Goodman Logistics Center

NOISE IMPACT ANALYSIS

CITY OF EL MONTE

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Goodman Logistics Center
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Goodman Logistics Center development ("Project"). The Project site is located on the southeast corner of Shirley Avenue and Lower Azusa Road in the City of El Monte. The Project is proposed to consist of 1,235,340 square feet of high-cube transload and short-term storage warehouse use within two buildings (572,240 square feet for Building 1 and 663,100 square feet for Building 2). This study has been prepared consistent with applicable City of El Monte noise standards, and significance criteria based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) In addition, since sensitive receiver locations are in the adjacent jurisdiction of Temple City, appropriate Temple City standards and thresholds are used in this analysis as well.

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 22 roadway segments surrounding the Project site were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in *Goodman Logistics Center Traffic Impact Analysis* prepared by Urban Crossroads, Inc. (2) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Opening Year 2020, and Horizon Year 2035 traffic conditions. The analysis shows that the unmitigated Project-related traffic noise level increases under all traffic scenarios will be *less than significant*.

OPERATIONAL NOISE ANALYSIS

Using reference noise levels to represent the potential noise sources within Goodman Logistics Center site, this analysis estimates the Project-related operational (stationary-source) noise levels at the nearby noise-sensitive receiver locations. The Project-related operational noise sources are expected to include idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements.

OPERATIONAL NOISE LEVEL COMPLIANCE

The analysis shows that the unmitigated Project-related operational noise levels will exceed the City of El Monte exterior noise level standards at three of the 11 off-site receiver locations in the Project study area: R1 and R2, representing the residential homes across Lower Azusa Road, and R5, representing Gidley Elementary School adjacent to the Project site. Therefore, operational noise mitigation measures in the form of noise barriers are required to reduce the impacts at nearby sensitive receiver locations.

With the existing and recommended noise barriers shown on Exhibit 9-B of this report, the Project operational noise levels will satisfy the City of El Monte and Temple City Municipal Code exterior noise level standards are all receiver locations, and the Project operational noise impacts will be *less than significant* with mitigation.

OPERATIONAL NOISE LEVEL CONTRIBUTIONS

Further, this analysis demonstrates that the Project-related noise level increases to the existing noise environment at all receiver locations would be less than the Federal Interagency Committee on Noise (FICON) guidance for noise level increases, and thus would be *less than significant* during daytime and nighttime hours. Therefore, the operational noise level impacts associated with the proposed Project activities, such as the idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements will be *less than significant*.

OPERATIONAL NOISE MITIGATION MEASURES

The following noise barriers are required to reduce the operational noise level impacts at the nearby sensitive receiver locations:

- Minimum 10-foot high noise barriers at the northwest corner of the exterior loading dock area of Building 1;
- Minimum 14-foot high noise barrier adjacent to the Gidley Elementary School fields, playground, and athletic court areas at the eastern Building 1 loading dock area;
    - Transition barriers from 10 to 8 feet high:
        - north of the 14-foot high recommended noise barrier adjacent to Gidley Elementary School classroom buildings; and
        - south of the 14-foot high recommended noise barrier location.
- Minimum 5-foot high parapet/screening walls for all roof-top mechanical ventilation equipment on Buildings 1 and 2.

The barriers shall provide a weight of at least 4 pounds per square foot of face area with no decorative cutouts or line-of-sight openings between shielded areas and the roadways, and a minimum transmission loss of 20 dBA. (3) The barrier shall consist of a solid face from top to bottom. Unnecessary openings or decorative cutouts shall not be made. All gaps (except for weep holes) should be filled with grout or caulking. The noise barrier shall be constructed using the following materials:

- Masonry block;
- Earthen berm;
- Metal;
- Or any combination of construction materials capable of the minimum weight of 4 pounds per square foot and a minimum transmission loss of 20 dBA.

CONSTRUCTION NOISE ANALYSIS

Construction activities are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site. Using sample reference noise levels to represent the planned construction activities of Goodman Logistics Center site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations. The Project-related short-term construction noise levels are expected to approach 87.5 dBA L_{eq} from mobile equipment, and 56.1 dBA L_{eq} for stationary equipment. The unmitigated construction noise levels will, therefore, exceed the County of Los Angeles mobile equipment noise level threshold of 75 dBA L_{eq} at two of 11 receiver locations, R4 and R5. All other receiver locations will experience Project construction noise levels below the 75 dBA L_{eq} mobile equipment and 60 dBA L_{eq} stationary equipment thresholds. The noise impact due to unmitigated Project construction noise levels is, therefore, considered a *potentially significant* impact at R4 and R5, which both represent the Gidley Elementary School east of the Project, and construction noise mitigation is required to reduce the temporary impacts.

The temporary construction noise mitigation measures include a 100-foot buffer zone from the impacted receiver locations for large construction equipment (e.g. dozers, graders, scrapers, etc.) capable of generating noise levels greater than 87 dBA L_{eq} at 10 feet over a 10-minute period of activity, as shown on Exhibit 10-B of this report. The mitigated construction noise levels at the potentially impacted receiver locations will be reduced to 73.5 dBA L_{eq} with the attenuation provided by the 100-foot buffer zone for large construction equipment (e.g., dozers, graders, scrapers, etc.). Therefore, the mitigated construction noise levels due to mobile equipment at receiver locations R4 and R5, representing the Gidley Elementary School, will satisfy the 75 dBA L_{eq} mobile equipment noise level standards, and the impact due to temporary Project construction is considered *less than significant* with mitigation.

The construction noise analysis presents a conservative approach with the highest noise-level-producing equipment for each stage of Project construction operating at the closest point from primary construction activity to the nearby sensitive receiver locations. This scenario is unlikely to occur during typical construction activities and likely overstates the construction noise levels which will be experienced at each receiver location.

CONSTRUCTION VIBRATION ANALYSIS

At distances ranging from 20 to 901 feet from Project construction activity, construction vibration velocity levels are expected to approach 0.088 in/sec RMS. Based on the County of Los Angeles vibration standards, the unmitigated Project construction vibration levels will exceed the 0.01 in/sec RMS threshold at two of the 11 receiver locations: R4 and R5, which both represent Gidley Elementary School. Therefore, the 100-foot buffer zone mitigation measure, previously identified to reduce construction noise levels, is required to reduce the vibration levels at receiver locations R4 and R5. With the 100-foot buffer zone for large construction equipment large construction equipment (e.g., dozers, graders, scrapers, etc.) capable of generating noise levels greater than 87 dBA L_{eq} at 10 feet over a 10-minute period of activity, the mitigated Project vibration levels will approach 0.008 in/sec RMS and will remain below the 0.01 in/sec RMS

threshold. Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter. Moreover, construction at the Project site will be restricted to daytime hours consistent with City requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours.

CONSTRUCTION NOISE AND VIBRATION MITIGATION MEASURES

Though construction noise is temporary, intermittent and of short duration, and will not present any long-term impacts, the following mitigation measures would reduce the noise level increases produced by the construction equipment to the nearby noise-sensitive residential land uses:

- If feasible, construct the operational noise mitigation barriers detailed in the Executive Summary at the eastern Project site boundary to reduce the construction noise levels experienced at the adjacent Gidley Elementary School as early in the construction process as possible.
- The use of large construction equipment (e.g., dozers, graders, scrapers) capable of generating noise levels in excess of 87 dBA L_{eq} (10-minute) at 10 feet and vibration levels of 0.01 in/sec RMS at sensitive receiver locations shall be prohibited within 100 feet of nearby occupied sensitive school uses (represented by receiver locations R4 to R5) to reduce the noise and vibration levels for the entire duration of Project construction. If the contractor can demonstrate that specific pieces of large construction equipment satisfies the 87 dBA L_{eq} (10-minute) at 10 feet and vibration levels of 0.01 in/sec RMS, then they shall be allowed to operate within the buffer zone shown on Exhibit 10-B.
- Prior to approval of grading plans and/or issuance of building permits, plans shall include a note indicating that noise-generating Project construction activities shall only occur between the hours of 6:00 a.m. to 7:00 p.m. Mondays through Fridays; 8:00 a.m. to 7:00 p.m. on Saturdays and Sundays (City of El Monte Municipal Code, Section 8.36.050(C)). (4) The Project construction supervisor shall ensure compliance with the note and the City shall conduct periodic inspection at its discretion.
- During all Project site construction, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the Project site.
- The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receivers nearest the Project site during all Project construction (i.e., to the center).
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment (between the hours of 6:00 a.m. to 7:00 p.m. Mondays through Fridays; 8:00 a.m. to 7:00 p.m. on Saturdays and Sundays). The contractor shall design delivery routes to minimize the exposure of sensitive land uses or residential dwellings to delivery truck-related noise.

SUMMARY OF CEQA SIGNIFICANCE FINDINGS

The results of this Goodman Logistics Center Noise Impact 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 described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise Levels	7	*Less Than Significant*	*n/a*
Operational Noise Levels	9	*Potentially Significant*	*Less Than Significant*
Construction Noise Levels	10	*Potentially Significant*	*Less Than Significant*
Construction Vibration Levels		*Potentially Significant*	*Less Than Significant*

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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Goodman Logistics Center ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise impacts.

1.1 SITE LOCATION

The proposed Goodman Logistics Center Project is located on the southeast corner of Shirley Avenue and Lower Azusa Road in the City of El Monte, as shown on Exhibit 1-A. The proposed Project is located approximately 1.2 miles north of Interstate 10 (I-10), roughly 3,300 feet west of the closest airport, El Monte Airport, and approximately 50 feet north of existing Union Pacific Railroad lines.

The Project site is currently occupied by a Vons Grocery warehouse. Existing single-family residential uses in the Project study area are located north across Lower Azusa Road, east on Arden Drive, and south of the Project site across Union Pacific Railroad lines. The Gidley Elementary School is located immediate adjacent to the Project's eastern site boundary. Existing industrial uses are located west and east of the Project site.

