 2.South**  
**34, 0' 7.720000", 117, 41' 21.430000"**



**14835\_L2\_J 3.East**  
**34, 0' 7.720000", 117, 41' 21.370000"**



**14835\_L2\_J 4.West**  
**34, 0' 7.730000", 117, 41' 21.400000"**

**JN:14835**



**14835\_L3\_K 1.North**  
**33, 59' 39.220000", 117, 41' 19.480000"**



**14835\_L3\_K 2.South**  
**33, 59' 39.110000", 117, 41' 19.390000"**



**14835\_L3\_K 3.East**  
**33, 59' 39.110000", 117, 41' 19.370000"**



**14835\_L3\_K 4.West**  
**33, 59' 39.100000", 117, 41' 19.450000"**

**JN:14835**



**14835\_L4\_L 1.North**  
**33, 59' 46.460000", 117, 41' 30.660000"**



**14835\_L4\_L 2.South**  
**33, 59' 46.460000", 117, 41' 30.710000"**



**14835\_L4\_L 3.East**  
**33, 59' 46.460000", 117, 41' 30.710000"**



**14835\_L4\_L 4.West**  
**33, 59' 46.460000", 117, 41' 30.740000"**

**APPENDIX 5.2:**  
**NOISE LEVEL MEASUREMENT WORKSHEETS**

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## 24-Hour Noise Level Measurement Summary

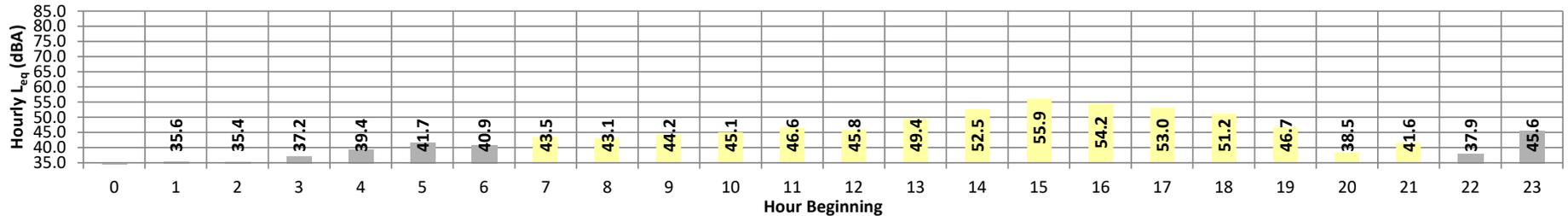
Date: Wednesday, May 22, 2024  
Project: Watson High Desert Logistics

Location: L1 - Located east of the site near the residence at 19019 Llanto  
Source: Rd.

Meter: Piccolo II

JN: 14722  
Analyst: Z. Ibrahim

Hourly  $L_{eq}$  dBA Readings (unadjusted)



Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	34.5	37.1	33.1	36.9	36.7	36.2	35.9	35.0	34.2	33.5	33.3	33.2	34.5	10.0	44.5
	1	35.6	40.9	32.8	40.5	40.0	39.3	38.6	36.0	34.5	33.2	33.1	32.9	35.6	10.0	45.6
	2	35.4	40.6	32.7	40.2	39.8	38.8	38.1	36.1	34.4	33.2	33.0	32.8	35.4	10.0	45.4
	3	37.2	42.2	33.9	41.8	41.4	40.5	39.9	38.0	36.5	34.5	34.2	33.9	37.2	10.0	47.2
	4	39.4	45.7	35.0	45.4	44.9	43.6	42.7	40.2	38.0	35.7	35.4	35.1	39.4	10.0	49.4
	5	41.7	46.1	37.6	45.8	45.4	44.8	44.3	42.5	41.1	39.0	38.6	37.9	41.7	10.0	51.7
Day	6	40.9	45.5	37.4	45.2	44.7	44.1	43.5	41.6	40.2	38.2	37.8	37.5	40.9	10.0	50.9
	7	43.5	50.4	37.1	50.2	50.1	49.1	48.2	43.8	40.6	38.0	37.6	37.3	43.5	0.0	43.5
	8	43.1	50.6	34.9	50.4	50.1	49.0	47.9	43.7	40.1	36.1	35.6	35.1	43.1	0.0	43.1
	9	44.2	53.8	34.1	53.5	53.0	51.0	49.1	43.7	39.4	35.5	35.0	34.4	44.2	0.0	44.2
	10	45.1	53.7	35.0	53.3	53.0	52.0	50.2	45.0	41.2	36.7	35.9	35.2	45.1	0.0	45.1
	11	46.6	56.4	33.2	56.2	55.9	54.3	52.4	45.7	40.1	35.3	34.5	33.6	46.6	0.0	46.6
	12	45.8	54.4	33.4	53.9	53.4	51.7	50.5	46.4	43.1	36.7	35.2	33.8	45.8	0.0	45.8
	13	49.4	56.8	37.6	56.2	55.8	54.5	53.9	50.9	46.8	40.9	39.8	38.1	49.4	0.0	49.4
	14	52.5	62.4	40.1	61.8	61.1	58.6	56.6	52.7	49.3	43.2	41.7	40.5	52.5	0.0	52.5
	15	55.9	67.2	42.4	66.3	65.0	62.9	61.0	54.8	51.3	45.9	44.5	42.9	55.9	0.0	55.9
	16	54.2	64.0	42.8	63.3	62.3	59.9	58.0	54.7	51.9	46.3	44.8	43.2	54.2	0.0	54.2
	17	53.0	61.2	42.1	60.6	60.0	58.5	57.3	53.7	50.8	45.4	44.1	42.6	53.0	0.0	53.0
	18	51.2	59.0	40.9	58.2	57.6	56.2	55.3	52.2	49.0	43.9	42.8	41.4	51.2	0.0	51.2
	19	46.7	54.5	37.3	53.0	53.0	51.5	50.5	47.9	44.9	39.5	38.7	37.7	46.7	5.0	51.7
	20	38.5	44.2	34.7	43.6	43.1	42.2	41.6	39.3	37.3	35.4	35.1	34.8	38.5	5.0	43.5
21	41.6	48.0	35.9	47.3	46.8	46.0	45.3	42.7	39.8	36.9	36.5	36.1	41.6	5.0	46.6	
Night	22	37.9	44.2	34.6	43.6	43.1	41.6	40.7	38.4	36.8	35.2	35.0	34.7	37.9	10.0	47.9
Night	23	45.6	53.1	36.2	52.9	52.6	52.0	51.4	46.6	40.3	37.3	36.8	36.4	45.6	10.0	55.6
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL		
Day	Min	38.5	44.2	33.2	43.6	43.1	42.2	41.6	39.3	37.3	35.3	34.5	33.6	50.3	50.0	40.2
	Max	55.9	67.2	42.8	66.3	65.0	62.9	61.0	54.8	51.9	46.3	44.8	43.2			
Energy Average		50.0	Average:		55.2	54.7	53.2	51.9	47.8	44.4	39.7	38.8	37.8			
Night	Min	34.5	37.1	32.7	36.9	36.7	36.2	35.9	35.0	34.2	33.2	33.0	32.8			
	Max	45.6	53.1	37.6	52.9	52.6	52.0	51.4	46.6	41.1	39.0	38.6	37.9			
Energy Average		40.2	Average:		43.6	43.2	42.3	41.7	39.4	37.3	35.5	35.2	34.9			

## 24-Hour Noise Level Measurement Summary

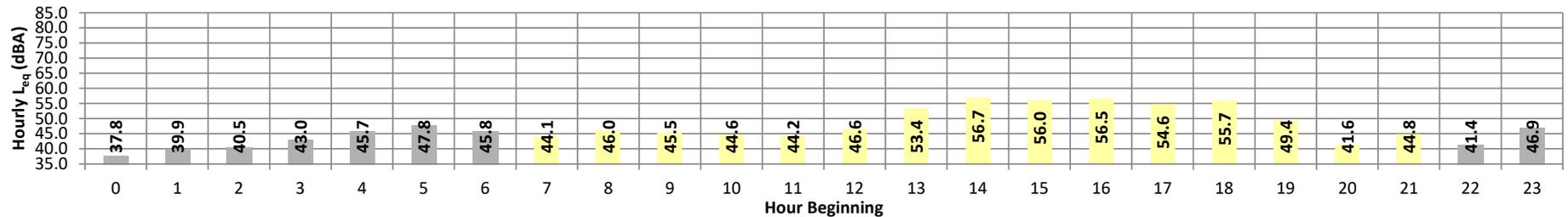
Date: Wednesday, May 22, 2024  
Project: Watson High Desert Logistics

Location: L2 - Located east of the site near the residence at 18809  
Source: Central Rd.

Meter: Piccolo II

JN: 14722  
Analyst: Z. Ibrahim

Hourly  $L_{eq}$  dBA Readings (unadjusted)



Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	37.8	44.7	33.7	44.3	43.7	42.6	41.6	38.0	35.9	34.2	34.0	33.8	37.8	10.0	47.8
	1	39.9	48.3	33.0	47.9	47.3	46.1	44.7	40.8	35.4	33.4	33.3	33.1	39.9	10.0	49.9
	2	40.5	49.0	33.3	48.5	47.9	46.5	45.2	40.7	37.3	34.2	33.9	33.4	40.5	10.0	50.5
	3	43.0	50.6	35.0	50.3	49.8	48.6	47.6	44.0	40.4	36.0	35.5	35.1	43.0	10.0	53.0
	4	45.7	52.3	37.6	52.0	51.6	50.7	50.0	47.1	43.4	39.1	38.4	37.8	45.7	10.0	55.7
	5	47.8	54.8	39.4	54.5	54.2	53.3	52.4	49.0	45.2	40.8	40.1	39.6	47.8	10.0	57.8
Day	6	45.8	52.3	38.9	52.0	51.7	50.8	50.1	46.7	43.9	40.1	39.5	39.0	45.8	10.0	55.8
	7	44.1	49.6	38.5	49.4	49.1	48.2	47.8	45.3	42.4	39.4	39.0	38.7	44.1	0.0	44.1
	8	46.0	55.4	36.1	55.1	54.8	53.7	52.2	44.3	40.9	37.4	36.8	36.3	46.0	0.0	46.0
	9	45.5	54.6	35.2	54.4	54.1	52.7	51.2	45.0	41.0	36.6	36.0	35.4	45.5	0.0	45.5
	10	44.6	51.1	35.5	50.8	50.4	49.7	49.2	46.4	41.6	37.3	36.6	35.8	44.6	0.0	44.6
	11	44.2	51.8	34.5	51.5	51.1	50.0	49.1	45.4	40.9	36.6	35.9	34.8	44.2	0.0	44.2
	12	46.6	53.9	35.4	53.4	53.0	51.9	51.2	48.1	44.0	38.3	37.3	36.0	46.6	0.0	46.6
	13	53.4	62.2	39.7	61.4	60.8	59.1	57.9	54.4	50.5	42.7	41.6	40.1	53.4	0.0	53.4
	14	56.7	65.7	42.6	64.9	64.1	62.5	61.3	57.7	54.0	46.3	44.6	43.0	56.7	0.0	56.7
	15	56.0	65.2	43.8	64.4	63.6	61.9	60.7	56.7	52.9	47.0	45.6	44.2	56.0	0.0	56.0
	16	56.5	65.2	44.8	64.5	63.7	62.1	61.1	57.4	53.7	47.8	46.4	45.2	56.5	0.0	56.5
	17	54.6	63.8	43.5	62.8	61.8	60.0	58.9	55.4	52.1	46.5	45.4	43.9	54.6	0.0	54.6
	18	55.7	64.5	43.6	63.7	63.0	61.5	60.3	56.5	53.1	46.8	45.6	44.1	55.7	0.0	55.7
	19	49.4	58.7	38.5	57.8	57.0	55.3	54.0	50.0	46.4	40.7	39.7	38.8	49.4	5.0	54.4
	20	41.6	48.9	35.0	48.3	47.7	46.2	45.5	42.6	39.7	36.3	35.7	35.1	41.6	5.0	46.6
	21	44.8	52.7	37.7	52.1	51.3	49.7	48.9	45.7	42.5	39.1	38.5	37.9	44.8	5.0	49.8
Night	22	41.4	51.7	34.9	50.8	49.9	47.2	44.9	41.2	38.5	35.7	35.4	35.0	41.4	10.0	51.4
	23	46.9	54.7	37.4	54.2	53.9	53.1	52.3	46.9	43.0	39.0	38.4	37.6	46.9	10.0	56.9
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL		
Day	Min	41.6	48.9	34.5	48.3	47.7	46.2	45.5	42.6	39.7	36.3	35.7	34.8	53.4	52.3	44.4
	Max	56.7	65.7	44.8	64.9	64.1	62.5	61.3	57.7	54.0	47.8	46.4	45.2			
Energy Average		52.3	Average:		57.0	56.4	55.0	54.0	50.1	46.4	41.3	40.3	39.3			
Night	Min	37.8	44.7	33.0	44.3	43.7	42.6	41.6	38.0	35.4	33.4	33.3	33.1			
	Max	47.8	54.8	39.4	54.5	54.2	53.3	52.4	49.0	45.2	40.8	40.1	39.6			
Energy Average		44.4	Average:		50.5	50.0	48.8	47.7	43.8	40.4	37.0	36.5	36.0			

### 24-Hour Noise Level Measurement Summary

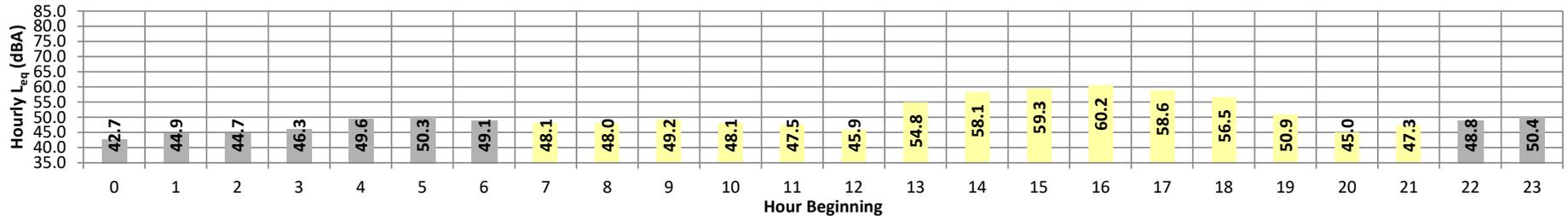
Date: Wednesday, May 22, 2024  
Project: Watson High Desert Logistics

Location: L3 - Located east of the site near the residence at 18611  
Source: Pauhaska Rd.