1.2 PROJECT DESCRIPTION

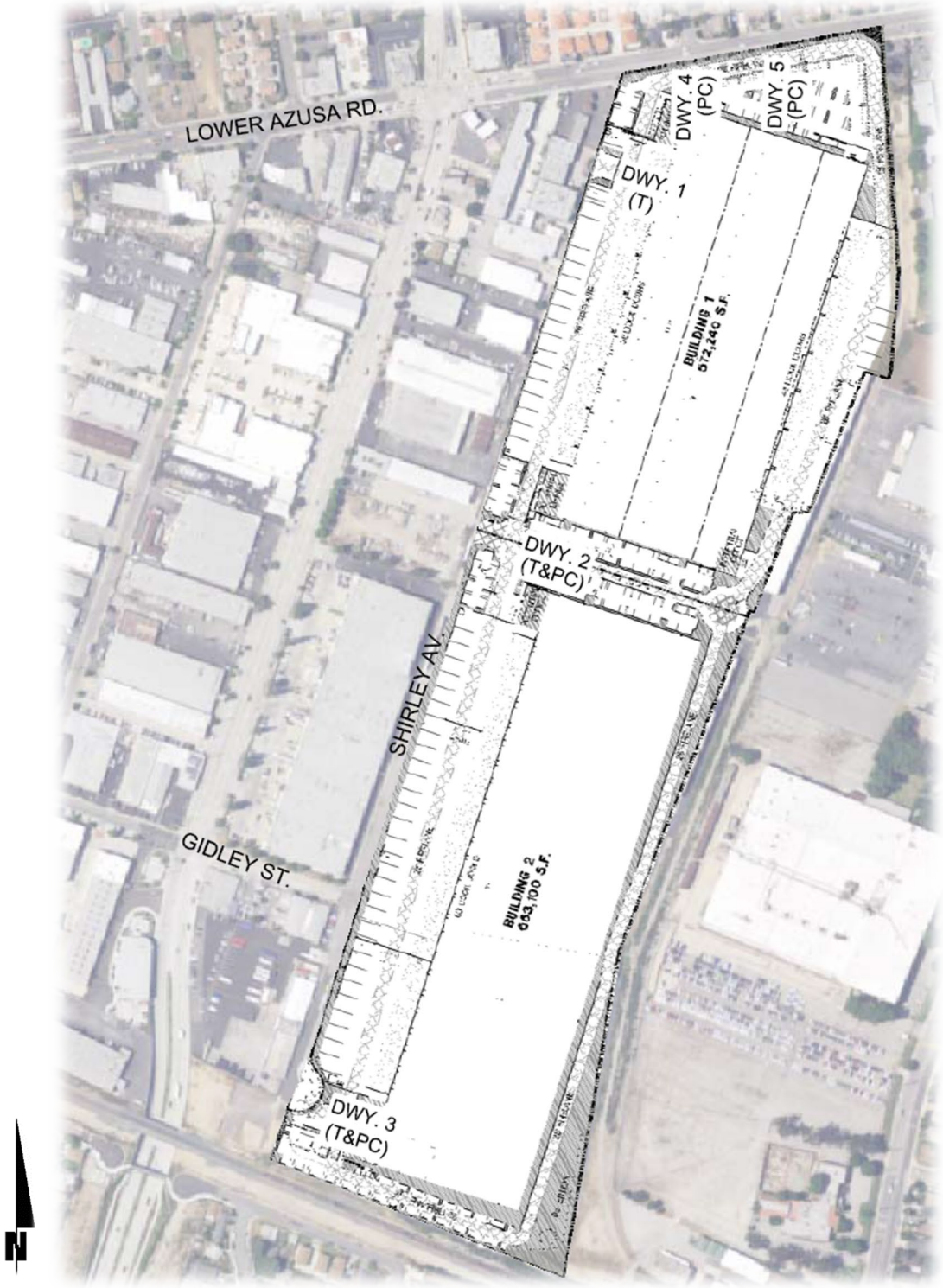
It is our understanding that the Project is proposed to consist of 1,235,340 square feet of high-cube transload and short-term storage warehouse use within two buildings (572,240 square feet for Building 1 and 663,100 square feet for Building 2), as shown on Exhibit 1-B. For the purposes of this analysis, the Project is anticipated to be developed in a single phase with an Opening Year of 2020.

At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The on-site Project-related noise sources are expected to include: idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements. This noise analysis is intended to describe noise level impacts associated with the expected typical operational activities at the Project site.

Per the *Goodman Logistics Center Traffic Impact Analysis* prepared by Urban Crossroads, Inc. the Project is expected to generate a net total of approximately 1,729 trip-ends per day (actual vehicles) with 98 AM peak hour trips and 123 PM peak hour trips. (5) The net Project trip generation includes 539 truck trip-ends per day from the proposed buildings within the Project site. This noise study relies on the net Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

Noise has been 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

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
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		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		SLEEP DISTURBANCE
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
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. (6) 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 100 feet, which can cause serious discomfort. (7) 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 commonly used figure 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 sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of El Monte 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. (6)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receptor 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 receptor, 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 receptor 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. (8)

2.3.3 Atmospheric Effects

Receptors 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. (6)

2.3.4 Shielding

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. 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 resident. 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 FHWA does not consider the planting of vegetation to be a noise abatement measure. (8)

2.4 Noise Control

Noise control is the process of obtaining an acceptable noise environment for an observation point or receptor by controlling the noise source, transmission path, receptor, or all three. This concept is known as the source-path-receptor 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 receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (8)

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. (9)

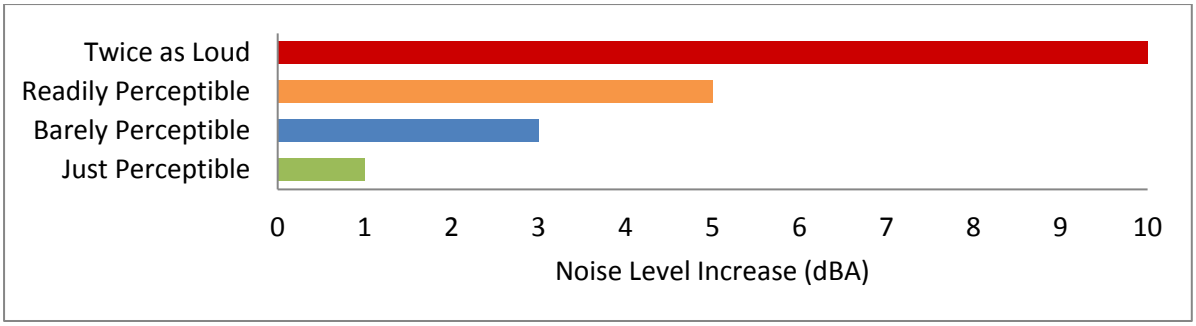
2.7 COMMUNITY RESPONSE TO NOISE

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten 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 will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (10) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (10) 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. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (8)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (11)

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related operational and construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (12)

2.9 VIBRATION

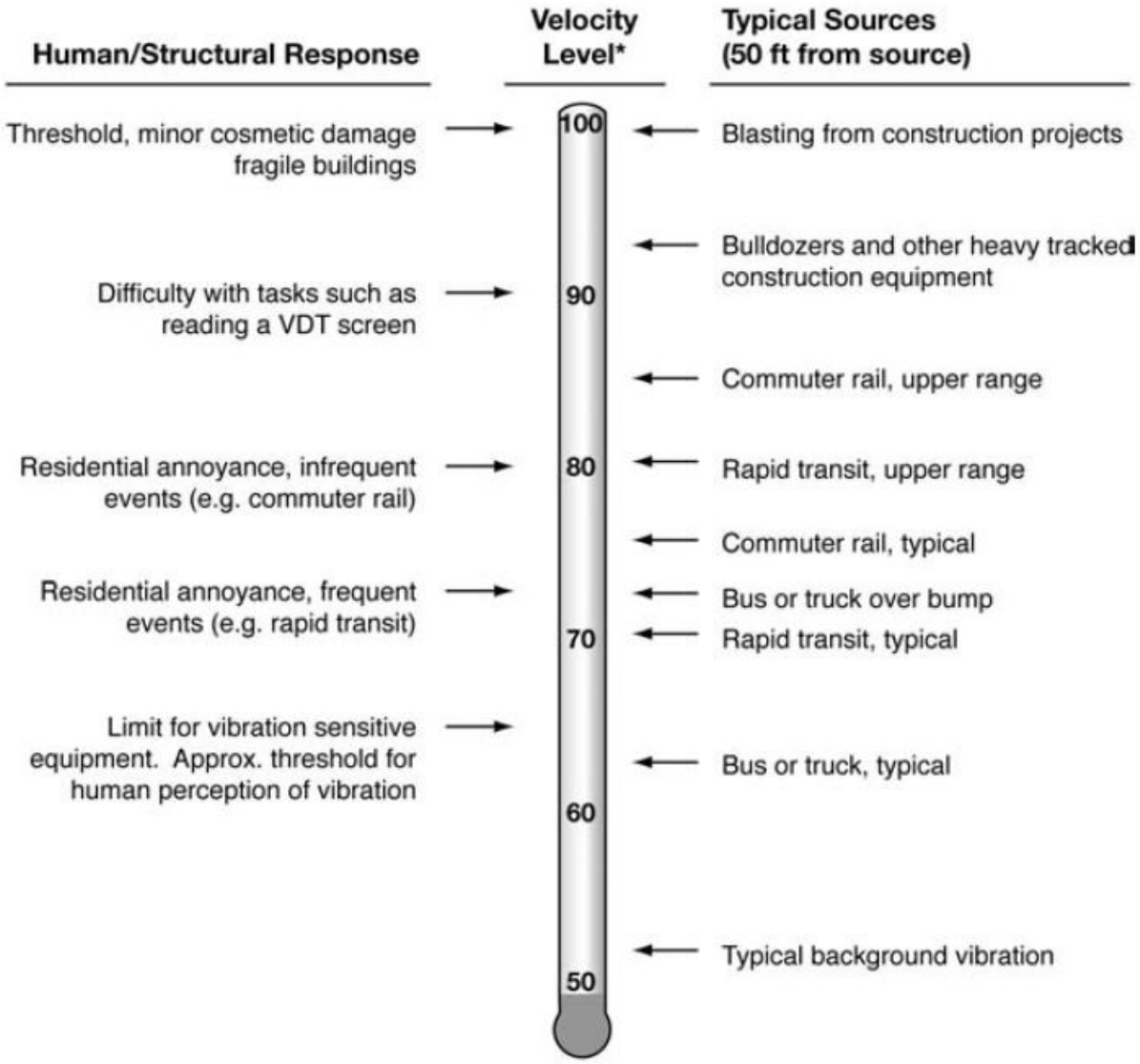
Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (13), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions.

As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

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

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



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

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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. (14) 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 STATE OF CALIFORNIA BUILDING STANDARDS

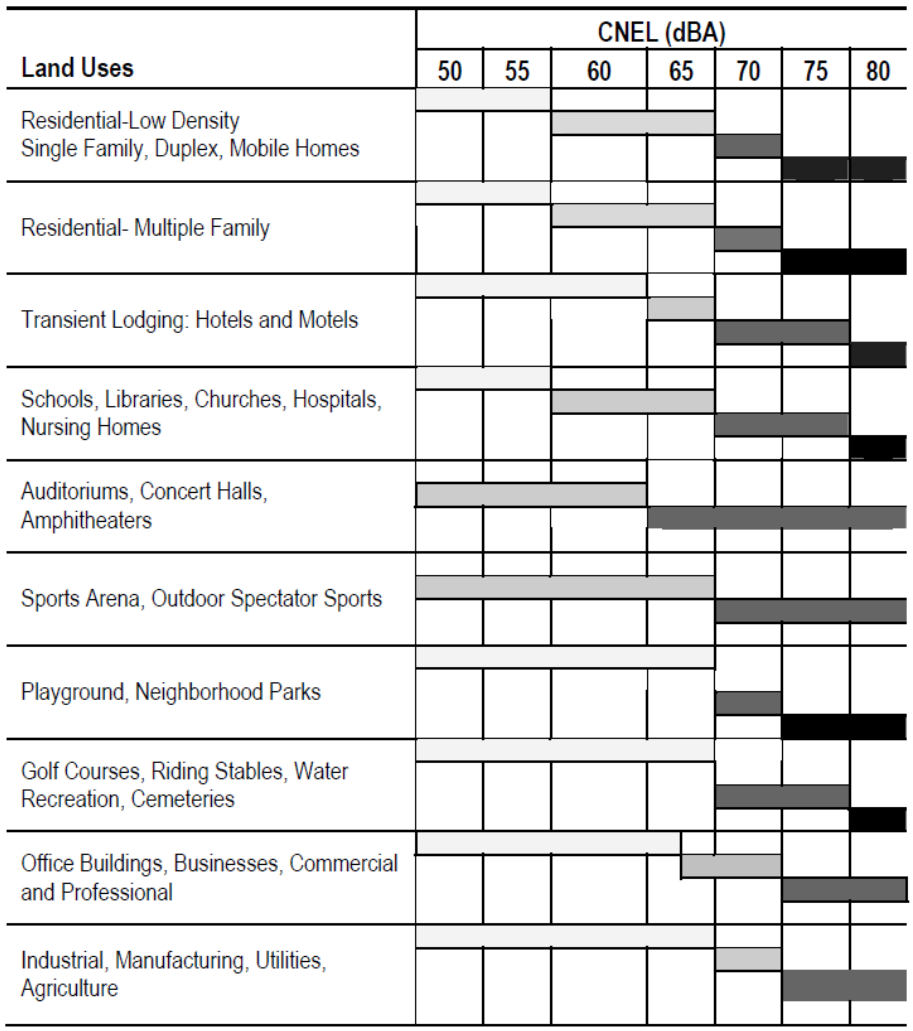
The 2014 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. (15) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available, and the noise level exceeds 65 dBA L_{eq} for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).