Meter: Piccolo II

JN: 14722  
Analyst: Z. Ibrahim

Hourly  $L_{eq}$  dBA Readings (unadjusted)



Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	42.7	46.0	41.4	45.7	45.5	45.1	44.7	43.1	41.9	41.4	41.4	41.3	42.7	10.0	52.7
	1	44.9	51.2	41.2	50.8	50.3	49.9	49.5	45.1	42.1	41.3	41.2	41.1	44.9	10.0	54.9
	2	44.7	51.7	41.2	51.4	50.8	49.4	47.9	45.1	42.9	41.5	41.4	41.2	44.7	10.0	54.7
	3	46.3	51.6	41.7	51.3	51.0	50.2	49.7	47.6	46.6	42.1	41.9	41.7	46.3	10.0	56.3
	4	49.6	56.7	43.6	56.2	55.6	54.2	53.4	50.5	47.9	44.5	44.1	43.7	49.6	10.0	59.6
	5	50.3	56.1	44.4	55.9	55.6	54.7	54.0	51.5	48.7	45.4	44.9	44.5	50.3	10.0	60.3
	6	49.1	54.4	43.8	54.1	53.8	53.1	52.6	50.3	47.7	44.6	44.2	43.8	49.1	10.0	59.1
Day	7	48.1	54.9	43.1	54.8	54.6	53.8	52.8	48.5	45.3	43.5	43.3	43.1	48.1	0.0	48.1
	8	48.0	55.8	42.3	55.6	55.3	54.0	53.0	47.8	45.1	42.6	42.4	42.2	48.0	0.0	48.0
	9	49.2	58.0	41.7	57.5	57.1	56.0	54.5	49.2	44.7	42.2	42.0	41.7	49.2	0.0	49.2
	10	48.1	55.0	42.0	54.6	54.1	53.2	52.2	49.1	46.2	42.7	42.4	42.1	48.1	0.0	48.1
	11	47.5	56.3	41.1	55.7	55.2	53.5	52.0	47.7	44.2	41.6	41.3	41.1	47.5	0.0	47.5
	12	45.9	53.4	41.2	52.8	52.2	50.7	49.7	46.4	43.8	41.7	41.5	41.2	45.9	0.0	45.9
	13	54.8	62.5	44.1	61.9	61.4	60.4	59.4	56.5	51.1	46.1	45.3	44.3	54.8	0.0	54.8
	14	58.1	65.9	47.7	65.3	64.7	63.5	62.5	59.1	55.9	50.4	49.3	48.2	58.1	0.0	58.1
	15	59.3	66.9	49.2	66.4	65.9	64.5	63.6	60.2	57.3	52.1	51.0	49.7	59.3	0.0	59.3
	16	60.2	67.9	50.0	67.3	66.6	65.2	64.3	61.3	58.4	53.1	52.0	50.4	60.2	0.0	60.2
	17	58.6	66.0	49.0	65.4	64.8	63.6	62.7	59.7	56.8	51.6	50.6	49.4	58.6	0.0	58.6
	18	56.5	64.2	46.3	63.5	63.0	61.6	60.7	57.6	54.3	49.0	47.9	46.7	56.5	0.0	56.5
	19	50.9	57.9	43.6	57.2	56.5	55.4	54.6	51.9	49.3	45.3	44.6	43.7	50.9	5.0	55.9
	20	45.0	50.6	41.8	50.2	49.8	48.6	47.9	45.7	43.8	42.2	42.0	41.8	45.0	5.0	50.0
	21	47.3	53.3	43.0	52.7	52.3	51.4	50.8	47.9	46.0	43.7	43.4	43.1	47.3	5.0	52.3
Night	22	48.8	61.5	41.7	60.3	59.6	57.0	50.2	45.1	43.4	42.0	41.8	41.7	48.8	10.0	58.8
Night	23	50.4	57.2	43.1	56.9	56.6	56.1	55.3	52.0	46.5	43.9	43.5	43.2	50.4	10.0	60.4
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL		
Day	Min	45.0	50.6	41.1	50.2	49.8	48.6	47.9	45.7	43.8	41.6	41.3	41.1	56.6	54.9	48.1
	Max	60.2	67.9	50.0	67.3	66.6	65.2	64.3	61.3	58.4	53.1	52.0	50.4			
Energy Average		54.9	Average:		58.7	58.2	57.0	56.0	52.6	49.5	45.9	45.3	44.6			
Night	Min	42.7	46.0	41.2	45.7	45.5	45.1	44.7	43.1	41.9	41.3	41.2	41.1			
	Max	50.4	61.5	44.4	60.3	59.6	57.0	55.3	52.0	48.7	45.4	44.9	44.5			
Energy Average		48.1	Average:		53.6	53.2	52.2	50.8	47.8	45.1	43.0	42.7	42.5			

### 24-Hour Noise Level Measurement Summary

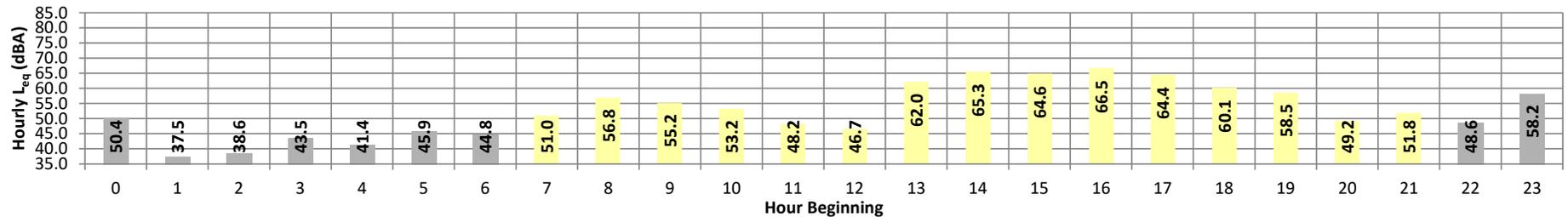
Date: Wednesday, May 22, 2024  
Project: Watson High Desert Logistics

Location: L4 - Located south of the site near the residence at 18142  
Source: Navajo Rd.

Meter: Piccolo II

JN: 14722  
Analyst: Z. Ibrahim

Hourly  $L_{eq}$  dBA Readings (unadjusted)



Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	50.4	63.2	36.9	62.4	61.5	60.0	55.4	43.0	39.8	37.6	37.3	37.0	50.4	10.0	60.4
	1	37.5	40.1	36.3	39.7	39.4	38.8	38.5	37.7	37.3	36.7	36.5	36.4	37.5	10.0	47.5
	2	38.6	43.7	36.7	43.1	42.5	41.6	40.6	39.0	37.7	37.1	37.0	36.8	38.6	10.0	48.6
	3	43.5	49.6	38.9	48.8	48.3	47.2	46.4	45.4	42.0	39.4	39.3	39.0	43.5	10.0	53.5
	4	41.4	45.3	39.9	44.6	44.0	43.1	42.6	41.7	41.2	40.3	40.1	40.0	41.4	10.0	51.4
	5	45.9	52.9	41.4	52.5	52.1	50.6	49.5	45.9	44.5	42.4	42.1	41.6	45.9	10.0	55.9
Day	6	44.8	48.8	41.5	48.3	47.9	47.3	47.0	45.8	44.5	42.2	41.9	41.6	44.8	10.0	54.8
	7	51.0	59.3	44.1	58.7	58.0	56.4	55.6	51.7	47.8	44.7	44.5	44.2	51.0	0.0	51.0
	8	56.8	67.3	40.5	66.9	66.4	64.7	63.0	54.6	47.5	41.9	41.3	40.7	56.8	0.0	56.8
	9	55.2	65.4	41.0	64.8	64.2	62.9	61.3	53.9	48.6	42.7	41.9	41.3	55.2	0.0	55.2
	10	53.2	63.1	38.4	62.4	62.0	61.0	60.3	51.4	44.4	40.1	39.5	38.6	53.2	0.0	53.2
	11	48.2	58.4	35.7	57.6	57.2	55.5	54.1	47.5	41.4	37.2	36.6	36.0	48.2	0.0	48.2
	12	46.7	58.2	33.8	57.7	56.8	53.9	52.1	45.8	38.1	34.9	34.5	34.0	46.7	0.0	46.7
	13	62.0	69.5	49.7	68.9	68.4	67.0	66.2	63.2	59.8	53.9	52.2	50.3	62.0	0.0	62.0
	14	65.3	72.4	53.7	71.8	71.2	70.0	69.2	66.5	63.8	57.5	56.1	54.3	65.3	0.0	65.3
	15	64.6	72.5	51.6	71.9	71.3	70.1	69.2	65.6	62.2	55.7	54.3	52.2	64.6	0.0	64.6
	16	66.5	74.0	54.3	73.5	73.0	71.7	70.8	67.6	64.5	58.6	57.1	55.1	66.5	0.0	66.5
	17	64.4	74.6	50.3	73.9	73.0	70.4	69.1	64.5	60.7	54.0	52.5	50.8	64.4	0.0	64.4
	18	60.1	69.3	46.1	68.7	68.0	66.5	65.3	60.7	56.3	49.2	48.1	46.7	60.1	0.0	60.1
	19	58.5	68.6	44.8	68.3	67.6	65.6	63.4	57.7	54.1	48.2	46.9	45.4	58.5	5.0	63.5
	20	49.2	58.1	38.8	57.6	56.8	55.3	54.1	49.4	45.9	40.9	40.0	39.1	49.2	5.0	54.2
	21	51.8	59.4	41.8	59.0	58.4	57.5	56.7	52.8	48.7	43.6	42.8	42.0	51.8	5.0	56.8
Night	22	48.6	56.7	38.7	56.3	55.9	54.6	53.7	48.9	45.3	40.9	40.0	38.9	48.6	10.0	58.6
	23	58.2	63.8	50.4	63.4	62.8	62.2	61.7	59.4	57.1	53.1	52.0	50.8	58.2	10.0	68.2
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL		
Day	Min	46.7	58.1	33.8	57.6	56.8	53.9	52.1	45.8	38.1	34.9	34.5	34.0	61.0	60.9	50.3
	Max	66.5	74.6	54.3	73.9	73.0	71.7	70.8	67.6	64.5	58.6	57.1	55.1			
Energy Average		60.9	Average:		65.4	64.8	63.2	62.0	56.9	52.3	46.9	45.9	44.7			
Night	Min	37.5	40.1	36.3	39.7	39.4	38.8	38.5	37.7	37.3	36.7	36.5	36.4			
	Max	58.2	63.8	50.4	63.4	62.8	62.2	61.7	59.4	57.1	53.1	52.0	50.8			
Energy Average		50.3	Average:		51.0	50.5	49.5	48.4	45.2	43.3	41.1	40.7	40.2			

## 24-Hour Noise Level Measurement Summary

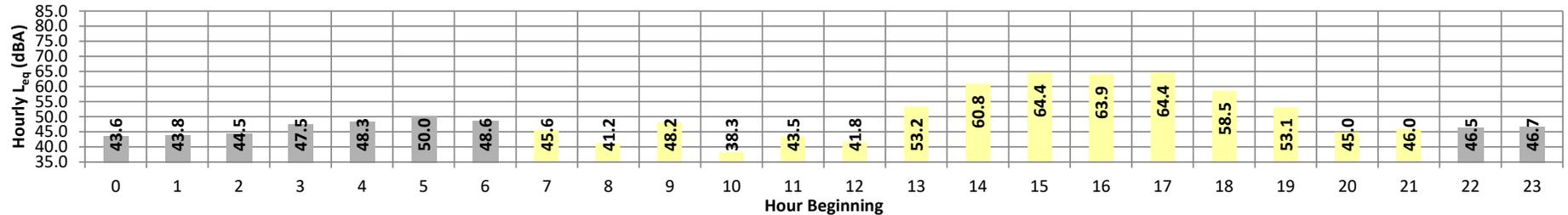
Date: Wednesday, May 22, 2024  
Project: Watson High Desert Logistics

Location: L5 - Located northwest of the site near the residence at 19493  
Source: Dachshund Av.

Meter: Piccolo II

JN: 14722  
Analyst: Z. Ibrahim

Hourly  $L_{eq}$  dBA Readings (unadjusted)



Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	43.6	46.5	41.9	46.1	45.7	45.1	44.9	44.0	43.3	42.4	42.2	42.0	43.6	10.0	53.6
	1	43.8	47.7	42.0	47.3	46.9	46.1	45.6	44.3	43.3	42.4	42.2	42.0	43.8	10.0	53.8
	2	44.5	47.8	42.2	47.4	47.1	46.5	46.2	45.1	44.1	42.8	42.6	42.4	44.5	10.0	54.5
	3	47.5	53.6	44.5	52.8	52.4	51.5	50.3	47.8	46.5	45.0	44.8	44.5	47.5	10.0	57.5
	4	48.3	52.4	45.6	52.2	52.0	51.3	50.6	48.7	47.7	46.3	46.0	45.7	48.3	10.0	58.3
	5	50.0	57.6	46.0	57.3	56.9	54.8	53.4	49.9	48.5	46.7	46.4	46.1	50.0	10.0	60.0
Day	6	48.6	52.1	46.5	51.6	51.3	50.6	50.2	49.2	48.3	47.0	46.8	46.6	48.6	10.0	58.6
	7	45.6	48.6	43.8	48.4	48.1	47.5	47.2	46.1	45.3	44.3	44.1	43.9	45.6	0.0	45.6
	8	41.2	47.0	38.1	46.5	46.0	44.9	44.0	41.7	40.4	38.8	38.5	38.2	41.2	0.0	41.2
	9	48.2	56.1	36.7	55.6	55.3	54.1	53.3	49.9	43.8	37.6	37.3	36.8	48.2	0.0	48.2
	10	38.3	43.2	35.0	42.8	42.3	41.2	40.7	39.1	37.6	35.8	35.5	35.2	38.3	0.0	38.3
	11	43.5	53.8	36.3	52.7	51.2	48.4	47.1	43.8	40.9	37.5	37.0	36.5	43.5	0.0	43.5
	12	41.8	49.4	35.3	48.7	48.2	46.8	45.8	42.7	39.8	36.3	35.9	35.5	41.8	0.0	41.8
	13	53.2	60.4	40.9	60.0	59.5	58.4	57.7	54.8	50.9	44.2	42.9	41.4	53.2	0.0	53.2
	14	60.8	68.4	49.5	68.0	67.4	65.9	65.0	61.8	59.0	53.2	51.8	50.0	60.8	0.0	60.8
	15	64.4	71.3	54.3	70.8	70.3	69.1	68.3	65.5	62.7	57.7	56.6	54.9	64.4	0.0	64.4
	16	63.9	70.6	53.5	70.1	69.7	68.8	68.0	65.1	62.3	57.2	55.9	54.2	63.9	0.0	63.9
	17	64.4	71.2	54.4	70.7	70.2	69.0	68.2	65.5	62.9	57.7	56.5	55.0	64.4	0.0	64.4
	18	58.5	65.5	48.3	65.1	64.6	63.4	62.6	59.9	56.7	51.6	50.4	48.8	58.5	0.0	58.5
	19	53.1	60.0	43.8	59.5	59.0	58.0	57.1	54.2	51.4	46.4	45.5	44.3	53.1	5.0	58.1
	20	45.0	54.5	39.1	54.2	53.8	51.4	48.6	44.1	42.2	39.8	39.5	39.2	45.0	5.0	50.0
	21	46.0	52.3	40.5	51.8	51.3	50.2	49.4	46.9	44.5	41.7	41.3	40.7	46.0	5.0	51.0
Night	22	46.5	53.3	39.7	53.1	52.0	51.0	50.6	48.0	44.3	40.7	40.3	39.9	46.5	10.0	56.5
	23	46.7	55.3	40.8	54.5	53.9	51.9	50.8	46.9	44.4	41.8	41.4	40.9	46.7	10.0	56.7
<b>Timeframe</b>	<b>Hour</b>	<b><math>L_{eq}</math></b>	<b><math>L_{max}</math></b>	<b><math>L_{min}</math></b>	<b>L1%</b>	<b>L2%</b>	<b>L5%</b>	<b>L8%</b>	<b>L25%</b>	<b>L50%</b>	<b>L90%</b>	<b>L95%</b>	<b>L99%</b>	<b>24-Hour CNEL</b>		
Day	Min	38.3	43.2	35.0	42.8	42.3	41.2	40.7	39.1	37.6	35.8	35.5	35.2	58.2	58.5	47.1
	Max	64.4	71.3	54.4	70.8	70.3	69.1	68.3	65.5	62.9	57.7	56.6	55.0			
Energy Average		58.5	Average:		57.7	57.1	55.8	54.9	52.1	49.4	45.3	44.6	43.6			
Night	Min	43.6	46.5	39.7	46.1	45.7	45.1	44.9	44.0	43.3	40.7	40.3	39.9	58.2	58.5	47.1
	Max	50.0	57.6	46.5	57.3	56.9	54.8	53.4	49.9	48.5	47.0	46.8	46.6			
Energy Average		47.1	Average:		51.4	50.9	49.9	49.2	47.1	45.6	43.9	43.6	43.4			

### 24-Hour Noise Level Measurement Summary

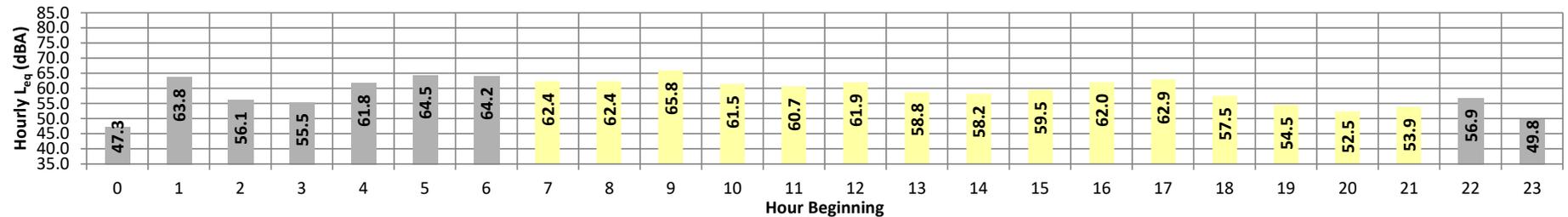
Date: Wednesday, May 22, 2024  
Project: Watson High Desert Logistics

Location: L6 - Located north of the site near the residence at 20025 Flint  
Source: Rd.

Meter: Piccolo II

JN: 14722  
Analyst: Z. Ibrahim

Hourly  $L_{eq}$  dBA Readings (unadjusted)



Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	47.3	61.0	36.3	60.5	59.3	54.9	50.7	39.9	37.8	36.9	36.7	36.4	47.3	10.0	57.3
	1	63.8	71.6	39.4	71.2	70.8	69.8	68.8	65.4	59.6	47.7	43.8	40.4	63.8	10.0	73.8
	2	56.1	70.1	36.9	69.6	68.6	63.9	59.9	47.8	40.2	37.5	37.3	37.0	56.1	10.0	66.1
	3	55.5	69.3	36.7	68.8	67.6	63.5	59.7	46.1	40.0	37.4	37.1	36.8	55.5	10.0	65.5
	4	61.8	73.1	39.6	72.7	71.8	69.1	66.9	60.9	54.5	40.7	40.1	39.7	61.8	10.0	71.8
	5	64.5	76.3	42.9	75.9	75.0	72.1	69.6	63.1	52.8	44.3	43.6	43.1	64.5	10.0	74.5
	6	64.2	76.7	42.3	76.2	75.3	72.2	69.9	59.6	51.1	43.5	42.9	42.4	64.2	10.0	74.2
Day	7	62.4	75.0	41.4	74.5	73.8	70.7	67.9	56.4	47.0	42.2	41.9	41.6	62.4	0.0	62.4
	8	62.4	75.5	35.1	75.1	74.3	70.7	67.4	54.5	44.7	36.5	35.8	35.3	62.4	0.0	62.4
	9	65.8	76.6	46.6	76.1	75.4	73.2	71.8	63.8	57.7	52.4	48.9	47.1	65.8	0.0	65.8
	10	61.5	75.0	34.8	74.5	73.5	69.7	66.2	53.0	42.8	36.7	35.9	35.1	61.5	0.0	61.5
	11	60.7	74.5	34.2	73.8	72.8	68.6	65.0	53.0	43.7	36.0	35.2	34.4	60.7	0.0	60.7
	12	61.9	74.1	37.7	73.5	72.5	69.4	66.9	60.4	51.1	40.4	39.4	38.1	61.9	0.0	61.9
	13	58.8	72.0	40.3	71.5	70.4	66.8	63.6	52.8	48.2	42.8	41.9	40.7	58.8	0.0	58.8
	14	58.2	70.0	45.0	69.4	68.3	65.2	62.7	56.4	52.8	47.7	46.7	45.4	58.2	0.0	58.2
	15	59.5	70.6	46.8	70.0	69.1	66.3	64.7	58.3	54.9	49.4	48.3	47.2	59.5	0.0	59.5
	16	62.0	73.4	47.5	72.8	71.9	69.0	66.5	61.2	56.8	50.2	49.1	47.8	62.0	0.0	62.0
	17	62.9	73.1	48.4	72.5	71.6	69.3	67.8	63.7	57.3	51.0	50.0	48.8	62.9	0.0	62.9
	18	57.5	69.9	44.0	69.3	68.3	64.7	61.9	54.7	50.8	46.4	45.5	44.3	57.5	0.0	57.5
	19	54.5	67.1	37.7	66.7	66.0	62.8	59.8	48.5	44.0	39.5	38.8	37.9	54.5	5.0	59.5
	20	52.5	65.8	35.3	65.3	64.3	60.5	56.9	46.0	41.0	36.2	35.7	35.4	52.5	5.0	57.5
	21	53.9	67.0	37.2	66.7	65.9	61.9	58.0	47.6	42.9	38.5	38.0	37.4	53.9	5.0	58.9
Night	22	56.9	64.8	35.9	64.6	64.1	62.4	61.2	58.9	53.5	37.6	36.5	36.1	56.9	10.0	66.9
Night	23	49.8	62.2	37.4	61.7	60.9	57.7	54.5	46.2	42.0	38.4	38.0	37.5	49.8	10.0	59.8
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL		
Day	Min	52.5	65.8	34.2	65.3	64.3	60.5	56.9	46.0	41.0	36.0	35.2	34.4	67.2	60.9	60.8
	Max	65.8	76.6	48.4	76.1	75.4	73.2	71.8	63.8	57.7	52.4	50.0	48.8			
Energy Average		60.9	Average:		71.5	70.5	67.3	64.5	55.3	49.1	43.1	42.1	41.1			
Night	Min	47.3	61.0	35.9	60.5	59.3	54.9	50.7	39.9	37.8	36.9	36.5	36.1			
	Max	64.5	76.7	42.9	76.2	75.3	72.2	69.9	65.4	59.6	47.7	43.8	43.1			
Energy Average		60.8	Average:		69.0	68.2	65.1	62.4	54.2	48.0	40.4	39.6	38.8			

## 24-Hour Noise Level Measurement Summary

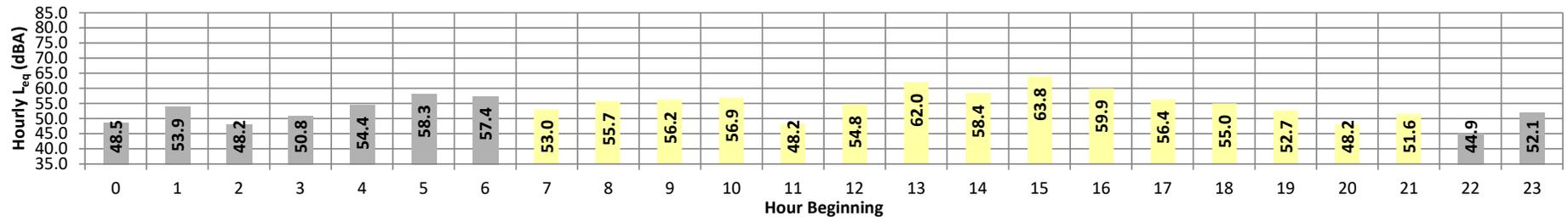
Date: Wednesday, May 22, 2024  
Project: Watson High Desert Logistics

Location: L7 - Located north of the site near the vacant industrial  
Source: building.

Meter: Piccolo II

JN: 14722  
Analyst: Z. Ibrahim

Hourly  $L_{eq}$  dBA Readings (unadjusted)



Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	$L_{eq}$	Adj.	Adj. $L_{eq}$
Night	0	48.5	59.6	36.8	59.5	59.3	56.5	53.4	46.9	40.9	37.6	37.3	37.0	48.5	10.0	58.5
	1	53.9	64.9	36.4	64.4	64.1	62.6	60.5	49.9	43.5	37.4	37.0	36.6	53.9	10.0	63.9
	2	48.2	58.1	36.8	57.7	57.2	55.4	53.9	47.0	42.5	38.1	37.4	36.9	48.2	10.0	58.2
	3	50.8	60.6	39.4	60.2	59.7	57.8	56.0	50.3	46.5	41.1	40.3	39.6	50.8	10.0	60.8
	4	54.4	63.0	43.8	62.7	62.3	60.7	59.6	54.8	50.6	45.7	45.0	44.1	54.4	10.0	64.4
	5	58.3	67.4	44.7	67.1	66.6	65.2	63.9	58.4	52.6	46.9	45.9	44.9	58.3	10.0	68.3
Day	6	57.4	67.1	43.6	66.5	66.1	64.8	64.0	56.4	50.7	45.3	44.6	43.8	57.4	10.0	67.4
	7	53.0	64.6	41.7	64.2	63.6	60.9	57.5	50.5	46.5	42.8	42.4	41.9	53.0	0.0	53.0
	8	55.7	68.0	38.8	67.1	66.2	63.5	61.2	52.1	45.7	40.1	39.6	39.0	55.7	0.0	55.7
	9	56.2	66.8	38.3	66.1	65.4	63.6	62.6	55.4	47.8	40.8	39.7	38.5	56.2	0.0	56.2
	10	56.9	68.9	36.9	68.3	67.8	65.4	62.1	53.7	45.8	38.7	37.9	37.1	56.9	0.0	56.9
	11	48.2	57.9	36.9	57.4	57.0	55.0	53.3	47.8	43.9	38.2	37.6	37.1	48.2	0.0	48.2
	12	54.8	64.8	36.9	64.3	63.6	62.4	61.7	52.3	44.7	38.6	37.9	37.2	54.8	0.0	54.8
	13	62.0	72.8	40.5	72.4	71.6	70.7	69.0	57.1	50.1	43.1	42.0	40.8	62.0	0.0	62.0
	14	58.4	68.2	44.1	67.7	67.2	66.1	64.4	56.8	52.4	47.0	45.7	44.5	58.4	0.0	58.4
	15	63.8	74.9	46.9	74.3	73.5	72.4	70.0	61.2	55.0	49.8	48.7	47.4	63.8	0.0	63.8
	16	59.9	70.6	48.1	69.7	69.0	67.3	64.8	58.9	55.4	50.9	49.8	48.5	59.9	0.0	59.9
	17	56.4	64.8	46.1	64.3	63.8	62.3	61.2	56.7	53.7	48.9	48.0	46.6	56.4	0.0	56.4
	18	55.0	62.6	45.0	62.2	61.8	60.3	59.3	55.8	52.8	47.9	46.8	45.4	55.0	0.0	55.0
	19	52.7	61.4	41.1	60.9	60.3	59.1	58.0	53.2	48.9	43.6	42.5	41.4	52.7	5.0	57.7
	20	48.2	57.8	38.4	57.5	57.0	54.9	52.9	47.8	44.6	39.7	39.1	38.6	48.2	5.0	53.2
	21	51.6	60.9	40.3	60.3	59.7	58.3	57.3	51.8	46.9	42.0	41.4	40.7	51.6	5.0	56.6
Night	22	44.9	53.0	38.5	52.7	52.2	51.1	49.7	44.7	42.4	39.5	39.1	38.6	44.9	10.0	54.9
	23	52.1	61.7	40.7	61.5	61.2	60.5	58.3	49.9	47.4	42.1	41.6	40.9	52.1	10.0	62.1
Timeframe	Hour	$L_{eq}$	$L_{max}$	$L_{min}$	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	24-Hour CNEL		
Day	Min	48.2	57.8	36.9	57.4	57.0	54.9	52.9	47.8	43.9	38.2	37.6	37.1	61.2	57.6	53.8
	Max	63.8	74.9	48.1	74.3	73.5	72.4	70.0	61.2	55.4	50.9	49.8	48.5			
Energy Average		57.6	Average:		65.1	64.5	62.8	61.0	54.1	49.0	43.5	42.6	41.6			
Night	Min	44.9	53.0	36.4	52.7	52.2	51.1	49.7	44.7	40.9	37.4	37.0	36.6			
	Max	58.3	67.4	44.7	67.1	66.6	65.2	64.0	58.4	52.6	46.9	45.9	44.9			
Energy Average		53.8	Average:		61.4	61.0	59.4	57.7	50.9	46.3	41.5	40.9	40.3			

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**APPENDIX 7.1:**  
**OFF-SITE TRAFFIC NOISE LEVEL CALCULATIONS**

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Dale Evans Pkwy. Road Segment: n/o Stoddard Wells Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 7,153 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 740 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 91.65% Medium Trucks: 90.1% 1.4% 8.5% 2.53% Heavy Trucks: 71.7% 1.0% 27.3% 5.81%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.98	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-19.56	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.96	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	64.0	62.1	58.0	55.2	63.3	63.6	
Medium Trucks:	59.2	57.9	45.8	48.8	57.8	57.8	
Heavy Trucks:	67.2	64.8	52.3	61.9	68.7	68.7	
Vehicle Noise:	69.4	67.2	59.2	62.9	70.0	70.1	
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	71	154	331	713			
CNEL:	72	156	336	724			