3.3 CITY OF EL MONTE GENERAL PLAN PUBLIC HEALTH AND SAFETY ELEMENT

The City of El Monte General Plan Public Health and Safety Element, Noise Levels section, identifies specific goals, policies and implementation measures to ensure that future land uses are compatible with projected noise environments. (16) To accomplish this goal the City of El Monte General Plan requires that the *Noise/Land Use Compatibility Standards*, Table PHS-1, are used to determine land use compatibility for new development. According to the City of El Monte

Noise/Land Use Compatibility Standards, shown on Exhibit 3-A, industrial uses, such as the Project, are considered *normally acceptable* with exterior noise levels of up to 70 dBA CNEL. For noise-sensitive residential land uses, an exterior noise level of 65 dBA CNEL is considered *conditionally acceptable*.

EXHIBIT 3-A: NOISE/LAND USE COMPATIBILITY STANDARDS



Source: City of El Monte General Plan Public Health and Safety Element, Table PHS-1.

3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Goodman Logistics Center Project, stationary-source (operational) noise such as idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements are typically evaluated against standards established under the Municipal Code. Although the Project site is located within the City of El Monte, several sensitive receivers are in both City of El Monte and the adjacent jurisdiction of Temple City as well.

3.4.1 CITY OF EL MONTE OPERATIONAL NOISE STANDARDS

The City of El Monte Municipal Code Chapter 8.36, Section 8.36.040 provides performance standards and noise control guidelines for determining non-transportation, fixed or stationary, nuisance noise source impacts to all land uses within their assigned zoning districts. (4)

As shown on Table 3-1, for single-family residential uses, the ambient noise standards are limited to 50 dBA L_{50} during the daytime hours from 7:00 a.m. to 10:00 p.m. This level is reduced by 5 dBA during the nighttime hours from 10:00 p.m. to 7:00 a.m. to a level of 45 dBA L_{50}. These standards shall apply for a cumulative period of 30 minutes in any hour, as well as plus 5 dBA cannot be exceeded for a cumulative period of more than 5 but less than 15 minutes in any hour (L_{25}), or the standard plus 10 dBA for a cumulative period more than 1 but less than 5 minutes in any hour (L_8), or the standard plus 15 dBA for a period of less than 1 minute (L_{max}). The City of El Monte Municipal Code noise regulations are provided in Appendix 3.1.

3.4.2 TEMPLE CITY OPERATIONAL NOISE STANDARDS

Section 9-1I-3 of the Temple City Municipal Code identifies the sound level limits by receiving land use as shown on Table 3-1. For noise-sensitive residential properties, the Municipal Code identifies operational noise level limits for the daytime (7:00 a.m. to 10:00 p.m.) hours of 55 dBA L_{eq} and 45 dBA L_{eq} during the nighttime (10:00 p.m. to 7:00 a.m.) hours. The Temple City Municipal Code noise standards are provided in Appendix 3.2.

TABLE 3-1: OPERATIONAL NOISE STANDARDS

Jurisdiction	Land Use	Time Period	Exterior Noise Level Standards[1]				
			L_{eq} (Hourly)	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_{max} (<1 min)
El Monte[2]	Single-Family Residential	7:00 a.m. to 10:00 p.m.	-	50	55	60	65
		10:00 p.m. to 7:00 a.m.	-	45	50	55	60
	Multi-Family Residential	7:00 a.m. to 10:00 p.m.	-	55	60	65	70
		10:00 p.m. to 7:00 a.m.	-	50	55	60	65
Temple City[3]	Residential	7:00 a.m. to 10:00 p.m.	55	-	-	-	-
		10:00 p.m. to 7:00 a.m.	45	-	-	-	-

[1] L_{eq} represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The percent noise level is the level exceeded "n" percent of the time during the measurement period. L_{25} is the noise level exceeded 25% of the time.
[2]Source: City of El Monte Municipal Code, Section 8.36.040 (Appendix 3.1).
[3] Source: City of Temple City Municipal Code, Section 9-1l-3 (Appendix 3.2).

3.5 CONSTRUCTION NOISE STANDARDS

To analyze noise impacts originating from the construction of the Goodman Logistics Center, noise from construction activities are typically evaluated against standards established under a City's Municipal Code. To control noise impacts associated with the construction, the City of El Monte has established limits to the hours of construction activity. According to Section 8.36.050 (C) (1) of the Municipal Code, *it is unlawful for any person within the city to operate power construction tools or equipment in the performance of any outside construction or repair work on building, structures, or projects in or adjacent to a residential area, except between the hours of 6:00 a.m. and 7:00 p.m. Monday through Friday or between the hours of 8:00 a.m. and 7:00 p.m. on Saturday and Sunday*. (4)

However, neither the City of El Monte or Temple City General Plans or Municipal Codes identify quantifiable construction noise level limits to evaluate potential impacts during Project construction. As such, the County of Los Angeles construction noise level standards are used in this analysis as the acceptable noise level limits at adjacent sensitive land uses.

The County of Los Angeles has established maximum noise levels for mobile and stationary equipment. Section 12.08.440 of the Los Angeles County Code identifies limits on noise from construction activities to the noise levels shown on Table 3-2 and 3-3 for mobile and stationary equipment, respectively. The nearest noise-sensitive receivers to the Project site consist of the existing Gidley Elementary School and existing single-family residential developments. For single-family residential development, mobile equipment noise levels may not exceed 75 dBA L_{eq} and stationary equipment noise levels may not exceed 60 dBA L_{eq} during the daytime hours. (17) Since the County of Los Angeles Municipal Code does not identify specific noise level standards for school uses, the single-family residential noise level standards shown on Tables 3-2 and 3-3 are used in this study to conservatively evaluate the potential impacts at the Gidley Elementary School.

TABLE 3-2: MOBILE EQUIPMENT NOISE LEVEL LIMITS

Type	Receiving Land Use Category	Time Period	Noise Level Standard (dBA L_{eq})[1]
I	Single-Family Residential	Daytime (7:00 a.m. - 8:00 p.m.)	75
		Nighttime (8:00 p.m. - 7:00 a.m.)	60
II	Multi-Family Residential	Daytime (7:00 a.m. - 8:00 p.m.)	80
		Nighttime (8:00 p.m. - 7:00 a.m.)	64
III	Semi-Residential/ Commercial	Daytime (7:00 a.m. - 8:00 p.m.)	85
		Nighttime (8:00 p.m. - 7:00 a.m.)	70

[1] Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment, Los Angeles County Code, Section 12.08.440. The lowest residential standards are applied to school uses to present a conservative approach.

TABLE 3-3: STATIONARY EQUIPMENT NOISE LEVEL LIMITS

Type	Receiving Land Use Category	Time Period	Noise Level Standard (dBA L_{eq})[1]
I	Single-Family Residential	Daytime (7:00 a.m. - 8:00 p.m.)	60
		Nighttime (8:00 p.m. - 7:00 a.m.)	50
II	Multi-Family Residential	Daytime (7:00 a.m. - 8:00 p.m.)	65
		Nighttime (8:00 p.m. - 7:00 a.m.)	55
III	Semi-Residential/ Commercial	Daytime (7:00 a.m. - 8:00 p.m.)	70
		Nighttime (8:00 p.m. - 7:00 a.m.)	60

[1] Maximum noise levels for repetitively scheduled and relatively long-term operation of stationary equipment, Los Angeles County Code, Section 12.08.440. The lowest residential standards are applied to school uses to present a conservative approach.

3.6 CONSTRUCTION VIBRATION STANDARDS

Since neither the City of El Monte or Temple City General Plan and Municipal Code identify specific vibration level standards, the Los Angeles County Code, Section 12.08.350, vibration perception threshold of 0.01 in/sec RMS is used in this analysis, provided on Table 3-4. (17) For the purposes of this analysis, the perception threshold of 0.01 in/sec RMS shall be used to assess the potential impacts due to Project construction at nearby sensitive receiver locations.

Typically, the human response at the perception threshold for vibration includes annoyance in residential areas as previously shown on Exhibit 2-B, when vibration levels expressed in vibration decibels (VdB) approach 75 VdB. The County, however, identifies a vibration perception

threshold of 0.01 in/sec. For vibration levels expressed in velocity, the human body responds to the average vibration amplitude often described as the root-mean-square (RMS). The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a one-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to reduce the range of numbers used to describe human response to vibration. Therefore, the County of Los Angeles standard of 0.01 in/sec in RMS velocity levels is used in this analysis to assess the human perception of vibration levels due to Project-related construction activities.

TABLE 3-4: VIBRATION NOISE STANDARDS

Jurisdiction	Root-Mean-Square Velocity Standard (in/sec)
County of Los Angeles	0.01

[1] Source: Los Angeles County Code, Section 12.08.350.

3.7 LOS ANGELES COUNTY AIRPORT LAND USE PLAN

The El Monte Airport is located in the Project study area, roughly 3,300 feet east of the Project site. The *Los Angeles County Airport Land Use Plan* (LAC ALUP) identifies the land use compatibility policies related to the El Monte Airport and the proposed Project land uses. Section V of the LAC ALUP indicates that the Project industrial land uses are considered *satisfactory* with noise levels below 70 dBA CNEL due to aircraft noise levels from the El Monte Airport. (18) Exhibit 3-B shows the El Monte Airport unmitigated noise level contour boundaries in relation to the Project site. Based on the noise level contours shown on Exhibit 3-B provided by the Airport Land Use Commission, the proposed Project industrial use will be located outside of the 65 dBA CNEL noise level contour boundaries of the El Monte Airport, and therefore, in terms of land use compatibility, the Project represents *satisfactory* land use.

EXHIBIT 3-B: AIRPORT NOISE LEVEL CONTOUR BOUNDARIES

LEGEND:

- El Monte Airport Influence Area
- El Monte Airport Unmitigated 65 dBA CNEL Noise Level Contour Boundary

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4 SIGNIFICANCE CRITERIA

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

A. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

B. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.

C. A substantial permanent increase in ambient noise levels in the Project vicinity above existing levels without the proposed Project; or

D. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above noise levels existing without the proposed Project.

E. For a project located within 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, expose people residing or working in the Project area to excessive noise levels.

F. For a project within the vicinity of a private airstrip, expose people residing or working in the Project area to excessive noise levels.

While the CEQA Guidelines and the City of El Monte General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts under CEQA Guideline A, they do not define the levels at which increases are considered substantial for use under Guidelines B, C, and D. CEQA Guidelines E and F apply to nearby public and private airports, if any, and the Project's land use compatibility. Based on the El Monte Airport noise level contours previously shown on Exhibit 3-B provided by the Airport Land Use Commission, the proposed Project facilities will be located outside of the 65 dBA CNEL noise level contour boundaries of the El Monte Airport, and therefore, in terms of land use compatibility, the Project industrial use represents *satisfactory* land use. The Project site is also not located in the vicinity of a private airstrip. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant,* and no further noise analysis is conducted in relation to Guidelines E and F.

4.1 NOISE-SENSITIVE RECEIVERS

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 ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (19) Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in

individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment.

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise (FICON) (20) 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 (i.e., CNEL), energy average noise level (L_{eq}), and median noise level (L_{50}).

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, FICON identifies a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. Per 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. Table 4-1 below provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

TABLE 4-1: SIGNIFICANCE OF NOISE IMPACTS AT NOISE-SENSITIVE RECEIVERS

Without Project Noise Level	Potential Significant Impact
< 60 dBA	5 dBA or more
60 - 65 dBA	3 dBA or more
> 65 dBA	1.5 dBA or more

Federal Interagency Committee on Noise (FICON), 1992.

4.2 NON-NOISE-SENSITIVE RECEIVERS

Per the City of El Monte General Plan Public Health and Safety Element *Noise/Land Use Compatibility Standards*, previously shown on Exhibit 3-A, non-noise-sensitive industrial and commercial uses are *normally* and *conditionally acceptable*, respectively, with exterior noise levels below 70 dBA CNEL and *normally unacceptable* with exterior noise levels above 75 dBA CNEL. (16)

To determine if Project-related traffic noise level increases are significant at off-site non-noise-sensitive land uses, a *readily perceptible* 5 dBA and *barely perceptible* 3 dBA criteria are used. When the without Project noise levels at the non-noise-sensitive land uses are below the 70 dBA

CNEL exterior noise level criteria, a *readily perceptible* 5 dBA or greater noise level increase is considered a significant impact. When the without Project noise levels are greater than the 70 dBA CNEL exterior noise level standard, 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 City of El Monte General Plan Public Health and Safety Element *Noise/Land Use Compatibility Standards*.

4.3 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-2 shows the significance criteria summary matrix.

OFF-SITE TRAFFIC NOISE

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, schools, etc.):
  - are less than 60 dBA CNEL and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project-related noise level increase; or
  - range from 60 to 65 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project-related noise level increase; or
  - already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).
- When the noise levels at existing and future non-noise-sensitive land uses (e.g. industrial, etc.):
  - are less than the City of El Monte General Plan Public Health and Safety Element 70 dBA CNEL noise level standard and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project-related noise level increase; or
  - are greater than the City of El Monte General Plan Public Health and Safety Element 70 dBA CNEL noise level standard and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project-related noise level increase.

OPERATIONAL NOISE

- If Project-related operational (stationary-source) noise levels exceed:
  - in the City of El Monte the 50 dBA L_{50} daytime or 45 dBA L_{50} nighttime noise level standards. These standards plus 5 dBA cannot be exceeded for a cumulative period of more than 15 minutes (L_{25}) in any hour, or the standard plus 10 dBA for a cumulative period of more than 5 minutes (L_8) in any hour, or the standard plus 15 dBA for a cumulative period of less than 1 minute (L_{max}) in any hour (City of El Monte Municipal Code, Section 8.36.040); or
  - in Temple City the 55 dBA L_{eq} daytime or 45 dBA L_{eq} nighttime exterior noise level standards at nearby sensitive residential uses in the Project study area (Temple City Municipal Code, Section 9-1-l-3);
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:

- are less than 60 dBA L_{eq}/L_{50} and the Project creates a *readily perceptible* 5 dBA L_{eq}/L_{so} or greater Project-related noise level increase; or
- range from 60 to 65 dBA L_{eq}/L_{50} and the Project creates a *barely perceptible* 3 dBA L_{eq}/L_{50} or greater Project-related noise level increase; or
- already exceed 65 dBA L_{eq}/L_{50}, and the Project creates a community noise level impact of greater than 1.5 dBA L_{eq}/L_{50} (FICON, 1992).

CONSTRUCTION NOISE AND VIBRATION

- If Project-related construction activities:
  - occur at any time other than the permitted hours of 6:00 a.m. to 7:00 p.m. Mondays through Fridays; 8:00 a.m. to 7:00 p.m. on Saturdays and Sundays (City of El Monte Municipal Code, Section 23.81.170);
  - create noise levels which exceed the mobile 75 dBA L_{eq} or stationary 60 dBA L_{eq} equipment noise level limits at the nearby sensitive residential and school land uses (Los Angeles County Code, Section 12.08.440);
  - generate construction vibration levels could exceed the Los Angeles County Bar acceptable vibration standard of 0.01 in/sec RMS at sensitive receiver locations (Los Angeles County Code, Section 12.08.350).

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Receiving Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site Traffic	Noise-Sensitive[1]	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[2]	if ambient is < 70 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is > 70 dBA CNEL	≥ 3 dBA CNEL Project increase	
Operational	Residential	Exterior Noise Level Standards	See Table 3-1.	
	Noise-Sensitive[1]	if ambient is < 60 dBA L_{eq}	≥ 5 dBA L_{eq} Project increase	
		if ambient is 60 - 65 dBA L_{eq}	≥ 3 dBA L_{eq} Project increase	
		if ambient is > 65 dBA L_{eq}	≥ 1.5 dBA L_{eq} Project increase	
Construction	Noise-Sensitive	Permitted between 6:00 a.m. to 7:00 p.m. Mondays through Fridays; 8:00 a.m. to 7:00 p.m. on Saturdays and Sundays.[3]		
		Mobile Equipment Noise Level Threshold[4]	75 dBA L_{eq}	n/a
		Stationary Equipment Noise Level Threshold[4]	60 dBA L_{eq}	n/a
		Vibration Level Threshold[5]	0.1 in/sec RMS	n/a

[1] Source: FICON, 1992.
[2] Source: Table PHS-1 of the City of El Monte General Plan Public Health and Safety Element.
[3] Source: Section 8.36.050(C) of the City of El Monte Municipal Code (Appendix 3.1).
[4] Source: Los Angeles County Code, Section 12.08.440.
[5] Source: Los Angeles County Code, Section 12.08.350.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "n/a" = construction activities are not planned during the nighttime hours; "RMS" = Root-mean-square velocity.

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, eight 24-hour noise level measurements were taken at sensitive receiver locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, November 29th, 2017. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (21)

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 any 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*. (6) Further, FTA guidance states, t*hat 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*. (13)

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. (13) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby

sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels northwest of the Project site on Lower Azusa Road adjacent to existing residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 72.6 dBA CNEL. The hourly noise levels measured at location L1 ranged from 66.6 to 71.7 dBA L_{eq} during the daytime hours and from 59.8 to 69.6 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 69.3 dBA L_{eq} with an average nighttime noise level of 64.8 dBA L_{eq}.
- Location L2 represents the noise levels north of the Project site across Lower Azusa Road adjacent to an existing multi-family residential apartment building. The noise level measurements collected show an overall 24-hour exterior noise level of 79.3 dBA CNEL. The hourly noise levels measured at location L2 ranged from 73.9 to 77.9 dBA L_{eq} during the daytime hours and from 65.1 to 76.8 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 76.0 dBA L_{eq} with an average nighttime noise level of 71.5 dBA L_{eq}.
- Location L3 represents the noise levels at the boundary between the Project site and the Gidley Elementary School on the south side of Lower Azusa Road. The 24-hour CNEL indicates that the overall exterior noise level is 76.5 dBA CNEL. At location L3 the background ambient noise levels ranged from 72.2 to 75.7 dBA L_{eq} during the daytime hours to levels of 63.1 to 72.4 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 73.8 dBA L_{eq} with an average nighttime noise level of 68.2 dBA L_{eq}.
- Location L4 represents the noise levels east of the Project site adjacent to an existing residential home at the intersection of Arden Drive and Arden Way. The noise level measurements collected show an overall 24-hour exterior noise level of 66.2 dBA CNEL. The hourly noise levels measured at location L4 ranged from 60.1 to 69.0 dBA L_{eq} during the daytime hours and from 50.1 to 61.7 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 64.2 dBA L_{eq} with an average nighttime noise level of 57.7 dBA L_{eq}.
- Location L5 represents the noise levels east of the Project site on Arden Drive near existing industrial and residential uses. The noise level measurements collected show an overall 24-hour exterior noise level of 67.6 dBA CNEL. The hourly noise levels measured at location L5 ranged from 60.6 to 70.2 dBA L_{eq} during the daytime hours and from 52.9 to 62.9 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 65.6 dBA L_{eq} with an average nighttime noise level of 59.1 dBA L_{eq}.

- Location L6 represents the noise levels east of the Project site on Arden Way adjacent to existing residential homes between Gidley Street and Venita Street. The noise level measurements collected show an overall 24-hour exterior noise level of 69.0 dBA CNEL. The hourly noise levels measured at location L6 ranged from 62.5 to 70.1 dBA L_{eq} during the daytime hours and from 52.0 to 64.2 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 66.9 dBA L_{eq} with an average nighttime noise level of 60.3 dBA L_{eq}.
- Location L7 represents the noise levels within Gibson Mariposa Park south of the Project site adjacent to existing Union Pacific Railroad lines. The noise level measurements collected show an overall 24-hour exterior noise level of 64.6 dBA CNEL. The hourly noise levels measured at location L7 ranged from 50.2 to 69.1 dBA L_{eq} during the daytime hours and from 46.3 to 61.4 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 62.1 dBA L_{eq} with an average nighttime noise level of 55.7 dBA L_{eq}.
- Location L8 represents the noise levels southwest of the Project site near existing residential homes and the Baldwin Avenue undercrossing for existing Union Pacific Railroad lines. The noise level measurements collected show an overall 24-hour exterior noise level of 68.2 dBA CNEL. The hourly noise levels measured at location L8 ranged from 58.8 to 72.4 dBA L_{eq} during the daytime hours and from 53.3 to 63.9 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 65.5 dBA L_{eq} with an average nighttime noise level of 59.9 dBA L_{eq}.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network. The 24-hour existing noise level measurements shown on Table 5-1 present the existing ambient noise conditions.