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Dale Evans Pkwy. Road Segment: n/o Stoddard Wells Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 17,342 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 1,795 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 95.22% Medium Trucks: 90.1% 1.4% 8.5% 2.07% Heavy Trucks: 71.7% 1.0% 27.3% 2.71%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.03	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-16.60	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.42	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	68.0	66.1	62.0	59.2	67.3	67.6	
Medium Trucks:	62.2	60.8	48.8	51.8	60.7	60.8	
Heavy Trucks:	67.8	65.4	52.8	62.4	69.2	69.2	
Vehicle Noise:	71.5	69.4	62.7	64.4	71.7	71.9	
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	92	199	429	925			
CNEL:	95	204	439	945			

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Dale Evans Pkwy. Road Segment: n/o Stoddard Wells Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 52,600 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 5,444 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 95.22% Medium Trucks: 90.1% 1.4% 8.5% 2.07% Heavy Trucks: 71.7% 1.0% 27.3% 2.71%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.85	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-11.78	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.60	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	72.8	70.9	66.8	64.0	72.1	72.4	
Medium Trucks:	67.0	65.6	53.6	56.6	65.5	65.6	
Heavy Trucks:	72.6	70.2	57.7	67.3	74.0	74.0	
Vehicle Noise:	76.3	74.2	67.5	69.2	76.5	76.7	
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	194	417	899	1,937			
CNEL:	198	427	919	1,981			

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Dale Evans Pkwy. Road Segment: s/o Stoddard Wells Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 7,124 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 737 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 91.63% Medium Trucks: 90.1% 1.4% 8.5% 2.54% Heavy Trucks: 71.7% 1.0% 27.3% 5.83%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.00	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-19.57	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.96	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	64.0	62.1	58.0	55.2	63.3	63.6	
Medium Trucks:	59.2	57.8	45.8	48.8	57.7	57.8	
Heavy Trucks:	67.2	64.8	52.3	61.9	68.7	68.7	
Vehicle Noise:	69.4	67.2	59.2	62.9	70.0	70.1	
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dBA	60 dBA	55 dBA		
Ldn:	71	154	331	713			
CNEL:	72	156	336	723			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Dale Evans Pkwy. Road Segment: s/o Stoddard Wells Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 17,311 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 1,792 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 95.21% Medium Trucks: 90.1% 1.4% 8.5% 2.07% Heavy Trucks: 71.7% 1.0% 27.3% 2.72%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.02	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-16.60	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.42	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	68.0	66.1	62.0	59.2	67.3	67.6	
Medium Trucks:	62.2	60.8	48.8	51.8	60.7	60.8	
Heavy Trucks:	67.8	65.4	52.8	62.4	69.2	69.2	
Vehicle Noise:	71.5	69.4	62.7	64.4	71.7	71.9	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			92	199	429	924	
CNEL:			94	204	438	945	

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Dale Evans Pkwy. Road Segment: s/o Stoddard Wells Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 50,600 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 5,237 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 95.21% Medium Trucks: 90.1% 1.4% 8.5% 2.07% Heavy Trucks: 71.7% 1.0% 27.3% 2.72%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.68	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-11.94	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.76	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	72.7	70.8	66.6	63.9	71.9	72.3	
Medium Trucks:	66.9	65.5	53.4	56.4	65.4	65.4	
Heavy Trucks:	72.4	70.0	57.5	67.1	73.9	73.9	
Vehicle Noise:	76.1	74.1	67.3	69.0	76.4	76.5	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			189	407	877	1,889	
CNEL:			193	416	896	1,931	

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Dale Evans Pkwy. Road Segment: n/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 6,640 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 687 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 91.19% Medium Trucks: 90.1% 1.4% 8.5% 2.60% Heavy Trucks: 71.7% 1.0% 27.3% 6.22%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.32	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-19.78	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.99	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	63.7	61.8	57.6	54.8	62.9	63.3	
Medium Trucks:	59.0	57.6	45.6	48.6	57.5	57.6	
Heavy Trucks:	67.2	64.8	52.3	61.9	68.6	68.7	
Vehicle Noise:	69.2	67.1	59.0	62.8	69.9	70.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			70	151	326	702	
CNEL:			71	153	330	712	

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Dale Evans Pkwy. Road Segment: n/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 9,250 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 957 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 93.03% Medium Trucks: 90.1% 1.4% 8.5% 2.36% Heavy Trucks: 71.7% 1.0% 27.3% 4.62%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.80	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-18.76	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.84	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	65.2	63.3	59.2	56.4	64.5	64.8	
Medium Trucks:	60.0	58.7	46.6	49.6	58.5	58.6	
Heavy Trucks:	67.3	65.0	52.4	62.0	68.8	68.8	
Vehicle Noise:	69.9	67.8	60.2	63.3	70.4	70.5	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			76	164	352	759	
CNEL:			77	166	358	772	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Dale Evans Pkwy. Road Segment: n/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 50,600 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 5,237 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 93.03% Medium Trucks: 90.1% 1.4% 8.5% 2.36% Heavy Trucks: 71.7% 1.0% 27.3% 4.62%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.58	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-11.38	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-8.46	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	72.6	70.7	66.5	63.8	71.8	72.2	
Medium Trucks:	67.4	66.0	54.0	57.0	65.9	66.0	
Heavy Trucks:	74.7	72.3	59.8	69.4	76.2	76.2	
Vehicle Noise:	77.3	75.2	67.6	70.6	77.8	77.9	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			236	508	1,094	2,357	
CNEL:			240	516	1,112	2,397	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Dale Evans Pkwy. Road Segment: n/o Corwin Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 4,352 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 450 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 95.43% Medium Trucks: 90.1% 1.4% 8.5% 2.08% Heavy Trucks: 71.7% 1.0% 27.3% 2.48%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.96	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-22.57	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-21.81	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	62.0	60.1	56.0	53.2	61.3	61.6	
Medium Trucks:	56.2	54.8	42.8	45.8	54.7	54.8	
Heavy Trucks:	61.4	59.0	46.5	56.0	62.8	62.8	
Vehicle Noise:	65.3	63.3	56.6	58.1	65.5	65.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			36	77	165	356	
CNEL:			36	79	169	365	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Dale Evans Pkwy. Road Segment: n/o Corwin Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 10,706 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 1,108 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.79% Medium Trucks: 90.1% 1.4% 8.5% 1.88% Heavy Trucks: 71.7% 1.0% 27.3% 1.33%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-1.99	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-19.10	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-20.61	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	66.0	64.1	60.0	57.2	65.3	65.6	
Medium Trucks:	59.7	58.3	46.3	49.3	58.2	58.3	
Heavy Trucks:	62.6	60.2	47.6	57.2	64.0	64.0	
Vehicle Noise:	68.3	66.3	60.4	60.6	68.2	68.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			54	115	248	535	
CNEL:			55	119	256	551	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Dale Evans Pkwy. Road Segment: n/o Corwin Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 63,900 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 6,614 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.79% Medium Trucks: 90.1% 1.4% 8.5% 1.88% Heavy Trucks: 71.7% 1.0% 27.3% 1.33%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	5.77	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-11.34	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-12.85	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	73.8	71.9	67.7	64.9	73.0	73.4	
Medium Trucks:	67.5	66.1	54.0	57.0	66.0	66.0	
Heavy Trucks:	70.3	67.9	55.4	65.0	71.8	71.8	
Vehicle Noise:	76.0	74.1	68.1	68.3	75.9	76.1	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			176	379	817	1,761	
CNEL:			181	391	842	1,813	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Dale Evans Pkwy. Road Segment: s/o Corwin Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 3,746 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 388 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.39% Medium Trucks: 90.1% 1.4% 8.5% 1.94% Heavy Trucks: 71.7% 1.0% 27.3% 1.67%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.57	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-23.53	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-24.19	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	61.4	59.5	55.4	52.6	60.7	61.0	
Medium Trucks:	55.3	53.9	41.8	44.9	53.8	53.9	
Heavy Trucks:	59.0	56.6	44.1	53.7	60.4	60.5	
Vehicle Noise:	64.0	62.0	55.9	56.5	64.0	64.2	
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dBA	60 dBA	55 dBA		
	Ldn:	28	61	131	283		
	CNEL:	29	63	135	291		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Dale Evans Pkwy. Road Segment: s/o Corwin Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 7,105 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 735 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 97.02% Medium Trucks: 90.1% 1.4% 8.5% 1.85% Heavy Trucks: 71.7% 1.0% 27.3% 1.13%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.76	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-20.96	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-23.08	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	64.2	62.3	58.2	55.4	63.5	63.8	
Medium Trucks:	57.8	56.5	44.4	47.4	56.4	56.4	
Heavy Trucks:	60.1	57.7	45.2	54.8	61.5	61.6	
Vehicle Noise:	66.3	64.4	58.6	58.5	66.1	66.3	
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dBA	60 dBA	55 dBA		
	Ldn:	39	84	182	392		
	CNEL:	40	87	187	404		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Dale Evans Pkwy. Road Segment: s/o Corwin Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 45,400 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 4,699 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 84 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 71.0 feet Centerline Dist. to Observer: 71.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 89.02% Medium Trucks: 90.1% 1.4% 8.5% 1.85% Heavy Trucks: 71.7% 1.0% 27.3% 1.13%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 57.463 Medium Trucks: 57.309 Heavy Trucks: 57.324			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.29	-1.01	-1.20	-4.72	0.000	0.000
Medium Trucks:	81.00	-12.91	-0.99	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.03	-0.99	-1.20	-5.27	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	72.3	70.4	66.3	63.5	71.6	71.9	
Medium Trucks:	65.9	64.5	52.5	55.5	64.4	64.5	
Heavy Trucks:	68.2	65.8	53.2	62.8	69.6	69.6	
Vehicle Noise:	74.4	72.4	66.6	66.5	74.2	74.4	
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dBA	60 dBA	55 dBA		
	Ldn:	135	290	626	1,348		
	CNEL:	139	300	646	1,391		

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Central Rd. Road Segment: s/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 4,393 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 455 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 89.58% Medium Trucks: 90.1% 1.4% 8.5% 2.96% Heavy Trucks: 71.7% 1.0% 27.3% 7.46%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.20	-0.33	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-21.01	-0.30	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-16.99	-0.31	-1.20	-5.31	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	62.5	60.6	56.5	53.7	61.8	62.1	
Medium Trucks:	58.5	57.1	45.1	48.1	57.0	57.1	
Heavy Trucks:	66.9	64.5	52.0	61.5	68.3	68.3	
Vehicle Noise:	68.7	66.5	58.0	62.4	69.4	69.5	
Centerline Distance to Noise Contour (in feet)							
		70 dBA	65 dBA	60 dBA	55 dBA		
	Ldn:	59	126	272	587		
	CNEL:	59	128	276	594		

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYCP Road Name: Central Rd. Road Segment: s/o Johnson Rd.					Project Name: Watson High Desert Logist Job Number: 14722				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>					
Average Daily Traffic (Adt): 13,187 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 1,365 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
<b>Site Data</b>				<b>Vehicle Mix</b>					
				Autos: 80.0% 7.7% 12.2% 95.01% Medium Trucks: 90.1% 1.4% 8.5% 2.15% Heavy Trucks: 71.7% 1.0% 27.3% 2.85%					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				<b>Noise Source Elevations (in feet)</b> Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				<b>Lane Equivalent Distance (in feet)</b>					
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-1.17	-0.33	-1.20	-4.70	0.000	0.000		
Medium Trucks:	81.00	-17.62	-0.30	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-16.40	-0.31	-1.20	-5.31	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.5	65.6	61.5	58.7	66.8	67.1			
Medium Trucks:	61.9	60.5	48.4	51.4	60.4	60.5			
Heavy Trucks:	67.5	65.1	52.5	62.1	68.9	68.9			
Vehicle Noise:	71.1	69.0	62.2	64.0	71.3	71.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			79	169	365	786			
CNEL:			80	173	373	804			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: GP Road Name: Central Rd. Road Segment: s/o Johnson Rd.					Project Name: Watson High Desert Logist Job Number: 14722				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>					
Average Daily Traffic (Adt): 23,500 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 2,432 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
<b>Site Data</b>				<b>Vehicle Mix</b>					
				Autos: 80.0% 7.7% 12.2% 95.01% Medium Trucks: 90.1% 1.4% 8.5% 2.15% Heavy Trucks: 71.7% 1.0% 27.3% 2.85%					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				<b>Noise Source Elevations (in feet)</b> Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				<b>Lane Equivalent Distance (in feet)</b>					
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	1.34	-0.33	-1.20	-4.70	0.000	0.000		
Medium Trucks:	81.00	-15.12	-0.30	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-13.89	-0.31	-1.20	-5.31	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	70.0	68.1	64.0	61.2	69.3	69.6			
Medium Trucks:	64.4	63.0	50.9	54.0	62.9	63.0			
Heavy Trucks:	70.0	67.6	55.1	64.6	71.4	71.4			
Vehicle Noise:	73.6	71.5	64.7	66.5	73.9	74.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			116	249	537	1,156			
CNEL:			118	254	548	1,181			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EP Road Name: Central Rd. Road Segment: n/o Waalew Rd.					Project Name: Watson High Desert Logist Job Number: 14722				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>					
Average Daily Traffic (Adt): 2,796 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 289 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
<b>Site Data</b>				<b>Vehicle Mix</b>					
				Autos: 80.0% 7.7% 12.2% 94.12% Medium Trucks: 90.1% 1.4% 8.5% 2.31% Heavy Trucks: 71.7% 1.0% 27.3% 3.57%					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				<b>Noise Source Elevations (in feet)</b> Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				<b>Lane Equivalent Distance (in feet)</b>					
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-7.94	-0.33	-1.20	-4.70	0.000	0.000		
Medium Trucks:	81.00	-24.05	-0.30	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-22.15	-0.31	-1.20	-5.31	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	60.7	58.8	54.7	51.9	60.0	60.3			
Medium Trucks:	55.4	54.1	42.0	45.0	54.0	54.0			
Heavy Trucks:	61.7	59.3	46.8	56.4	63.2	63.2			
Vehicle Noise:	64.8	62.7	55.6	57.9	65.2	65.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			31	66	142	307			
CNEL:			31	67	145	313			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: OYCP Road Name: Central Rd. Road Segment: n/o Waalew Rd.					Project Name: Watson High Desert Logist Job Number: 14722				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>					
Average Daily Traffic (Adt): 7,662 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 793 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
<b>Site Data</b>				<b>Vehicle Mix</b>					
				Autos: 80.0% 7.7% 12.2% 96.40% Medium Trucks: 90.1% 1.4% 8.5% 1.95% Heavy Trucks: 71.7% 1.0% 27.3% 1.65%					
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				<b>Noise Source Elevations (in feet)</b> Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0					
				<b>Lane Equivalent Distance (in feet)</b>					
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-3.46	-0.33	-1.20	-4.70	0.000	0.000		
Medium Trucks:	81.00	-20.40	-0.30	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-21.14	-0.31	-1.20	-5.31	0.000	0.000		
Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	65.2	63.3	59.2	56.4	64.5	64.8			
Medium Trucks:	59.1	57.7	45.7	48.7	57.6	57.7			
Heavy Trucks:	62.7	60.4	47.8	57.4	64.2	64.2			
Vehicle Noise:	67.8	65.8	59.7	60.2	67.8	68.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			46	98	211	455			
CNEL:			47	101	217	468			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Central Rd. Road Segment: n/o Waalew Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 38,100 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 3,943 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.40% Medium Trucks: 90.1% 1.4% 8.5% 1.95% Heavy Trucks: 71.7% 1.0% 27.3% 1.65%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.50	-0.33	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-13.44	-0.30	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-14.17	-0.31	-1.20	-5.31	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	72.2	70.3	66.2	63.4	71.5	71.8	
Medium Trucks:	66.1	64.7	52.6	55.6	64.6	64.6	
Heavy Trucks:	69.7	67.3	54.8	64.4	71.1	71.2	
Vehicle Noise:	74.8	72.8	66.6	67.2	74.7	74.9	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			133	286	615	1,326	
CNEL:			136	294	632	1,362	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Central Rd. Road Segment: s/o Waalew Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 3,234 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 335 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 94.44% Medium Trucks: 90.1% 1.4% 8.5% 2.36% Heavy Trucks: 71.7% 1.0% 27.3% 3.20%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-7.30	-0.33	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-23.33	-0.30	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-22.00	-0.31	-1.20	-5.31	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	61.4	59.5	55.3	52.6	60.7	61.0	
Medium Trucks:	56.2	54.8	42.7	45.7	54.7	54.7	
Heavy Trucks:	61.9	59.5	47.0	56.5	63.3	63.3	
Vehicle Noise:	65.2	63.2	56.1	58.3	65.6	65.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			32	70	150	324	
CNEL:			33	71	153	330	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Central Rd. Road Segment: s/o Waalew Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 6,766 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 700 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.15% Medium Trucks: 90.1% 1.4% 8.5% 2.04% Heavy Trucks: 71.7% 1.0% 27.3% 1.81%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-4.01	-0.33	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-20.75	-0.30	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-21.26	-0.31	-1.20	-5.31	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	64.7	62.8	58.6	55.8	63.9	64.3	
Medium Trucks:	58.7	57.4	45.3	48.3	57.2	57.3	
Heavy Trucks:	62.6	60.2	47.7	57.3	64.0	64.1	
Vehicle Noise:	67.4	65.4	59.2	59.9	67.4	67.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			43	93	200	432	
CNEL:			44	95	206	443	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Central Rd. Road Segment: s/o Waalew Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 47,500 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 4,916 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.15% Medium Trucks: 90.1% 1.4% 8.5% 2.04% Heavy Trucks: 71.7% 1.0% 27.3% 1.81%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	4.45	-0.33	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-12.29	-0.30	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-12.80	-0.31	-1.20	-5.31	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	73.1	71.2	67.1	64.3	72.4	72.7	
Medium Trucks:	67.2	65.8	53.8	56.8	65.7	65.8	
Heavy Trucks:	71.1	68.7	56.2	65.7	72.5	72.5	
Vehicle Noise:	75.9	73.9	67.6	68.4	75.9	76.1	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			158	341	735	1,583	
CNEL:			163	350	754	1,625	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Navajo Rd. Road Segment: s/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 4,048 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 419 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 86.44% Medium Trucks: 90.1% 1.4% 8.5% 3.42% Heavy Trucks: 71.7% 1.0% 27.3% 10.14%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.71	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	81.00	-20.73	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-16.01	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.6	61.7	57.5	54.8	62.8	63.2
Medium Trucks:	60.4	59.0	47.0	50.0	58.9	59.0
Heavy Trucks:	69.5	67.1	54.6	64.1	70.9	70.9
Vehicle Noise:	70.9	68.7	59.6	64.8	71.8	71.8