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

Location[1]	Distance to Project Boundary (Feet)	Description	Energy Average Hourly Noise Level (dBA L_{eq})[2]		Average Median Noise Level (dBA L_{50})[2]		CNEL
			Daytime	Nighttime	Daytime	Nighttime	
L1	255'	Located northwest of the Project site on Lower Azusa Road adjacent to existing residential homes.	69.3	64.8	58.3	50.2	72.6
L2	80'	Located north of the Project site across Lower Azusa Road adjacent to an existing multi-family residential apartment building.	76.0	71.5	63.7	51.9	79.3
L3	0'	Located at the boundary between the Project site and the Gidley Elementary School on the south side of Lower Azusa Road.	73.8	68.2	61.5	49.8	76.5
L4	765'	Located east of the Project site adjacent to an existing residential home at the intersection of Arden Drive and Arden Way.	64.2	57.7	53.5	46.8	66.2
L5	720'	Located east of the Project site on Arden Drive near existing industrial and residential uses.	65.6	59.1	51.1	51.7	67.6
L6	845'	Located east of the Project site on Arden Way adjacent to existing residential homes between Gidley Street and Venita Street.	66.9	60.3	52.7	46.6	69.0
L7	110'	Located within Gibson Mariposa Park south of the Project site adjacent to existing Union Pacific Railroad lines.	62.1	55.7	47.9	47.1	64.6
L8	155'	Located southwest of the Project site near existing residential homes and the Baldwin Avenue undercrossing for existing Union Pacific Railroad lines.	65.5	59.9	52.6	49.6	68.2

[1] See Exhibit 5-A for the noise level measurement locations.
[2] Energy (logarithmic) average hourly 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.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS

LEGEND:

Noise Measurement Locations

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6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (22) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (23) 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.

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 22 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of El Monte, Temple City, Rosemead, and Arcadia General Plan Circulation Elements, and the posted vehicle speeds. The ADT volumes used in this study are presented on Table 6-2 are based on the *Goodman Logistics Center Traffic Impact Analysis* prepared by Urban Crossroads, Inc., for the following traffic scenarios: Existing, Opening Year 2020, and Horizon Year 2035 conditions. (5) For this analysis, soft site conditions are used to analyze the traffic noise impacts within the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Caltrans' research has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model as used in this off-site traffic noise analysis. (24)

Per the *Goodman Logistics Center Traffic Impact Analysis* prepared by Urban Crossroads, Inc., the Project is expected to generate a net total of approximately 1,729 trip-ends per day (actual vehicles) with 98 AM peak hour trips and 123 PM peak hour trips. (5) The net Project trip generation includes 539 truck trip-ends per day from the proposed buildings within the Project site.

This noise study relies on the net Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network. 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. The 539 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 *Traffic Impact Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-5 to 6-7 show the vehicle mixes used for the with Project traffic scenarios.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Adjacent Planned (Existing) Land Use[1]	Distance from Centerline to Nearest Adjacent Land Use (Feet)[2]	Posted Vehicle Speed (mph)
1	Temple City Bl.	s/o Loftus Dr.	Residential	50'	40
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	50'	40
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	50'	40
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	50'	40
5	Baldwin Av.	s/o Gidley St.	Industrial	50'	40
6	Baldwin Av.	s/o Rose Av.	Industrial	50'	40
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	50'	35
8	Baldwin Av.	s/o Loftus Dr.	Residential	50'	35
9	Baldwin Av.	s/o Flair Dr.	Office Professional	50'	35
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	50'	35
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	50'	35
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	44'	40
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	44'	40
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	44'	40
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	44'	40
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	44'	35
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	44'	35
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	44'	35
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	44'	35
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	50'	35
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	50'	35
22	Loftus Dr.	e/o Temple City Bl.	Residential	32'	35

[1] Sources: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Element of the Cities of El Monte, Temple City, Rosemead, and Arcadia.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]					
			Existing		Opening Year 2020		Horizon Year 2035	
			Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Temple City Bl.	s/o Loftus Dr.	29,049	29,168	29,705	29,824	31,741	31,860
2	Baldwin Av.	s/o Las Tunas Dr.	28,190	28,336	28,706	28,852	30,802	30,948
3	Baldwin Av.	n/o Lower Azusa Rd.	30,062	30,208	30,578	30,724	32,849	32,995
4	Baldwin Av.	s/o Lower Azusa Rd.	24,781	24,835	25,578	25,632	27,078	27,132
5	Baldwin Av.	s/o Gidley St.	28,021	29,166	28,817	29,962	29,387	30,532
6	Baldwin Av.	s/o Rose Av.	26,824	27,969	27,729	28,874	30,618	31,763
7	Baldwin Av.	s/o Valley Bl.	31,520	32,254	32,227	32,961	34,441	35,175
8	Baldwin Av.	s/o Loftus Dr.	27,021	27,448	27,727	28,154	29,525	29,952
9	Baldwin Av.	s/o Flair Dr.	29,837	30,264	30,543	30,970	32,602	33,029
10	Santa Anita Av.	s/o Valley Bl.	25,813	25,932	26,719	26,838	28,205	28,324
11	Santa Anita Av.	s/o Ramona Bl.	37,785	37,904	39,327	39,446	41,287	41,406
12	Lower Azusa Rd.	e/o Temple City Bl.	20,065	20,152	20,247	20,334	21,925	22,012
13	Lower Azusa Rd.	e/o Ellis Ln.	23,374	23,520	23,556	23,702	25,540	25,686
14	Lower Azusa Rd.	e/o Baldwin Av.	25,724	26,016	26,215	26,507	28,108	28,400
15	Lower Azusa Rd.	w/o Arden Dr.	27,528	27,820	28,018	28,310	30,079	30,371
16	Lower Azusa Rd.	e/o Arden Dr.	24,250	24,483	24,752	24,985	26,497	26,730
17	Lower Azusa Rd.	w/o Santa Anita Av.	23,402	23,635	23,904	24,137	25,571	25,804
18	Lower Azusa Rd.	e/o Santa Anita Av.	30,136	30,369	31,060	31,293	32,929	33,162
19	Lower Azusa Rd.	e/o Peck Rd.	28,429	28,602	29,245	29,418	31,064	31,237
20	Valley Bl.	e/o Temple City Bl.	28,922	29,128	30,144	30,350	31,602	31,808
21	Valley Bl.	e/o Baldwin Av.	25,680	25,767	26,145	26,232	28,060	28,147
22	Loftus Dr.	e/o Temple City Bl.	13,222	13,530	13,222	13,530	14,447	14,755

[1] Source: Goodman Logistics Center Traffic Impact Analysis, Urban Crossroads, Inc., December 2017.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	76.15%	12.30%	11.54%	100.00%
Medium Trucks	78.59%	5.75%	15.66%	100.00%
Heavy Trucks	84.50%	2.95%	12.55%	100.00%

Based on an existing 24-hour vehicle count taken at Lower Azusa Road and Baldwin Avenue (Goodman Logistics Center Traffic Impact Analysis, Urban Crossroads, Inc., December 2017). Vehicle mix percentage values rounded to the nearest one-hundredth.
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-4: WITHOUT PROJECT CONDITIONS VEHICLE MIX

Classification	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	96.24%	2.71%	1.05%	100.00%

Based on an existing 24-hour vehicle count taken at Lower Azusa Road and Baldwin Avenue (Goodman Logistics Center Traffic Impact Analysis, Urban Crossroads, Inc., December 2017). Vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-5: EXISTING WITH PROJECT CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Temple City Bl.	s/o Loftus Dr.	96.26%	2.69%	1.05%	100.00%
2	Baldwin Av.	s/o Las Tunas Dr.	96.17%	2.71%	1.13%	100.00%
3	Baldwin Av.	n/o Lower Azusa Rd.	96.17%	2.71%	1.12%	100.00%
4	Baldwin Av.	s/o Lower Azusa Rd.	96.03%	2.74%	1.23%	100.00%
5	Baldwin Av.	s/o Gidley St.	94.91%	2.85%	2.24%	100.00%
6	Baldwin Av.	s/o Rose Av.	94.85%	2.85%	2.29%	100.00%
7	Baldwin Av.	s/o Valley Bl.	95.16%	2.84%	2.00%	100.00%
8	Baldwin Av.	s/o Loftus Dr.	95.61%	2.78%	1.61%	100.00%
9	Baldwin Av.	s/o Flair Dr.	95.67%	2.77%	1.56%	100.00%
10	Santa Anita Av.	s/o Valley Bl.	96.26%	2.69%	1.05%	100.00%
11	Santa Anita Av.	s/o Ramona Bl.	96.25%	2.70%	1.05%	100.00%
12	Lower Azusa Rd.	e/o Temple City Bl.	96.12%	2.72%	1.16%	100.00%
13	Lower Azusa Rd.	e/o Ellis Ln.	96.15%	2.71%	1.14%	100.00%
14	Lower Azusa Rd.	e/o Baldwin Av.	96.08%	2.71%	1.21%	100.00%
15	Lower Azusa Rd.	w/o Arden Dr.	96.09%	2.71%	1.20%	100.00%
16	Lower Azusa Rd.	e/o Arden Dr.	96.06%	2.72%	1.23%	100.00%
17	Lower Azusa Rd.	w/o Santa Anita Av.	96.05%	2.72%	1.23%	100.00%
18	Lower Azusa Rd.	e/o Santa Anita Av.	96.09%	2.71%	1.19%	100.00%
19	Lower Azusa Rd.	e/o Peck Rd.	96.07%	2.72%	1.20%	100.00%
20	Valley Bl.	e/o Temple City Bl.	96.17%	2.70%	1.12%	100.00%
21	Valley Bl.	e/o Baldwin Av.	96.15%	2.72%	1.13%	100.00%
22	Loftus Dr.	e/o Temple City Bl.	94.93%	2.88%	2.19%	100.00%

[1] Source: Goodman Logistics Center Traffic Impact Analysis, Urban Crossroads, Inc., December 2017.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-6: OPENING YEAR 2020 WITH PROJECT CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Temple City Bl.	s/o Loftus Dr.	96.26%	2.70%	1.05%	100.00%
2	Baldwin Av.	s/o Las Tunas Dr.	96.17%	2.71%	1.12%	100.00%
3	Baldwin Av.	n/o Lower Azusa Rd.	96.17%	2.71%	1.12%	100.00%
4	Baldwin Av.	s/o Lower Azusa Rd.	96.04%	2.74%	1.23%	100.00%
5	Baldwin Av.	s/o Gidley St.	94.95%	2.84%	2.21%	100.00%
6	Baldwin Av.	s/o Rose Av.	94.90%	2.85%	2.25%	100.00%
7	Baldwin Av.	s/o Valley Bl.	95.18%	2.84%	1.98%	100.00%
8	Baldwin Av.	s/o Loftus Dr.	95.63%	2.78%	1.59%	100.00%
9	Baldwin Av.	s/o Flair Dr.	95.68%	2.77%	1.55%	100.00%
10	Santa Anita Av.	s/o Valley Bl.	96.26%	2.69%	1.05%	100.00%
11	Santa Anita Av.	s/o Ramona Bl.	96.25%	2.70%	1.05%	100.00%
12	Lower Azusa Rd.	e/o Temple City Bl.	96.12%	2.72%	1.16%	100.00%
13	Lower Azusa Rd.	e/o Ellis Ln.	96.15%	2.71%	1.14%	100.00%
14	Lower Azusa Rd.	e/o Baldwin Av.	96.08%	2.71%	1.21%	100.00%
15	Lower Azusa Rd.	w/o Arden Dr.	96.09%	2.71%	1.20%	100.00%
16	Lower Azusa Rd.	e/o Arden Dr.	96.06%	2.72%	1.22%	100.00%
17	Lower Azusa Rd.	w/o Santa Anita Av.	96.05%	2.72%	1.23%	100.00%
18	Lower Azusa Rd.	e/o Santa Anita Av.	96.10%	2.71%	1.19%	100.00%
19	Lower Azusa Rd.	e/o Peck Rd.	96.08%	2.72%	1.20%	100.00%
20	Valley Bl.	e/o Temple City Bl.	96.18%	2.70%	1.12%	100.00%
21	Valley Bl.	e/o Baldwin Av.	96.15%	2.72%	1.13%	100.00%
22	Loftus Dr.	e/o Temple City Bl.	94.93%	2.88%	2.19%	100.00%

[1] Source: Goodman Logistics Center Traffic Impact Analysis, Urban Crossroads, Inc., December 2017.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-7: HORIZON YEAR 2035 WITH PROJECT CONDITIONS VEHICLE MIX

ID	Roadway	Segment	With Project[1]			
			Autos	Medium Trucks	Heavy Trucks	Total[2]
1	Temple City Bl.	s/o Loftus Dr.	96.26%	2.70%	1.05%	100.00%
2	Baldwin Av.	s/o Las Tunas Dr.	96.17%	2.71%	1.12%	100.00%
3	Baldwin Av.	n/o Lower Azusa Rd.	96.18%	2.71%	1.12%	100.00%
4	Baldwin Av.	s/o Lower Azusa Rd.	96.05%	2.73%	1.22%	100.00%
5	Baldwin Av.	s/o Gidley St.	94.97%	2.84%	2.19%	100.00%
6	Baldwin Av.	s/o Rose Av.	95.02%	2.84%	2.15%	100.00%
7	Baldwin Av.	s/o Valley Bl.	95.25%	2.83%	1.92%	100.00%
8	Baldwin Av.	s/o Loftus Dr.	95.66%	2.77%	1.56%	100.00%
9	Baldwin Av.	s/o Flair Dr.	95.72%	2.77%	1.51%	100.00%
10	Santa Anita Av.	s/o Valley Bl.	96.26%	2.69%	1.05%	100.00%
11	Santa Anita Av.	s/o Ramona Bl.	96.25%	2.70%	1.05%	100.00%
12	Lower Azusa Rd.	e/o Temple City Bl.	96.13%	2.72%	1.15%	100.00%
13	Lower Azusa Rd.	e/o Ellis Ln.	96.16%	2.71%	1.13%	100.00%
14	Lower Azusa Rd.	e/o Baldwin Av.	96.09%	2.71%	1.20%	100.00%
15	Lower Azusa Rd.	w/o Arden Dr.	96.10%	2.71%	1.19%	100.00%
16	Lower Azusa Rd.	e/o Arden Dr.	96.07%	2.72%	1.21%	100.00%
17	Lower Azusa Rd.	w/o Santa Anita Av.	96.07%	2.72%	1.22%	100.00%
18	Lower Azusa Rd.	e/o Santa Anita Av.	96.10%	2.71%	1.18%	100.00%
19	Lower Azusa Rd.	e/o Peck Rd.	96.09%	2.72%	1.19%	100.00%
20	Valley Bl.	e/o Temple City Bl.	96.18%	2.70%	1.12%	100.00%
21	Valley Bl.	e/o Baldwin Av.	96.16%	2.72%	1.13%	100.00%
22	Loftus Dr.	e/o Temple City Bl.	95.04%	2.87%	2.10%	100.00%

[1] Source: Goodman Logistics Center Traffic Impact Analysis, Urban Crossroads, Inc., December 2017.
[2] Total of vehicle mix percentage values rounded to the nearest one-hundredth.

6.3 CONSTRUCTION VIBRATION ASSESSMENT METHODOLOGY

This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with several types of construction equipment are summarized on Table 6-8. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 6-8: 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

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

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7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *Goodman Logistics Center Traffic Impact Analysis*. (2) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- Existing Conditions Without / With Project: This scenario refers to the existing present-day noise conditions without and with the proposed Project.
- Opening Year 2020 Without / With the Project: This scenario refers to Opening Year noise conditions without and with the proposed Project. This scenario includes all cumulative projects identified in the Traffic Impact Analysis.
- Horizon Year 2035 Without / With the Project: This scenario refers to future year 2035 noise conditions without and with the proposed Project. This scenario includes all cumulative projects identified in the Traffic Impact Analysis.

7.1 TRAFFIC NOISE CONTOURS

To quantify the Project's traffic noise impacts on the surrounding areas, the changes in traffic noise levels on roadway segments surrounding the Project were calculated based on the changes in the average daily traffic volumes. Based on the noise impact significance criteria described in Section 4 and shown on Table 4-2, a significant off-site traffic noise level impact occurs:

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
  - are less than 60 dBA CNEL and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project-related noise level increase; or
  - range from 60 to 65 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project-related noise level increase; or
  - already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).
- When the noise levels at existing and future non-noise-sensitive land uses (e.g. industrial, etc.):
  - are less than the City of El Monte General Plan Public Health and Safety Element 70 dBA CNEL noise level standard and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project-related noise level increase; or
  - are greater than the City of El Monte General Plan Public Health and Safety Element 70 dBA CNEL noise level standard and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project-related noise level increase.

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

contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 and 7-6 present a summary of the exterior traffic noise levels, without barrier attenuation, for the 22 study area roadway segments analyzed from the without Project to the with Project conditions under Existing, Opening Year 2020, and Horizon Year 2035 traffic conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Temple City Bl.	s/o Loftus Dr.	Residential	72.1	69	148	320
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	71.7	65	139	300
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	71.9	67	145	313
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	71.4	62	133	288
5	Baldwin Av.	s/o Gidley St.	Industrial	71.9	67	145	312
6	Baldwin Av.	s/o Rose Av.	Industrial	71.7	65	141	303
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	71.1	59	127	274
8	Baldwin Av.	s/o Loftus Dr.	Residential	70.4	53	115	247
9	Baldwin Av.	s/o Flair Dr.	Office Professional	70.8	57	122	264
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	70.2	52	111	239
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	71.9	67	143	309
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	71.3	54	117	251
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	72.0	60	129	278
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	72.4	64	138	296
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	72.7	67	144	310
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	70.8	50	107	231
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	70.6	49	105	225
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	71.7	57	124	267
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	71.5	55	119	257
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	70.7	56	120	258
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	70.2	51	111	239
22	Loftus Dr.	e/o Temple City Bl.	Residential	69.3	RW	62	133

[1] Source: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Temple City Bl.	s/o Loftus Dr.	Residential	72.1	69	149	320
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	71.8	66	141	304
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	72.0	68	147	317
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	71.6	64	137	296
5	Baldwin Av.	s/o Gidley St.	Industrial	73.2	82	176	379
6	Baldwin Av.	s/o Rose Av.	Industrial	73.0	80	172	371
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	72.2	70	150	324
8	Baldwin Av.	s/o Loftus Dr.	Residential	71.1	59	127	274
9	Baldwin Av.	s/o Flair Dr.	Office Professional	71.4	62	135	290
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	70.2	52	111	240
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	71.9	67	143	309
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	71.5	55	119	256
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	72.1	61	131	283
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	72.6	66	142	306
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	72.9	69	148	319
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	71.0	52	111	239
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	70.9	50	109	234
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	71.9	59	128	275
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	71.7	57	123	265
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	70.8	57	122	263
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	70.3	52	113	243
22	Loftus Dr.	e/o Temple City Bl.	Residential	70.6	35	75	162

[1] Source: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: OPENING YEAR 2020 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Temple City Bl.	s/o Loftus Dr.	Residential	72.2	70	151	324
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	71.7	65	141	304
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	72.0	68	147	317
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	71.5	63	136	294
5	Baldwin Av.	s/o Gidley St.	Industrial	72.1	69	148	318
6	Baldwin Av.	s/o Rose Av.	Industrial	71.9	67	144	310
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	71.2	60	129	278
8	Baldwin Av.	s/o Loftus Dr.	Residential	70.5	54	117	251
9	Baldwin Av.	s/o Flair Dr.	Office Professional	70.9	58	124	268
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	70.4	53	114	245
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	72.0	68	147	317
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	71.4	54	117	253
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	72.0	60	130	279
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	72.5	65	139	300
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	72.8	68	146	314
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	70.9	50	109	234
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	70.7	49	106	229
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	71.9	59	126	272
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	71.6	56	121	262
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	70.9	57	123	266
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	70.3	52	112	241
22	Loftus Dr.	e/o Temple City Bl.	Residential	69.3	RW	62	133

[1] Source: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-4: OPENING YEAR 2020 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Temple City Bl.	s/o Loftus Dr.	Residential	72.2	70	151	325
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	71.8	66	143	308
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	72.1	69	149	321
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	71.7	65	140	302
5	Baldwin Av.	s/o Gidley St.	Industrial	73.3	83	178	384
6	Baldwin Av.	s/o Rose Av.	Industrial	73.2	81	175	377
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	72.2	71	152	327
8	Baldwin Av.	s/o Loftus Dr.	Residential	71.2	60	129	278
9	Baldwin Av.	s/o Flair Dr.	Office Professional	71.5	63	136	294
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	70.4	53	114	245
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	72.0	68	147	317
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	71.5	55	120	258
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	72.2	61	132	284
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	72.7	67	144	310
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	73.0	70	150	323
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	71.1	52	113	243
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	71.0	51	110	237
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	72.1	60	130	280
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	71.8	58	125	269
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	71.0	58	125	270
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	70.4	53	114	246
22	Loftus Dr.	e/o Temple City Bl.	Residential	70.6	35	75	162

[1] Source: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-5: HORIZON YEAR 2035 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Temple City Bl.	s/o Loftus Dr.	Residential	72.5	73	157	339
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	72.1	69	148	318
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	72.3	72	154	332
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	71.8	66	142	305
5	Baldwin Av.	s/o Gidley St.	Industrial	72.1	69	150	322
6	Baldwin Av.	s/o Rose Av.	Industrial	72.3	71	154	331
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	71.5	63	135	290
8	Baldwin Av.	s/o Loftus Dr.	Residential	70.8	56	122	262
9	Baldwin Av.	s/o Flair Dr.	Office Professional	71.2	60	130	280
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	70.6	55	118	254
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	72.2	71	152	327
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	71.7	57	124	266
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	72.4	64	137	295
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	72.8	68	146	314
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	73.1	71	153	329
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	71.2	53	114	245
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	71.0	52	111	239
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	72.1	61	131	283
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	71.9	59	126	272
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	71.1	59	127	274
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	70.6	55	117	253
22	Loftus Dr.	e/o Temple City Bl.	Residential	69.7	RW	66	141