Centerline Distance to Noise Contour (in feet)					
	70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:	58	124	268	577	
CNEL:	58	126	271	583	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Navajo Rd. Road Segment: s/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 5,260 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 544 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 89.03% Medium Trucks: 90.1% 1.4% 8.5% 3.04% Heavy Trucks: 71.7% 1.0% 27.3% 7.93%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.44	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	81.00	-20.11	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-15.94	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.8	62.9	58.8	56.0	64.1	64.4
Medium Trucks:	61.0	59.6	47.6	50.6	59.5	59.6
Heavy Trucks:	69.5	67.2	54.6	64.2	71.0	71.0
Vehicle Noise:	71.2	69.1	60.4	65.0	72.0	72.1

Centerline Distance to Noise Contour (in feet)					
	70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:	60	130	279	601	
CNEL:	61	131	283	609	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Navajo Rd. Road Segment: s/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 14,700 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 1,521 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 36 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 89.03% Medium Trucks: 90.1% 1.4% 8.5% 3.04% Heavy Trucks: 71.7% 1.0% 27.3% 7.93%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 40.460 Medium Trucks: 40.241 Heavy Trucks: 40.262			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.98	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	81.00	-15.65	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-11.48	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.3	67.4	63.3	60.5	68.6	68.9
Medium Trucks:	65.5	64.1	52.0	55.0	64.0	64.0
Heavy Trucks:	74.0	71.6	59.1	68.7	75.4	75.5
Vehicle Noise:	75.7	73.5	64.9	69.4	76.5	76.6

Centerline Distance to Noise Contour (in feet)					
	70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:	119	257	554	1,193	
CNEL:	121	260	561	1,208	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Stoddard Wells Rd. Road Segment: s/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 5,394 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 558 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 91.03% Medium Trucks: 90.1% 1.4% 8.5% 2.89% Heavy Trucks: 71.7% 1.0% 27.3% 6.08%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.23	-0.33	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-20.22	-0.30	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-16.99	-0.31	-1.20	-5.31	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.4	61.5	57.4	54.6	62.7	63.0
Medium Trucks:	59.3	57.9	45.8	48.9	57.8	57.9
Heavy Trucks:	66.9	64.5	52.0	61.5	68.3	68.3
Vehicle Noise:	69.0	66.9	58.7	62.5	69.7	69.8

Centerline Distance to Noise Contour (in feet)					
	70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:	61	131	282	608	
CNEL:	62	133	286	617	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Stoddard Wells Rd. Road Segment: s/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 25,118 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 2,600 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.28% Medium Trucks: 90.1% 1.4% 8.5% 1.99% Heavy Trucks: 71.7% 1.0% 27.3% 1.73%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.69	-0.33	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-15.16	-0.30	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-15.77	-0.31	-1.20	-5.31	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	70.4	68.5	64.3	61.5	69.6	70.0	
Medium Trucks:	64.3	62.9	50.9	53.9	62.8	62.9	
Heavy Trucks:	68.1	65.7	53.2	62.8	69.5	69.6	
Vehicle Noise:	73.0	71.0	64.8	65.5	73.0	73.2	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			102	220	473	1,020	
CNEL:			105	226	486	1,047	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Stoddard Wells Rd. Road Segment: s/o Johnson Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 54,300 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 5,620 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 76 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 64.0 feet Centerline Dist. to Observer: 64.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.28% Medium Trucks: 90.1% 1.4% 8.5% 1.99% Heavy Trucks: 71.7% 1.0% 27.3% 1.73%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 51.740 Medium Trucks: 51.568 Heavy Trucks: 51.585			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	5.04	-0.33	-1.20	-4.70	0.000	0.000
Medium Trucks:	81.00	-11.81	-0.30	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-12.42	-0.31	-1.20	-5.31	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	73.7	71.8	67.7	64.9	73.0	73.3	
Medium Trucks:	67.7	66.3	54.3	57.3	66.2	66.3	
Heavy Trucks:	71.5	69.1	56.5	66.1	72.9	72.9	
Vehicle Noise:	76.4	74.4	68.2	68.9	76.4	76.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			170	367	791	1,705	
CNEL:			175	377	813	1,751	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Johnson Rd. Road Segment: w/o Dale Evans Pkwy.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 5,094 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 527 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 90.64% Medium Trucks: 90.1% 1.4% 8.5% 2.96% Heavy Trucks: 71.7% 1.0% 27.3% 6.41%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.50	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-20.37	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.01	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	64.0	62.1	58.0	55.2	63.3	63.6	
Medium Trucks:	60.0	58.6	46.6	49.6	58.5	58.6	
Heavy Trucks:	67.7	65.3	52.8	62.4	69.2	69.2	
Vehicle Noise:	69.8	67.6	59.4	63.3	70.5	70.5	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			56	120	259	558	
CNEL:			57	122	262	565	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Johnson Rd. Road Segment: w/o Dale Evans Pkwy.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 24,800 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 2,567 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.26% Medium Trucks: 90.1% 1.4% 8.5% 1.99% Heavy Trucks: 71.7% 1.0% 27.3% 1.74%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.63	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-15.21	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-15.78	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	71.2	69.3	65.1	62.4	70.4	70.8	
Medium Trucks:	65.2	63.8	51.7	54.7	63.7	63.7	
Heavy Trucks:	69.0	66.6	54.0	63.6	70.4	70.4	
Vehicle Noise:	73.8	71.9	65.6	66.4	73.9	74.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			94	203	437	941	
CNEL:			97	208	449	966	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Johnson Rd. Road Segment: w/o Dale Evans Pkwy.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 25,500 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 2,639 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 96.26% Medium Trucks: 90.1% 1.4% 8.5% 1.99% Heavy Trucks: 71.7% 1.0% 27.3% 1.74%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.75	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-15.09	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-15.66	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	71.3	69.4	65.3	62.5	70.6	70.9	
Medium Trucks:	65.3	63.9	51.8	54.9	63.8	63.9	
Heavy Trucks:	69.1	66.7	54.2	63.7	70.5	70.5	
Vehicle Noise:	74.0	72.0	65.8	66.5	74.0	74.2	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			96	207	445	959	
CNEL:			98	212	457	985	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Johnson Rd. Road Segment: e/o Dale Evans Pkwy.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 10,374 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 1,074 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 89.10% Medium Trucks: 90.1% 1.4% 8.5% 3.03% Heavy Trucks: 71.7% 1.0% 27.3% 7.87%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-2.49	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-17.18	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-13.03	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	67.1	65.1	61.0	58.2	66.3	66.7	
Medium Trucks:	63.2	61.8	49.8	52.8	61.7	61.8	
Heavy Trucks:	71.7	69.3	56.8	66.4	73.1	73.2	
Vehicle Noise:	73.4	71.3	62.6	67.2	74.2	74.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			99	214	461	994	
CNEL:			101	217	467	1,006	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Johnson Rd. Road Segment: e/o Dale Evans Pkwy.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 34,015 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 3,521 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 95.09% Medium Trucks: 90.1% 1.4% 8.5% 2.14% Heavy Trucks: 71.7% 1.0% 27.3% 2.78%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.95	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-13.53	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-12.40	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	72.5	70.6	66.5	63.7	71.8	72.1	
Medium Trucks:	66.8	65.4	53.4	56.4	65.3	65.4	
Heavy Trucks:	72.3	70.0	57.4	67.0	73.8	73.8	
Vehicle Noise:	76.0	74.0	67.2	68.9	76.3	76.4	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			136	293	631	1,360	
CNEL:			139	299	645	1,390	

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Johnson Rd. Road Segment: e/o Dale Evans Pkwy.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 40,500 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 4,192 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 95.09% Medium Trucks: 90.1% 1.4% 8.5% 2.14% Heavy Trucks: 71.7% 1.0% 27.3% 2.78%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.71	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-12.78	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-11.64	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	73.3	71.3	67.2	64.4	72.5	72.9	
Medium Trucks:	67.6	66.2	54.2	57.2	66.1	66.2	
Heavy Trucks:	73.1	70.7	58.2	67.8	74.5	74.6	
Vehicle Noise:	76.8	74.7	67.9	69.7	77.0	77.2	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			153	329	709	1,528	
CNEL:			156	336	725	1,562	

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Johnson Rd. Road Segment: w/o Central Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 3,717 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 385 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 88.10% Medium Trucks: 90.1% 1.4% 8.5% 3.18% Heavy Trucks: 71.7% 1.0% 27.3% 8.72%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-6.99	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-21.42	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-17.04	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	62.5	60.6	56.5	53.7	61.8	62.2	
Medium Trucks:	58.9	57.6	45.5	48.5	57.4	57.5	
Heavy Trucks:	67.7	65.3	52.8	62.4	69.1	69.2	
Vehicle Noise:	69.3	67.1	58.3	63.1	70.1	70.2	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			53	114	246	529	
CNEL:			54	115	249	536	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Johnson Rd. Road Segment: w/o Central Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 16,706 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 1,729 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 95.58% Medium Trucks: 90.1% 1.4% 8.5% 2.06% Heavy Trucks: 71.7% 1.0% 27.3% 2.36%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.11	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-16.77	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-16.19	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	69.4	67.5	63.4	60.6	68.7	69.0	
Medium Trucks:	63.6	62.2	50.2	53.2	62.1	62.2	
Heavy Trucks:	68.6	66.2	53.6	63.2	70.0	70.0	
Vehicle Noise:	72.6	70.6	64.0	65.4	72.8	72.9	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			80	172	370	798	
CNEL:			82	176	379	817	

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Johnson Rd. Road Segment: w/o Central Rd.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 40,500 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 4,192 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 95.58% Medium Trucks: 90.1% 1.4% 8.5% 2.06% Heavy Trucks: 71.7% 1.0% 27.3% 2.36%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.73	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-12.93	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-12.34	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	73.3	71.4	67.2	64.5	72.5	72.9	
Medium Trucks:	67.4	66.0	54.0	57.0	65.9	66.0	
Heavy Trucks:	72.4	70.0	57.5	67.1	73.8	73.9	
Vehicle Noise:	76.5	74.4	67.9	69.2	76.6	76.8	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			144	310	668	1,440	
CNEL:			147	318	684	1,474	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EP Road Name: Corwin Rd. Road Segment: w/o Dale Evans Pkwy.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
<b>Highway Data</b>				<b>Site Conditions (Hard = 10, Soft = 15)</b>			
Average Daily Traffic (Adt): 1,253 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 130 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
<b>Site Data</b>				<b>Vehicle Mix</b>			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 80.0% 7.7% 12.2% 93.75% Medium Trucks: 90.1% 1.4% 8.5% 2.33% Heavy Trucks: 71.7% 1.0% 27.3% 3.91%			
				<b>Noise Source Elevations (in feet)</b>			
				Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0			
				<b>Lane Equivalent Distance (in feet)</b>			
				Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-11.45	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-27.49	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-25.24	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	58.1	56.2	52.1	49.3	57.4	57.7	
Medium Trucks:	52.9	51.5	39.4	42.5	51.4	51.5	
Heavy Trucks:	59.5	57.1	44.6	54.2	60.9	61.0	
Vehicle Noise:	62.4	60.3	53.0	55.6	62.8	63.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			17	37	80	173	
CNEL:			18	38	82	176	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: OYCP Road Name: Corwin Rd. Road Segment: w/o Dale Evans Pkwy.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS				
<b>Highway Data</b>			<b>Site Conditions (Hard = 10, Soft = 15)</b>				
Average Daily Traffic (Adt): 4,288 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 444 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet			Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
<b>Site Data</b>  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees			<b>Vehicle Mix</b>				
			Autos: 80.0% 7.7% 12.2% 96.56% Medium Trucks: 90.1% 1.4% 8.5% 1.92% Heavy Trucks: 71.7% 1.0% 27.3% 1.53%				
			<b>Noise Source Elevations (in feet)</b>				
			Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
			<b>Lane Equivalent Distance (in feet)</b>				
			Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133				
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-5.97	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-23.00	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-23.99	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	63.6	61.7	57.5	54.7	62.8	63.2	
Medium Trucks:	57.4	56.0	43.9	46.9	55.9	55.9	
Heavy Trucks:	60.8	58.4	45.8	55.4	62.2	62.2	
Vehicle Noise:	66.0	64.1	58.0	58.4	66.0	66.2	
Centerline Distance to Noise Contour (in feet)							
	70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:	28	60	130	281			
CNEL:	29	62	134	289			