[1] Source: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-6: HORIZON YEAR 2035 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Temple City Bl.	s/o Loftus Dr.	Residential	72.5	73	158	340
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	72.1	69	150	322
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	72.4	72	156	336
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	72.0	68	146	313
5	Baldwin Av.	s/o Gidley St.	Industrial	73.3	84	180	388
6	Baldwin Av.	s/o Rose Av.	Industrial	73.5	85	184	396
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	72.5	73	157	339
8	Baldwin Av.	s/o Loftus Dr.	Residential	71.4	62	134	288
9	Baldwin Av.	s/o Flair Dr.	Office Professional	71.8	66	142	305
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	70.6	55	118	254
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	72.2	71	152	328
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	71.8	58	126	271
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	72.5	65	139	300
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	73.0	70	150	324
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	73.3	73	157	338
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	71.4	55	118	253
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	71.3	53	115	248
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	72.3	63	135	291
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	72.1	60	130	280
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	71.2	60	129	278
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	70.7	55	119	257
22	Loftus Dr.	e/o Temple City Bl.	Residential	70.9	36	79	169

[1] Source: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.2 EXISTING CONDITION PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-1 presents the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 69.3 to 72.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 70.2 to 73.2 dBA CNEL. As shown on Table 7-7 the Project will generate a noise level increase of up to 1.3 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Existing conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-7: EXISTING CONDITION OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Temple City Bl.	s/o Loftus Dr.	Residential	72.1	72.1	0.0	Yes	No
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	71.7	71.8	0.1	Yes	No
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	71.9	72.0	0.1	Yes	No
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	71.4	71.6	0.2	No	No
5	Baldwin Av.	s/o Gidley St.	Industrial	71.9	73.2	1.3	No	No
6	Baldwin Av.	s/o Rose Av.	Industrial	71.7	73.0	1.3	No	No
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	71.1	72.2	1.1	Yes	No
8	Baldwin Av.	s/o Loftus Dr.	Residential	70.4	71.1	0.7	Yes	No
9	Baldwin Av.	s/o Flair Dr.	Office Professional	70.8	71.4	0.6	No	No
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	70.2	70.2	0.0	Yes	No
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	71.9	71.9	0.0	Yes	No
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	71.3	71.5	0.1	Yes	No
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	72.0	72.1	0.1	Yes	No
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	72.4	72.6	0.2	Yes	No
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	72.7	72.9	0.2	Yes	No
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	70.8	71.0	0.2	Yes	No
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	70.6	70.9	0.2	Yes	No
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	71.7	71.9	0.2	Yes	No
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	71.5	71.7	0.2	Yes	No
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	70.7	70.8	0.1	Yes	No
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	70.2	70.3	0.1	Yes	No
22	Loftus Dr.	e/o Temple City Bl.	Residential	69.3	70.6	1.3	Yes	No

[1] Source: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).

7.3 OPENING YEAR 2020 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-3 presents the Opening Year 2020 without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 69.3 to 72.8 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-4 shows the Opening Year 2020 with Project conditions will range from 70.4 to 73.3 dBA CNEL. As shown on Table 7-8 the Project will generate a noise level increase of up to 1.3 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Opening Year 2020 conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-8: OPENING YEAR OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Temple City Bl.	s/o Loftus Dr.	Residential	72.2	72.2	0.0	Yes	No
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	71.7	71.8	0.1	Yes	No
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	72.0	72.1	0.1	Yes	No
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	71.5	71.7	0.2	No	No
5	Baldwin Av.	s/o Gidley St.	Industrial	72.1	73.3	1.2	No	No
6	Baldwin Av.	s/o Rose Av.	Industrial	71.9	73.2	1.3	No	No
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	71.2	72.2	1.1	Yes	No
8	Baldwin Av.	s/o Loftus Dr.	Residential	70.5	71.2	0.7	Yes	No
9	Baldwin Av.	s/o Flair Dr.	Office Professional	70.9	71.5	0.6	No	No
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	70.4	70.4	0.0	Yes	No
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	72.0	72.0	0.0	Yes	No
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	71.4	71.5	0.1	Yes	No
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	72.0	72.2	0.1	Yes	No
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	72.5	72.7	0.2	Yes	No
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	72.8	73.0	0.2	Yes	No
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	70.9	71.1	0.2	Yes	No
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	70.7	71.0	0.2	Yes	No
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	71.9	72.1	0.2	Yes	No
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	71.6	71.8	0.2	Yes	No
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	70.9	71.0	0.1	Yes	No
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	70.3	70.4	0.1	Yes	No
22	Loftus Dr.	e/o Temple City Bl.	Residential	69.3	70.6	1.3	Yes	No

[1] Source: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).

7.4 HORIZON YEAR 2035 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-5 presents the Horizon Year 2035 without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 69.7 to 73.1 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-6 shows the Horizon Year 2035 with Project conditions will range from 70.6 to 73.5 dBA CNEL. As shown on Table 7-6 the Project will generate a noise level increase of up to 1.2 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Horizon Year 2035 conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-9: HORIZON YEAR 2035 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned (Existing) Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Temple City Bl.	s/o Loftus Dr.	Residential	72.5	72.5	0.0	Yes	No
2	Baldwin Av.	s/o Las Tunas Dr.	Commercial (Residential)	72.1	72.1	0.1	Yes	No
3	Baldwin Av.	n/o Lower Azusa Rd.	Residential	72.3	72.4	0.1	Yes	No
4	Baldwin Av.	s/o Lower Azusa Rd.	Industrial	71.8	72.0	0.2	No	No
5	Baldwin Av.	s/o Gidley St.	Industrial	72.1	73.3	1.2	No	No
6	Baldwin Av.	s/o Rose Av.	Industrial	72.3	73.5	1.2	No	No
7	Baldwin Av.	s/o Valley Bl.	Commercial (Residential)	71.5	72.5	1.0	Yes	No
8	Baldwin Av.	s/o Loftus Dr.	Residential	70.8	71.4	0.6	Yes	No
9	Baldwin Av.	s/o Flair Dr.	Office Professional	71.2	71.8	0.6	No	No
10	Santa Anita Av.	s/o Valley Bl.	Industrial (Residential)	70.6	70.6	0.0	Yes	No
11	Santa Anita Av.	s/o Ramona Bl.	Industrial (Residential)	72.2	72.2	0.0	Yes	No
12	Lower Azusa Rd.	e/o Temple City Bl.	Residential	71.7	71.8	0.1	Yes	No
13	Lower Azusa Rd.	e/o Ellis Ln.	Residential	72.4	72.5	0.1	Yes	No
14	Lower Azusa Rd.	e/o Baldwin Av.	Residential	72.8	73.0	0.2	Yes	No
15	Lower Azusa Rd.	w/o Arden Dr.	School/Residential	73.1	73.3	0.2	Yes	No
16	Lower Azusa Rd.	e/o Arden Dr.	Residential	71.2	71.4	0.2	Yes	No
17	Lower Azusa Rd.	w/o Santa Anita Av.	Commercial (Residential)	71.0	71.3	0.2	Yes	No
18	Lower Azusa Rd.	e/o Santa Anita Av.	Commercial (Residential)	72.1	72.3	0.2	Yes	No
19	Lower Azusa Rd.	e/o Peck Rd.	Commercial (Residential)	71.9	72.1	0.2	Yes	No
20	Valley Bl.	e/o Temple City Bl.	Commercial (Residential)	71.1	71.2	0.1	Yes	No
21	Valley Bl.	e/o Baldwin Av.	Commercial (Residential)	70.6	70.7	0.1	Yes	No
22	Loftus Dr.	e/o Temple City Bl.	Residential	69.7	70.9	1.2	Yes	No

[1] Source: City of El Monte General Plan Land Use Policy Map and Google Earth Aerial Imagery.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).

8 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following 11 receiver locations as shown on Exhibit 8-A were identified as representative locations for focused analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Sensitive receivers near the Project site include existing residential homes and the Gidley Elementary School, as described below. The closest sensitive receiver location is the Gidley Elementary School represented by R4 and R5 at approximately 10 feet east of the Project site boundary. 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.

R1: Located approximately 257 feet northwest of the Project site, R1 represents existing residential homes on Lower Azusa Road. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents existing residential homes located approximately 79 feet north of the Project site across Lower Azusa Road. A 24-hour noise level measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the residential homes located roughly 98 feet north of the Project site on Lower Azusa Road. A 24-hour noise level measurement was taken near this location, L3, to describe the existing ambient noise environment.

R4: Location R4 represents the existing Gidley Elementary School located roughly 10 feet east of the Project sit, south of Lower Azusa Road. A 24-hour noise level measurement was taken near this location, L3, to describe the existing ambient noise environment.

R5: Location R5 represents the existing outdoor fields of Gidley Elementary School located roughly 10 feet east of the Project site. A 24-hour noise level measurement was taken east of this location, L4, to describe the existing ambient noise environment.

R6: Location R6 represents the existing residential homes located approximately 773 feet west of the Project site on Arden Drive. A 24-hour noise level measurement was taken near this location, L4, to describe the existing ambient noise environment.

R7: Located approximately 829 feet east of the Project site, R7 represents the existing residential homes on Arden Drive. A 24-hour noise level measurement was taken near this location, L5, to describe the existing ambient noise environment.

R8: Location R8 represents existing residential homes located approximately 879 feet east of the Project site on Arden Drive. A 24-hour noise level measurement was taken near this location, L6, to describe the existing ambient noise environment.

R9: Location R9 represents the existing residential homes located roughly 178 feet south of the Project site on Railroad Drive, south of existing Union Pacific Railroad lines. A 24-hour noise level measurement was taken near this location, L7, to describe the existing ambient noise environment.

R10: Location R10 represents the existing Gibson Mariposa Park located roughly 123 feet south of the Project site on Gibson Road. A 24-hour noise level measurement was taken near this location, L7, to describe the existing ambient noise environment.

R11: Location R11 represents the existing residential homes located roughly 170 feet southwest of the Project site Bessie Avenue. A 24-hour noise level measurement was taken near this location, L8, to describe the existing ambient noise environment.

EXHIBIT 8-A: RECEIVER LOCATIONS

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9 OPERATIONAL IMPACTS

This section analyzes the potential operational noise impacts due to the Project's stationary noise sources on the off-site sensitive receiver locations identified in Section 8. Exhibit 9-A identifies the receiver locations and noise source locations used to assess the Project-related operational noise levels.

9.1 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 idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements all operating continuously. These noise level impacts will likely vary throughout the day.

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Duration (hh:mm:ss)	Ref. Distance (Feet)	Noise Source Height (Feet)	Hourly Activity (Mins)[5]	Reference Noise Level (dBA L_{eq})	
					@ Ref. Dist.	@ 50 Feet
Unloading/Docking Activity[1]	0:15:00	30'	8'	60	67.2	62.8
Roof-Top Air Conditioning Units[4]	96:00:00	5'	5'	39	77.2	57.2
Parking Lot Vehicle Movements[5]	01:00:00	10'	5'	60	52.2	41.7

[1] Reference noise level measurements were collected from the existing operations of the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino on Wednesday, January 7, 2015.
[2] As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.
[3] As measured by Urban Crossroads, Inc. on 5/17/2017 at the Panasonic Avionics Corporation parking lot in the City of Lake Forest.
[4] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site based on the reference noise level measurement activity.

9.1.1 UNLOADING/DOCKING ACTIVITY

Short-term reference noise level measurements were collected on Wednesday, January 7th, 2015, by Urban Crossroads, Inc. at the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino. The noise level measurements represent the typical weekday dry goods logistics warehouse operation in a single building, of roughly 285,000 square feet, with a loading dock area on the western side of the building façade. Up to ten trucks were observed in the loading dock area including a combination of track trailer semi-trucks, two-axle delivery trucks, and background forklift operations.