Monday, December 23, 2024

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: GP Road Name: Corwin Rd. Road Segment: w/o Dale Evans Pkwy.				Project Name: Watson High Desert Logist Job Number: 14722			
SITE SPECIFIC INPUT DATA			NOISE MODEL INPUTS				
<b>Highway Data</b>			<b>Site Conditions (Hard = 10, Soft = 15)</b>				
Average Daily Traffic (Adt): 22,100 vehicles Peak Hour Percentage: 10.35% Peak Hour Volume: 2,287 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 52 feet			Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15				
<b>Site Data</b>  Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 52.0 feet Centerline Dist. to Observer: 52.0 feet 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 Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees			<b>Vehicle Mix</b>				
			Autos: 80.0% 7.7% 12.2% 96.56% Medium Trucks: 90.1% 1.4% 8.5% 1.92% Heavy Trucks: 71.7% 1.0% 27.3% 1.53%				
			<b>Noise Source Elevations (in feet)</b>				
			Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0				
			<b>Lane Equivalent Distance (in feet)</b>				
			Autos: 45.310 Medium Trucks: 45.114 Heavy Trucks: 45.133				
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.15	0.54	-1.20	-4.66	0.000	0.000
Medium Trucks:	81.00	-15.88	0.57	-1.20	-4.87	0.000	0.000
Heavy Trucks:	85.38	-16.87	0.56	-1.20	-5.41	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	70.7	68.8	64.7	61.9	70.0	70.3	
Medium Trucks:	64.5	63.1	51.1	54.1	63.0	63.1	
Heavy Trucks:	67.9	65.5	53.0	62.5	69.3	69.3	
Vehicle Noise:	73.2	71.2	65.1	65.5	73.1	73.3	
Centerline Distance to Noise Contour (in feet)							
	70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:	84	180	388	837			
CNEL:	86	185	400	861			

Monday, December 23, 2024

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**APPENDIX 9.1:**  
**OPERATIONAL NOISE MODEL INPUTS**

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# 14722 - Watson High Desert Logistics

CadnaA Noise Prediction Model: 14722-02.cna

Date: 21.06.24

Analyst: B. Lawson

## Calculation Configuration

Configuration	
Parameter	Value
<b>General</b>	
Max. Error (dB)	0.00
Max. Search Radius #(Unit,LEN)	3048.00
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	
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 Rcvr - 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
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

## Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height (ft)	Coordinates			
			Day (dBA)	Night (dBA)	CNEL (dBA)	Day (dBA)	Night (dBA)	CNEL (dBA)	Type	Auto	Noise Type		X (ft)	Y (ft)	Z (ft)	
RECEIVERS		R1	40.5	40.5	47.2	50.0	40.0	0.0				5.00	a	6812959.77	2040483.75	5.00
RECEIVERS		R2	41.3	41.2	47.9	50.0	40.0	0.0				5.00	a	6811865.57	2038794.86	5.00
RECEIVERS		R3	36.7	36.7	43.4	50.0	40.0	0.0				5.00	a	6811804.90	2035918.89	5.00
RECEIVERS		R4	41.5	41.5	48.2	50.0	40.0	0.0				5.00	a	6805386.76	2034366.80	5.00
RECEIVERS		R5	37.4	37.3	44.0	50.0	40.0	0.0				5.00	a	6803068.90	2043149.98	5.00
RECEIVERS		R6	36.9	36.9	43.6	50.0	40.0	0.0				5.00	a	6808361.18	2046931.21	5.00

## Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height (ft)	Coordinates				
			Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value norm. dB(A)	Day (min)	Special (min)	Night (min)		X (ft)	Y (ft)	Z (ft)		
POINTSOURCE		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6803479.01	2037451.55	45.00
POINTSOURCE		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6803419.80	2037451.55	45.00
POINTSOURCE		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6805260.64	2036992.29	45.00
POINTSOURCE		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6805166.51	2036990.01	45.00
POINTSOURCE		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6810532.46	2041752.50	45.00
POINTSOURCE		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6810532.46	2041808.26	45.00
POINTSOURCE		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6810417.35	2041752.50	45.00
POINTSOURCE		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6810417.35	2041808.26	45.00
POINTSOURCE		AC09	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6808962.32	2041727.32	45.00
POINTSOURCE		AC10	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6808902.96	2041786.68	45.00
POINTSOURCE		AC11	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6808383.18	2041718.33	45.00
POINTSOURCE		AC12	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6808383.18	2041775.89	45.00
POINTSOURCE		AC13	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6808268.07	2041720.13	45.00
POINTSOURCE		AC14	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6808268.07	2041775.89	45.00

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height		Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)		X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)			(ft)	(ft)	(ft)
POINTSOURCE		AC15	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6806259.08	2041684.16	45.00
POINTSOURCE		AC16	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6806255.48	2041743.51	45.00
POINTSOURCE		AC17	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6806147.57	2041682.36	45.00
POINTSOURCE		AC18	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6806145.77	2041743.51	45.00
POINTSOURCE		TRASH01	89.0	89.0	89.0	Lw	89		900.00	0.00	540.00	5.00	a	6806406.56	2041896.39	5.00
POINTSOURCE		TRASH02	89.0	89.0	89.0	Lw	89		900.00	0.00	540.00	5.00	a	6810349.01	2041962.94	5.00
POINTSOURCE		TRASH03	89.0	89.0	89.0	Lw	89		900.00	0.00	540.00	5.00	a	6805101.23	2036788.09	5.00

### Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number	Speed	(ft)		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		dB(A)		(min)	(min)	(min)	Day	Evening	Night	(mph)	
LINESOURCE		TRUCK01	93.2	93.2	93.2	60.1	60.1	60.1	Lw	93.2								8	a
LINESOURCE		TRUCK02	93.2	93.2	93.2	69.1	69.1	69.1	Lw	93.2								8	a
LINESOURCE		TRUCK03	93.2	93.2	93.2	67.6	67.6	67.6	Lw	93.2								8	a
LINESOURCE		TRUCK04	93.2	93.2	93.2	61.4	61.4	61.4	Lw	93.2								8	a
LINESOURCE		TRUCK05	93.2	93.2	93.2	75.7	75.7	75.7	Lw	93.2								8	a
LINESOURCE		TRUCK06	93.2	93.2	93.2	64.2	64.2	64.2	Lw	93.2								8	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	TRUCK01	8.00	a	6806059.93	2041996.56	8.00	0.00
				6806074.40	2040976.04	8.00	0.00
				6806074.52	2040963.96	8.00	0.00
				6806076.60	2040952.06	8.00	0.00
				6806080.59	2040940.66	8.00	0.00
				6806086.37	2040930.05	8.00	0.00
				6806093.80	2040920.53	8.00	0.00
				6806102.68	2040912.33	8.00	0.00
				6806112.77	2040905.69	8.00	0.00
				6808482.30	2040947.26	8.00	0.00
				6808488.79	2040951.48	8.00	0.00
				6808494.47	2040956.73	8.00	0.00
				6808499.18	2040962.86	8.00	0.00
				6808502.79	2040969.70	8.00	0.00
				6808505.20	2040977.05	8.00	0.00
				6808506.33	2040984.70	8.00	0.00
				6808506.16	2040992.43	8.00	0.00
				6808504.69	2041000.02	8.00	0.00
				6808491.90	2041818.65	8.00	0.00
				6808489.98	2041825.78	8.00	0.00
				6808486.88	2041832.48	8.00	0.00
				6808482.69	2041838.55	8.00	0.00
				6808477.53	2041843.83	8.00	0.00
				6808471.55	2041848.15	8.00	0.00
				6808464.92	2041851.40	8.00	0.00
				6808457.83	2041853.47	8.00	0.00
				6808450.50	2041854.31	8.00	0.00
				6808443.13	2041853.89	8.00	0.00
				6808435.94	2041852.23	8.00	0.00
				6806351.00	2041820.25	8.00	0.00
				6806345.56	2041824.89	8.00	0.00
				6806340.89	2041830.31	8.00	0.00
				6806337.10	2041836.39	8.00	0.00
				6806334.29	2041842.97	8.00	0.00
				6806332.51	2041849.90	8.00	0.00
				6806331.82	2041857.02	8.00	0.00
				6806333.34	2042000.75	8.00	0.00
LINESOURCE	TRUCK02	8.00	a	6808499.37	2041340.48	8.00	0.00
				6808631.00	2041342.18	8.00	0.00
				6808637.79	2041345.54	8.00	0.00
				6808643.98	2041349.91	8.00	0.00
				6808649.41	2041355.19	8.00	0.00
				6808653.95	2041361.25	8.00	0.00
				6808657.49	2041367.95	8.00	0.00
				6808659.94	2041375.12	8.00	0.00
				6808661.25	2041382.58	8.00	0.00
				6808661.38	2041390.15	8.00	0.00
				6808654.98	2041735.51	8.00	0.00
				6808677.37	2041889.00	8.00	0.00
				6808669.37	2042036.56	8.00	0.00
LINESOURCE	TRUCK03	8.00	a	6808506.17	2040982.78	8.00	0.00
				6808509.49	2040889.70	8.00	0.00
				6808704.55	2040896.10	8.00	0.00
				6808699.75	2041607.60	8.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
LINESOURCE	TRUCK04	8.00	a	6808662.26	2041785.41	8.00	0.00
				6810895.66	2040982.26	8.00	0.00
				6808896.41	2040948.86	8.00	0.00
				6808888.44	2040949.46	8.00	0.00
				6808880.66	2040951.32	8.00	0.00
				6808873.28	2040954.40	8.00	0.00
				6808866.48	2040958.60	8.00	0.00
				6808860.43	2040963.84	8.00	0.00
				6808855.30	2040969.97	8.00	0.00
				6808851.20	2040976.84	8.00	0.00
				6808848.25	2040984.27	8.00	0.00
				6808846.51	2040992.08	8.00	0.00
				6808846.04	2041000.06	8.00	0.00
				6808846.85	2041008.02	8.00	0.00
				6808835.66	2041853.82	8.00	0.00
				6810877.86	2041898.66	8.00	0.00
LINESOURCE	TRUCK05	8.00	a	6808921.95	2041855.72	8.00	0.00
				6808913.86	2042040.31	8.00	0.00
LINESOURCE	TRUCK06	8.00	a	6803053.47	2036951.29	8.00	0.00
				6803330.98	2036954.33	8.00	0.00
				6803390.95	2036908.03	8.00	0.00
				6805295.56	2036915.62	8.00	0.00
				6805547.58	2036956.61	8.00	0.00
				6805620.21	2036957.38	8.00	0.00

### Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li		Operating Time			Height		
			Day (dBA)	Evening (dBA)	Night (dBA)	Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value dB(A)	norm.	Day (min)	Special (min)	Night (min)	(ft)	
AREASOURCE		CAR01	81.1	81.1	81.1	55.0	55.0	55.0	Lw	81.1					5	a
AREASOURCE		CAR02	81.1	81.1	81.1	55.9	55.9	55.9	Lw	81.1					5	a
AREASOURCE		CAR03	81.1	81.1	81.1	53.1	53.1	53.1	Lw	81.1					5	a
AREASOURCE		CAR04	81.1	81.1	81.1	53.2	53.2	53.2	Lw	81.1					5	a
AREASOURCE		CAR05	81.1	81.1	81.1	53.1	53.1	53.1	Lw	81.1					5	a
AREASOURCE		CAR06	81.1	81.1	81.1	53.0	53.0	53.0	Lw	81.1					5	a
AREASOURCE		CAR07	81.1	81.1	81.1	53.3	53.3	53.3	Lw	81.1					5	a
AREASOURCE		CAR08	81.1	81.1	81.1	53.2	53.2	53.2	Lw	81.1					5	a
AREASOURCE		CAR09	81.1	81.1	81.1	53.3	53.3	53.3	Lw	81.1					5	a
AREASOURCE		CAR10	81.1	81.1	81.1	55.6	55.6	55.6	Lw	81.1					5	a
AREASOURCE		CAR11	81.1	81.1	81.1	56.3	56.3	56.3	Lw	81.1					5	a
AREASOURCE		CAR12	81.1	81.1	81.1	55.6	55.6	55.6	Lw	81.1					5	a
AREASOURCE		CAR13	81.1	81.1	81.1	55.5	55.5	55.5	Lw	81.1					5	a
AREASOURCE		CAR14	81.1	81.1	81.1	52.6	52.6	52.6	Lw	81.1					5	a
AREASOURCE		CAR15	81.1	81.1	81.1	48.8	48.8	48.8	Lw	81.1					5	a
AREASOURCE		CAR16	81.1	81.1	81.1	52.1	52.1	52.1	Lw	81.1					5	a
AREASOURCE		CAR17	81.1	81.1	81.1	52.8	52.8	52.8	Lw	81.1					5	a
AREASOURCE		CAR18	81.1	81.1	81.1	53.0	53.0	53.0	Lw	81.1					5	a
AREASOURCE		CAR19	81.1	81.1	81.1	53.0	53.0	53.0	Lw	81.1					5	a
AREASOURCE		CAR20	81.1	81.1	81.1	52.9	52.9	52.9	Lw	81.1					5	a
AREASOURCE		CAR21	81.1	81.1	81.1	52.9	52.9	52.9	Lw	81.1					5	a
AREASOURCE		CAR22	81.1	81.1	81.1	52.9	52.9	52.9	Lw	81.1					5	a
AREASOURCE		CAR23	81.1	81.1	81.1	52.8	52.8	52.8	Lw	81.1					5	a
AREASOURCE		CAR24	81.1	81.1	81.1	52.9	52.9	52.9	Lw	81.1					5	a
AREASOURCE		CAR25	81.1	81.1	81.1	52.8	52.8	52.8	Lw	81.1					5	a
AREASOURCE		CAR26	81.1	81.1	81.1	50.5	50.5	50.5	Lw	81.1					5	a
AREASOURCE		CAR27	81.1	81.1	81.1	49.0	49.0	49.0	Lw	81.1					5	a
AREASOURCE		CAR28	81.1	81.1	81.1	52.7	52.7	52.7	Lw	81.1					5	a
AREASOURCE		CAR29	81.1	81.1	81.1	52.8	52.8	52.8	Lw	81.1					5	a
AREASOURCE		CAR30	81.1	81.1	81.1	52.9	52.9	52.9	Lw	81.1					5	a
AREASOURCE		CAR31	81.1	81.1	81.1	54.7	54.7	54.7	Lw	81.1					5	a
AREASOURCE		CAR32	81.1	81.1	81.1	54.7	54.7	54.7	Lw	81.1					5	a
AREASOURCE		CAR33	81.1	81.1	81.1	57.7	57.7	57.7	Lw	81.1					5	a
AREASOURCE		CAR34	81.1	81.1	81.1	60.1	60.1	60.1	Lw	81.1					5	a
AREASOURCE		CAR35	81.1	81.1	81.1	55.5	55.5	55.5	Lw	81.1					5	a
AREASOURCE		CAR36	81.1	81.1	81.1	50.6	50.6	50.6	Lw	81.1					5	a
AREASOURCE		CAR37	81.1	81.1	81.1	51.0	51.0	51.0	Lw	81.1					5	a
AREASOURCE		CAR38	81.1	81.1	81.1	62.5	62.5	62.5	Lw	81.1					5	a
AREASOURCE		CAR39	81.1	81.1	81.1	56.0	56.0	56.0	Lw	81.1					5	a
AREASOURCE		CAR40	81.1	81.1	81.1	53.6	53.6	53.6	Lw	81.1					5	a
AREASOURCE		CAR41	81.1	81.1	81.1	53.6	53.6	53.6	Lw	81.1					5	a
AREASOURCE		CAR42	81.1	81.1	81.1	53.5	53.5	53.5	Lw	81.1					5	a
AREASOURCE		CAR43	81.1	81.1	81.1	53.5	53.5	53.5	Lw	81.1					5	a
AREASOURCE		CAR44	81.1	81.1	81.1	53.4	53.4	53.4	Lw	81.1					5	a
AREASOURCE		CAR45	81.1	81.1	81.1	53.5	53.5	53.5	Lw	81.1					5	a
AREASOURCE		CAR46	81.1	81.1	81.1	53.6	53.6	53.6	Lw	81.1					5	a
AREASOURCE		CAR47	81.1	81.1	81.1	53.7	53.7	53.7	Lw	81.1					5	a

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
AREASOURCE		CAR48	81.1	81.1	81.1	53.6	53.6	53.6	Lw	81.1					5	a
AREASOURCE		CAR49	81.1	81.1	81.1	53.5	53.5	53.5	Lw	81.1					5	a
AREASOURCE		CAR50	81.1	81.1	81.1	53.5	53.5	53.5	Lw	81.1					5	a
AREASOURCE		CAR51	81.1	81.1	81.1	61.4	61.4	61.4	Lw	81.1					5	a
AREASOURCE		CAR52	81.1	81.1	81.1	53.6	53.6	53.6	Lw	81.1					5	a
AREASOURCE		CAR53	81.1	81.1	81.1	56.3	56.3	56.3	Lw	81.1					5	a
AREASOURCE		CAR54	81.1	81.1	81.1	42.3	42.3	42.3	Lw	81.1					5	a
AREASOURCE		CAR55	81.1	81.1	81.1	43.7	43.7	43.7	Lw	81.1					5	a
AREASOURCE		CAR56	81.1	81.1	81.1	54.1	54.1	54.1	Lw	81.1					5	a
AREASOURCE		CAR57	81.1	81.1	81.1	48.0	48.0	48.0	Lw	81.1					5	a
AREASOURCE		CAR58	81.1	81.1	81.1	40.6	40.6	40.6	Lw	81.1					5	a
AREASOURCE		DOCK01	111.5	111.5	111.5	71.8	71.8	71.8	Lw	111.5					8	a
AREASOURCE		DOCK02	111.5	111.5	111.5	71.4	71.4	71.4	Lw	111.5					8	a
AREASOURCE		DOCK03	111.5	111.5	111.5	73.3	73.3	73.3	Lw	111.5					8	a
AREASOURCE		DOCK04	111.5	111.5	111.5	72.8	72.8	72.8	Lw	111.5					8	a
AREASOURCE		DOCK05	111.5	111.5	111.5	71.5	71.5	71.5	Lw	111.5					8	a
AREASOURCE		STOR01	103.4	103.4	103.4	59.4	59.4	59.4	Lw	103.4					8	a
AREASOURCE		STOR02	103.4	103.4	103.4	61.3	61.3	61.3	Lw	103.4					8	a
AREASOURCE		STOR03	103.4	103.4	103.4	67.8	67.8	67.8	Lw	103.4					8	a
AREASOURCE		STOR04	103.4	103.4	103.4	60.7	60.7	60.7	Lw	103.4					8	a

Name	ID	Height		Coordinates			
		Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
AREASOURCE	CAR01	5.00	a	6805298.51	2037234.73	5.00	0.00
				6805316.51	2037234.21	5.00	0.00
				6805317.03	2036993.44	5.00	0.00
				6805299.02	2036992.41	5.00	0.00
AREASOURCE	CAR02	5.00	a	6805296.96	2037460.07	5.00	0.00
				6805315.49	2037459.55	5.00	0.00
				6805316.00	2037271.26	5.00	0.00
				6805296.45	2037270.74	5.00	0.00
AREASOURCE	CAR03	5.00	a	6805361.27	2037092.73	5.00	0.00
				6805540.82	2037095.31	5.00	0.00
				6805541.85	2037056.21	5.00	0.00
				6805361.79	2037056.21	5.00	0.00
AREASOURCE	CAR04	5.00	a	6805361.27	2037156.53	5.00	0.00
				6805539.80	2037158.59	5.00	0.00
				6805540.82	2037121.03	5.00	0.00
				6805361.79	2037120.00	5.00	0.00
AREASOURCE	CAR05	5.00	a	6805361.27	2037220.84	5.00	0.00
				6805540.31	2037221.87	5.00	0.00
				6805541.85	2037183.80	5.00	0.00
				6805360.76	2037182.77	5.00	0.00
AREASOURCE	CAR06	5.00	a	6805360.24	2037284.12	5.00	0.00
				6805539.80	2037286.18	5.00	0.00
				6805540.82	2037246.56	5.00	0.00
				6805360.76	2037247.08	5.00	0.00
AREASOURCE	CAR07	5.00	a	6805360.24	2037346.88	5.00	0.00
				6805539.80	2037350.49	5.00	0.00
				6805539.80	2037312.93	5.00	0.00
				6805360.76	2037311.90	5.00	0.00
AREASOURCE	CAR08	5.00	a	6805359.22	2037411.71	5.00	0.00
				6805539.80	2037413.25	5.00	0.00
				6805539.28	2037376.72	5.00	0.00
				6805360.24	2037375.18	5.00	0.00
AREASOURCE	CAR09	5.00	a	6805376.19	2037478.08	5.00	0.00
				6805539.80	2037477.56	5.00	0.00
				6805539.28	2037441.03	5.00	0.00
				6805358.70	2037439.49	5.00	0.00
				6805359.73	2037457.50	5.00	0.00
				6805377.22	2037458.01	5.00	0.00
AREASOURCE	CAR10	5.00	a	6805361.27	2037028.43	5.00	0.00
				6805569.12	2037030.48	5.00	0.00
				6805568.61	2037011.96	5.00	0.00
				6805360.24	2037010.42	5.00	0.00
AREASOURCE	CAR11	5.00	a	6805574.78	2037209.01	5.00	0.00
				6805593.82	2037207.98	5.00	0.00
				6805594.84	2037037.69	5.00	0.00
				6805575.81	2037038.20	5.00	0.00
AREASOURCE	CAR12	5.00	a	6805573.75	2037459.55	5.00	0.00
				6805592.27	2037460.58	5.00	0.00
				6805593.82	2037261.48	5.00	0.00
				6805574.27	2037261.48	5.00	0.00
AREASOURCE	CAR13	5.00	a	6805362.82	2037531.58	5.00	0.00
				6805569.64	2037533.12	5.00	0.00
				6805570.15	2037513.57	5.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6805363.33	2037513.06	5.00	0.00
AREASOURCE	CAR14	5.00	a	6803250.84	2037412.97	5.00	0.00
				6803268.96	2037412.52	5.00	0.00
				6803272.49	2036999.31	5.00	0.00
				6803253.49	2036999.31	5.00	0.00
AREASOURCE	CAR15	5.00	a	6803314.48	2037476.61	5.00	0.00
				6803333.04	2037476.61	5.00	0.00
				6803335.69	2036990.91	5.00	0.00
				6803296.80	2036991.35	5.00	0.00
				6803295.48	2037467.77	5.00	0.00
				6803314.48	2037466.44	5.00	0.00
AREASOURCE	CAR16	5.00	a	6803369.28	2037448.76	5.00	0.00
				6803386.96	2037448.76	5.00	0.00
				6803391.38	2036990.91	5.00	0.00
				6803371.49	2036990.91	5.00	0.00
AREASOURCE	CAR17	5.00	a	6805859.66	2041028.84	5.00	0.00
				6806048.86	2041031.67	5.00	0.00
				6806050.27	2040993.46	5.00	0.00
				6805860.61	2040990.16	5.00	0.00
AREASOURCE	CAR18	5.00	a	6805858.72	2041090.18	5.00	0.00
				6806047.92	2041093.48	5.00	0.00
				6806048.86	2041056.68	5.00	0.00
				6805860.14	2041053.85	5.00	0.00
AREASOURCE	CAR19	5.00	a	6805857.78	2041151.99	5.00	0.00
				6806046.97	2041155.29	5.00	0.00
				6806047.44	2041118.02	5.00	0.00
				6805858.72	2041115.18	5.00	0.00
AREASOURCE	CAR20	5.00	a	6805857.31	2041213.32	5.00	0.00
				6806046.03	2041218.04	5.00	0.00
				6806047.44	2041180.29	5.00	0.00
				6805857.31	2041176.52	5.00	0.00
AREASOURCE	CAR21	5.00	a	6805855.42	2041277.01	5.00	0.00
				6806044.61	2041279.85	5.00	0.00
				6806044.61	2041242.10	5.00	0.00
				6805856.83	2041239.27	5.00	0.00
AREASOURCE	CAR22	5.00	a	6805855.42	2041338.82	5.00	0.00
				6806044.14	2041341.65	5.00	0.00
				6806044.14	2041304.85	5.00	0.00
				6805854.95	2041301.08	5.00	0.00
AREASOURCE	CAR23	5.00	a	6805854.00	2041400.63	5.00	0.00
				6806042.73	2041404.87	5.00	0.00
				6806044.14	2041365.24	5.00	0.00
				6805855.89	2041363.83	5.00	0.00
AREASOURCE	CAR24	5.00	a	6805851.64	2041463.38	5.00	0.00
				6806042.73	2041465.27	5.00	0.00
				6806042.25	2041427.99	5.00	0.00
				6805853.53	2041425.16	5.00	0.00
AREASOURCE	CAR25	5.00	a	6805853.06	2041524.71	5.00	0.00
				6806041.31	2041528.02	5.00	0.00
				6806041.31	2041489.80	5.00	0.00
				6805851.64	2041486.50	5.00	0.00
AREASOURCE	CAR26	5.00	a	6806081.30	2041689.69	5.00	0.00
				6806101.92	2041689.69	5.00	0.00
				6806111.69	2041045.16	5.00	0.00
				6806094.32	2041045.16	5.00	0.00
AREASOURCE	CAR27	5.00	a	6805792.24	2041853.97	5.00	0.00
				6805815.16	2041857.62	5.00	0.00
				6805824.79	2041010.22	5.00	0.00
				6805806.56	2041012.83	5.00	0.00
AREASOURCE	CAR28	5.00	a	6805850.57	2041588.35	5.00	0.00
				6806040.16	2041590.43	5.00	0.00
				6806040.16	2041550.85	5.00	0.00
				6805851.09	2041548.77	5.00	0.00
AREASOURCE	CAR29	5.00	a	6805849.53	2041648.77	5.00	0.00
				6806038.59	2041651.89	5.00	0.00
				6806040.16	2041613.87	5.00	0.00
				6805849.53	2041610.74	5.00	0.00
AREASOURCE	CAR30	5.00	a	6805849.53	2041711.27	5.00	0.00
				6806035.99	2041714.91	5.00	0.00
				6806038.07	2041676.37	5.00	0.00
				6805850.05	2041673.77	5.00	0.00
AREASOURCE	CAR31	5.00	a	6805847.45	2041773.24	5.00	0.00
				6805972.97	2041774.29	5.00	0.00
				6805974.53	2041736.79	5.00	0.00
				6805848.49	2041736.27	5.00	0.00
AREASOURCE	CAR32	5.00	a	6805847.45	2041835.22	5.00	0.00
				6805972.45	2041837.31	5.00	0.00

Name	ID	Height		Coordinates			
		Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
				6805971.93	2041799.81	5.00	0.00
				6805848.49	2041797.20	5.00	0.00
AREASOURCE	CAR33	5.00	a	6806003.70	2041859.18	5.00	0.00
				6806027.14	2041860.22	5.00	0.00
				6806028.18	2041750.33	5.00	0.00
				6806008.91	2041750.33	5.00	0.00
AREASOURCE	CAR34	5.00	a	6806093.80	2041905.54	5.00	0.00
				6806165.16	2041907.62	5.00	0.00
				6806165.16	2041887.83	5.00	0.00
				6806094.32	2041887.31	5.00	0.00
AREASOURCE	CAR35	5.00	a	6805814.64	2041877.41	5.00	0.00
				6806003.18	2041881.06	5.00	0.00
				6806003.70	2041859.18	5.00	0.00
				6805815.16	2041857.62	5.00	0.00
AREASOURCE	CAR36	5.00	a	6810575.51	2041760.23	5.00	0.00
				6810594.78	2041761.00	5.00	0.00
				6810605.57	2041115.89	5.00	0.00
				6810587.07	2041114.35	5.00	0.00
AREASOURCE	CAR37	5.00	a	6810833.70	2041720.15	5.00	0.00
				6810854.51	2041717.84	5.00	0.00
				6810864.53	2041162.91	5.00	0.00
				6810846.04	2041162.14	5.00	0.00
AREASOURCE	CAR38	5.00	a	6810847.58	2041088.15	5.00	0.00
				6810867.62	2041088.92	5.00	0.00
				6810864.53	2041044.22	5.00	0.00
				6810849.12	2041044.99	5.00	0.00
AREASOURCE	CAR39	5.00	a	6810651.04	2041040.36	5.00	0.00
				6810839.10	2041043.45	5.00	0.00
				6810838.33	2041024.18	5.00	0.00
				6810651.04	2041022.64	5.00	0.00
AREASOURCE	CAR40	5.00	a	6810648.73	2041102.79	5.00	0.00
				6810811.35	2041104.33	5.00	0.00
				6810812.12	2041066.57	5.00	0.00
				6810651.81	2041065.03	5.00	0.00
AREASOURCE	CAR41	5.00	a	6810647.96	2041175.24	5.00	0.00
				6810809.04	2041178.32	5.00	0.00
				6810812.89	2041140.56	5.00	0.00
				6810650.27	2041137.48	5.00	0.00
AREASOURCE	CAR42	5.00	a	6810647.19	2041237.67	5.00	0.00
				6810809.04	2041241.52	5.00	0.00
				6810809.81	2041202.99	5.00	0.00
				6810646.42	2041200.68	5.00	0.00
AREASOURCE	CAR43	5.00	a	6810646.42	2041300.87	5.00	0.00
				6810807.50	2041303.18	5.00	0.00
				6810807.50	2041265.42	5.00	0.00
				6810647.19	2041261.56	5.00	0.00
AREASOURCE	CAR44	5.00	a	6810644.87	2041362.53	5.00	0.00
				6810806.73	2041366.38	5.00	0.00
				6810808.27	2041326.31	5.00	0.00
				6810645.65	2041323.99	5.00	0.00
AREASOURCE	CAR45	5.00	a	6810644.87	2041424.96	5.00	0.00
				6810805.19	2041428.81	5.00	0.00
				6810806.73	2041388.74	5.00	0.00
				6810646.42	2041387.19	5.00	0.00
AREASOURCE	CAR46	5.00	a	6810642.56	2041485.85	5.00	0.00
				6810805.19	2041489.70	5.00	0.00
				6810805.19	2041450.39	5.00	0.00
				6810644.87	2041449.62	5.00	0.00
AREASOURCE	CAR47	5.00	a	6810643.33	2041546.74	5.00	0.00
				6810804.42	2041550.59	5.00	0.00
				6810803.65	2041512.05	5.00	0.00
				6810644.10	2041511.28	5.00	0.00
AREASOURCE	CAR48	5.00	a	6810640.25	2041611.48	5.00	0.00
				6810802.10	2041613.02	5.00	0.00
				6810803.65	2041576.02	5.00	0.00
				6810642.56	2041573.71	5.00	0.00
AREASOURCE	CAR49	5.00	a	6810640.25	2041673.14	5.00	0.00
				6810804.42	2041675.45	5.00	0.00
				6810802.88	2041638.45	5.00	0.00
				6810641.79	2041634.60	5.00	0.00
AREASOURCE	CAR50	5.00	a	6810638.71	2041734.80	5.00	0.00
				6810801.33	2041737.88	5.00	0.00
				6810802.88	2041700.11	5.00	0.00
				6810637.94	2041697.80	5.00	0.00
AREASOURCE	CAR51	5.00	a	6810827.54	2041835.76	5.00	0.00
				6810852.97	2041834.99	5.00	0.00
				6810854.51	2041791.06	5.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6810833.70	2041792.60	5.00	0.00
AREASOURCE	CAR52	5.00	a	6810635.63	2041808.02	5.00	0.00
				6810799.79	2041811.87	5.00	0.00
				6810801.33	2041774.87	5.00	0.00
				6810637.94	2041771.79	5.00	0.00
AREASOURCE	CAR53	5.00	a	6810637.94	2041851.95	5.00	0.00
				6810826.77	2041853.49	5.00	0.00
				6810827.54	2041835.76	5.00	0.00
				6810637.94	2041834.99	5.00	0.00
AREASOURCE	CAR54	5.00	a	6808958.35	2041951.72	5.00	0.00
				6810389.43	2041974.75	5.00	0.00
				6810388.33	2041916.63	5.00	0.00
				6808958.35	2041896.89	5.00	0.00
AREASOURCE	CAR55	5.00	a	6808800.45	2041889.19	5.00	0.00
				6808818.43	2040939.55	5.00	0.00
				6808753.68	2040937.76	5.00	0.00
				6808739.29	2041887.40	5.00	0.00
AREASOURCE	CAR56	5.00	a	6808802.24	2041952.14	5.00	0.00
				6808886.78	2041952.14	5.00	0.00
				6808888.58	2041890.99	5.00	0.00
				6808800.45	2041889.19	5.00	0.00
AREASOURCE	CAR57	5.00	a	6808530.66	2041887.40	5.00	0.00
				6808593.61	2041889.19	5.00	0.00
				6808600.81	2041540.27	5.00	0.00
				6808537.86	2041538.47	5.00	0.00
AREASOURCE	CAR58	5.00	a	6806383.18	2041912.58	5.00	0.00
				6808523.47	2041943.15	5.00	0.00
				6808530.66	2041887.40	5.00	0.00
				6806384.98	2041855.02	5.00	0.00
AREASOURCE	DOCK01	8.00	a	6806282.46	2041772.29	8.00	0.00
				6808244.69	2041801.06	8.00	0.00
				6808244.69	2041752.50	8.00	0.00
				6806286.06	2041718.33	8.00	0.00
AREASOURCE	DOCK02	8.00	a	6806293.25	2041020.49	8.00	0.00
				6808417.35	2041054.66	8.00	0.00
				6808417.35	2040998.91	8.00	0.00
				6806295.05	2040971.93	8.00	0.00
AREASOURCE	DOCK03	8.00	a	6808994.69	2041811.86	8.00	0.00
				6810395.77	2041833.44	8.00	0.00
				6810393.97	2041783.08	8.00	0.00
				6808994.69	2041761.50	8.00	0.00
AREASOURCE	DOCK04	8.00	a	6808892.17	2041058.26	8.00	0.00
				6810401.17	2041085.24	8.00	0.00
				6810408.36	2041034.88	8.00	0.00
				6808888.58	2041004.30	8.00	0.00
AREASOURCE	DOCK05	8.00	a	6803426.62	2037010.68	8.00	0.00
				6805137.66	2037021.89	8.00	0.00
				6805139.94	2036958.89	8.00	0.00
				6803424.35	2036948.26	8.00	0.00
AREASOURCE	STOR01	8.00	a	6806293.25	2040896.39	8.00	0.00
				6808424.55	2040923.37	8.00	0.00
				6808428.14	2040864.01	8.00	0.00
				6808735.70	2040871.21	8.00	0.00
				6808739.29	2040813.65	8.00	0.00
				6806296.85	2040772.29	8.00	0.00
AREASOURCE	STOR02	8.00	a	6808822.03	2040815.45	8.00	0.00
				6808817.38	2040923.74	8.00	0.00
				6810406.56	2040952.14	8.00	0.00
				6810404.76	2040840.63	8.00	0.00
AREASOURCE	STOR03	8.00	a	6808541.45	2041281.28	8.00	0.00
				6808654.76	2041286.68	8.00	0.00
				6808665.55	2040943.15	8.00	0.00
				6808546.85	2040946.75	8.00	0.00
AREASOURCE	STOR04	8.00	a	6803253.55	2036882.98	8.00	0.00
				6805085.28	2036890.57	8.00	0.00
				6805086.04	2036779.74	8.00	0.00
				6803253.55	2036774.43	8.00	0.00

### Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates				
								Begin	x	y	z	Ground
								(ft)	(ft)	(ft)	(ft)	(ft)
BUILDING			BUILDING00001	x	0	40.00	a	6806113.40	2041766.89	40.00	0.00	
								6806282.46	2041772.29	40.00	0.00	
								6806286.06	2041718.33	40.00	0.00	
								6808244.69	2041752.50	40.00	0.00	

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates			
								Begin	x	y	z
							(ft)	(ft)	(ft)	(ft)	(ft)
								6808244.69	2041801.06	40.00	0.00
								6808410.16	2041802.86	40.00	0.00
								6808417.35	2041054.66	40.00	0.00
								6806293.25	2041020.49	40.00	0.00
								6806295.05	2040971.93	40.00	0.00
								6806129.58	2040964.73	40.00	0.00
BUILDING			BUILDING00002	x	0		40.00	a 6808874.19	2041813.65	40.00	0.00
								6808994.69	2041811.86	40.00	0.00
								6808994.69	2041761.50	40.00	0.00
								6810393.97	2041783.08	40.00	0.00
								6810395.77	2041833.44	40.00	0.00
								6810557.64	2041838.83	40.00	0.00
								6810570.23	2041033.08	40.00	0.00
								6810408.36	2041034.88	40.00	0.00
								6810401.17	2041085.24	40.00	0.00
								6808892.17	2041058.26	40.00	0.00
BUILDING			BUILDING00003	x	0		40.00	a 6803397.78	2037478.88	40.00	0.00
								6805287.97	2037492.54	40.00	0.00
								6805287.97	2036959.65	40.00	0.00
								6805139.94	2036958.89	40.00	0.00
								6805137.66	2037021.89	40.00	0.00
								6803400.06	2037010.51	40.00	0.00

**APPENDIX 10.1:**  
**CONSTRUCTION NOISE MODEL INPUTS**

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# 14722 - Watson High Desert Logistics

CadnaA Noise Prediction Model: 14722-02\_Construction.cna

Date: 21.06.24

Analyst: B. Lawson

## Calculation Configuration

Configuration	
Parameter	Value
<b>General</b>	
Max. Error (dB)	0.00
Max. Search Radius #(Unit,LEN)	3048.00
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	
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 Rcvr - 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
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

## Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height (ft)	Coordinates			
			Day (dBA)	Night (dBA)	CNEL (dBA)	Day (dBA)	Night (dBA)	CNEL (dBA)	Type	Auto	Noise Type		X (ft)	Y (ft)	Z (ft)	
RECEIVERS		R1	47.8	-59.2	44.8	50.0	40.0	0.0				5.00	a	6812959.77	2040483.75	5.00
RECEIVERS		R2	48.1	-58.9	45.1	50.0	40.0	0.0				5.00	a	6811865.57	2038794.86	5.00
RECEIVERS		R3	44.1	-62.8	41.1	50.0	40.0	0.0				5.00	a	6811804.90	2035918.89	5.00
RECEIVERS		R4	51.0	-56.0	48.0	50.0	40.0	0.0				5.00	a	6805386.76	2034366.80	5.00
RECEIVERS		R5	47.0	-59.9	44.0	50.0	40.0	0.0				5.00	a	6803068.90	2043149.98	5.00
RECEIVERS		R6	43.9	-63.0	40.9	50.0	40.0	0.0				5.00	a	6808361.18	2046931.21	5.00

## Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li		Operating Time			Height (ft)		
			Day (dBA)	Evening (dBA)	Night (dBA)	Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value dB(A)	norm.	Day (min)	Special (min)		Night (min)	
SITEBOUNDARY		CONSTRUCTION01	122.6	15.6	15.6	64.7	-42.3	-42.3	PWL-Pt	115.6					8	a
SITEBOUNDARY		CONSTRUCTION02	122.6	15.6	15.6	69.7	-37.3	-37.3	PWL-Pt	115.6					8	a

Name	ID	Height		Coordinates					
		Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)		
SITEBOUNDARY	CONSTRUCTION01	8.00	a			6805688.27	2041952.35	8.00	0.00
						6805724.73	2041991.42	8.00	0.00
						6810837.75	2042069.80	8.00	0.00
						6810875.25	2042032.82	8.00	0.00
						6810899.38	2040790.64	8.00	0.00
						6805680.85	2040714.25	8.00	0.00
SITEBOUNDARY	CONSTRUCTION02	8.00	a			6803049.16	2037524.36	8.00	0.00
						6805610.42	2037542.71	8.00	0.00

Name	ID	Height		Coordinates			
		Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
				6805624.04	2036728.55	8.00	0.00
				6803055.21	2036719.18	8.00	0.00

**APPENDIX 10.2:**  
**NIGHTTIME CONCRETE POUR NOISE MODEL INPUTS**

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# 14722 - Watson High Desert Logistics

CadnaA Noise Prediction Model: 14722-02\_Pour.cna

Date: 21.06.24

Analyst: B. Lawson

## Calculation Configuration

Configuration	
Parameter	Value
<b>General</b>	
Max. Error (dB)	0.00
Max. Search Radius #(Unit,LEN)	3048.00
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	
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
<b>Reflection</b>	
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 Rcvr - 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
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

## Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height (ft)	Coordinates			
			Day (dBA)	Night (dBA)	CNEL (dBA)	Day (dBA)	Night (dBA)	CNEL (dBA)	Type	Auto	Noise Type		X (ft)	Y (ft)	Z (ft)	
RECEIVERS		R1	32.5	-73.5	29.5	50.0	40.0	0.0				5.00	a	6812959.77	2040483.75	5.00
RECEIVERS		R2	32.8	-73.2	29.8	50.0	40.0	0.0				5.00	a	6811865.57	2038794.86	5.00
RECEIVERS		R3	28.8	-76.1	25.8	50.0	40.0	0.0				5.00	a	6811804.90	2035918.89	5.00
RECEIVERS		R4	35.7	-70.8	32.7	50.0	40.0	0.0				5.00	a	6805386.76	2034366.80	5.00
RECEIVERS		R5	31.7	-74.1	28.7	50.0	40.0	0.0				5.00	a	6803068.90	2043149.98	5.00
RECEIVERS		R6	28.6	-76.2	25.6	50.0	40.0	0.0				5.00	a	6808361.18	2046931.21	5.00

## Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li		Operating Time			Height (ft)		
			Day (dBA)	Evening (dBA)	Night (dBA)	Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value dB(A)	norm.	Day (min)	Special (min)		Night (min)	
SITEBOUNDARY		CONSTRUCTION01	107.3	0.3	0.3	49.4	-57.6	-57.6	PWL-Pt	100.3					8	a
SITEBOUNDARY		CONSTRUCTION02	107.3	0.3	0.3	54.4	-52.6	-52.6	PWL-Pt	100.3					8	a

Name	ID	Height		Coordinates					
		Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)		
SITEBOUNDARY	CONSTRUCTION01	8.00	a			6805688.27	2041952.35	8.00	0.00
						6805724.73	2041991.42	8.00	0.00
						6810837.75	2042069.80	8.00	0.00
						6810875.25	2042032.82	8.00	0.00
						6810899.38	2040790.64	8.00	0.00
						6805680.85	2040714.25	8.00	0.00
SITEBOUNDARY	CONSTRUCTION02	8.00	a			6803049.16	2037524.36	8.00	0.00
						6805610.42	2037542.71	8.00	0.00

Name	ID	Height		Coordinates			
		Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
				6805624.04	2036728.55	8.00	0.00
				6803055.21	2036719.18	8.00	0.00