The unloading/docking activity noise level measurement was taken over a fifteen-minute period and represents multiple noise sources taken from the center of loading dock activities generating a reference noise level of 62.8 dBA L_{eq} at a uniform reference distance of 50 feet. At this measurement location, the noise sources associated with 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 and air brakes noise.

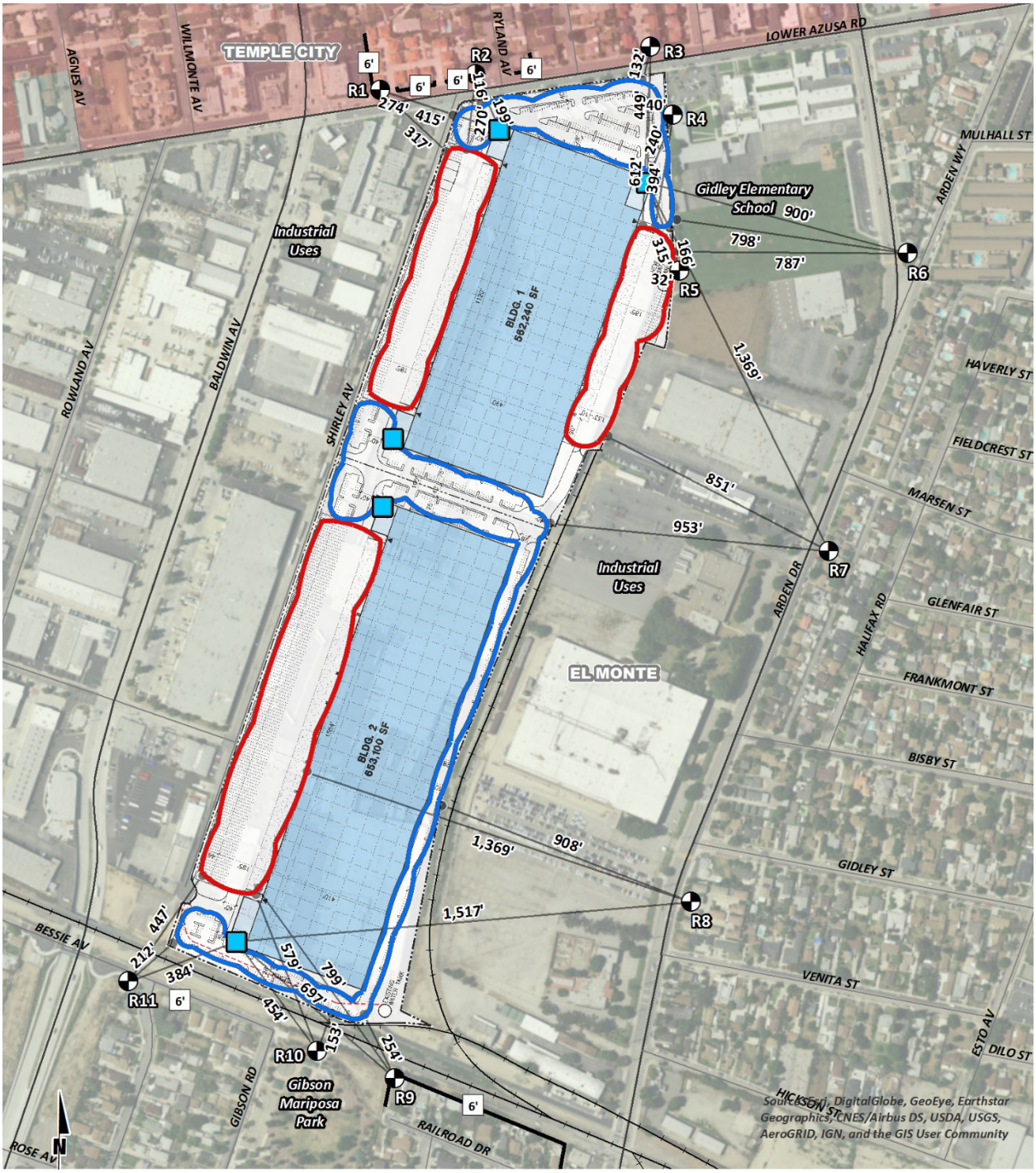
9.1.2 ROOF-TOP AIR CONDITIONING UNITS

To assess the impacts created by the roof-top air conditioning units at the Project buildings, reference noise levels measurements were taken at the Santee Walmart on July 27th, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe a single mechanical roof-top air conditioning unit on the roof of an existing Walmart store. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. At 5 feet from the roof-top air conditioning unit, the exterior noise levels were measured at 77.2 dBA L_{eq}. Using the uniform reference distance of 50 feet, the noise level is 57.2 dBA L_{eq}. The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. The roof-top air condition units were observed to operate the most during the daytime hours for a total of 39 minutes per hour. The noise attenuation provided by a parapet wall is not reflected in this reference noise level measurement.

9.1.3 PARKING LOT VEHICLE MOVEMENTS (AUTOS)

To determine the noise levels associated with parking lot vehicle movements, Urban Crossroads collected reference noise level measurements over a 24-hour period on May 17th, 2017 at the parking lot for the Panasonic Avionics Corporation in the City of Lake Forest. The peak hour of activity measured over the 24-hour noise level measurement period occurred between 12:00 p.m. to 1:00 p.m., or the typical lunch hour for employees working in the area. The measured reference noise level at 50 feet from parking lot vehicle movements was measured at 41.7 dBA L_{eq}. The parking lot noise levels are mainly due to cars pulling in and out of spaces during peak lunch hour activity and employees talking. Noise associated with parking lot vehicle movements is expected to operate for the entire hour (60 minutes).

EXHIBIT 9-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS



LEGEND:

- Receiver Locations
- 6' Existing Barrier Height (in feet)
- Existing Barrier
- Roof-Top Air Conditioning Unit
- Parking Lot Vehicle Movements
- Truck Unloading/Docking Activity
- Distance from receiver to center of noise source (in feet

9.2 OPERATIONAL NOISE LEVELS

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each of the sensitive receiver locations. The operational noise level calculations shown on Table 9-2 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. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL_1):

$$SPL_2 = SPL_1 - 20\log(D_2/D_1)$$

Where SPL_2 is the resulting noise level after attenuation, SPL_1 is the source noise level, D_2 is the distance to the reference sound pressure level (SPL_1), and D_1 is the distance to the receiver location. Table 9-2 indicates that the unmitigated operational noise levels associated with the idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements are expected to range from 24.9 to 63.6 dBA L_{50} at sensitive receiver locations in the City of El Monte, and between 43.1 to 49.5 dBA L_{eq} at sensitive receiver locations in Temple City. The unmitigated operational noise level calculation worksheets are included in Appendix 9.1.

TABLE 9-2: UNMITIGATED PROJECT OPERATIONAL NOISE LEVELS

Receiver Location[1]	Noise Source[2]	Project Operational Noise Levels (dBA)[3]				
		L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_{max} (Anytime)
R1	Truck Unloading/Docking Activity	46.7	-	-	-	-
	Roof-Top Air Conditioning Unit	36.9	-	-	-	-
	Parking Lot Vehicle Movements	30.6	-	-	-	-
	Combined Noise Level:	47.2	-	-	-	-
R2	Truck Unloading/Docking Activity	48.1	-	-	-	-
	Roof-Top Air Conditioning Unit	43.3	-	-	-	-
	Parking Lot Vehicle Movements	36.2	-	-	-	-
	Combined Noise Level:	49.5	-	-	-	-
R3	Truck Unloading/Docking Activity	41.0	-	-	-	-
	Roof-Top Air Conditioning Unit	36.2	-	-	-	-
	Parking Lot Vehicle Movements	35.4	-	-	-	-
	Combined Noise Level:	43.1	-	-	-	-
R4	Truck Unloading/Docking Activity	-	41.8	44.8	49.4	57.6
	Roof-Top Air Conditioning Unit	-	38.9	40.6	41.9	42.7
	Parking Lot Vehicle Movements	-	40.0	41.0	46.0	62.9
	Combined Noise Level:	-	45.2	47.3	51.5	64.1
R5	Truck Unloading/Docking Activity	-	63.6	66.6	71.2	79.4
	Roof-Top Air Conditioning Unit	-	36.5	38.2	39.5	40.3
	Parking Lot Vehicle Movements	-	30.7	31.7	36.7	53.6
	Combined Noise Level:	-	63.6	66.6	71.2	79.4
R6	Truck Unloading/Docking Activity	-	35.8	38.8	43.4	51.6
	Roof-Top Air Conditioning Unit	-	27.4	29.1	30.4	31.2
	Parking Lot Vehicle Movements	-	20.5	21.5	26.5	43.4
	Combined Noise Level:	-	36.5	39.3	43.7	52.2
R7	Truck Unloading/Docking Activity	-	35.1	38.1	42.7	50.9
	Roof-Top Air Conditioning Unit	-	23.8	25.5	26.8	27.6
	Parking Lot Vehicle Movements	-	19.3	20.3	25.3	42.2
	Combined Noise Level:	-	35.5	38.4	42.9	51.5
R8	Truck Unloading/Docking Activity	-	13.4	16.4	21.0	29.2
	Roof-Top Air Conditioning Unit	-	22.9	24.6	25.9	26.7
	Parking Lot Vehicle Movements	-	19.6	20.6	25.6	42.5
	Combined Noise Level:	-	24.9	26.5	29.4	42.8
R9	Truck Unloading/Docking Activity	-	18.1	21.1	25.7	33.9
	Roof-Top Air Conditioning Unit	-	29.6	31.3	32.6	33.4
	Parking Lot Vehicle Movements	-	27.9	28.9	33.9	50.8
	Combined Noise Level:	-	32.0	33.5	36.7	51.0

Receiver Location[1]	Noise Source[2]	Project Operational Noise Levels (dBA)[3]				
		L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_{max} (Anytime)
R10	Truck Unloading/Docking Activity	-	20.9	23.9	28.5	36.7
	Roof-Top Air Conditioning Unit	-	33.3	35.0	36.3	37.1
	Parking Lot Vehicle Movements	-	31.2	32.2	37.2	54.1
	Combined Noise Level:	-	35.5	37.0	40.1	54.3
R11	Truck Unloading/Docking Activity	-	40.7	43.7	48.3	56.5
	Roof-Top Air Conditioning Unit	-	34.8	36.5	37.8	38.6
	Parking Lot Vehicle Movements	-	29.1	30.1	35.1	52.0
	Combined Noise Level:	-	41.9	44.6	48.9	57.9

[1] See Exhibit 9-A for the receiver and noise source locations.
[2] Reference noise sources as shown on Table 9-1.
[3] Operational noise level calculations are provided in Appendix 9.1.
"E. Avg." = Logarithmic (energy) average

9.3 OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of El Monte and Temple City exterior noise level standards. Table 9-3 shows the operational noise levels associated with Goodman Logistics Center Project will exceed the exterior noise level standards at three of the 11 receiver locations: R1, R2, and R5. Therefore, operational noise mitigation measures are required to reduce the *potentially significant* noise level impacts at adjacent sensitive uses.

TABLE 9-3: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Land Use	Jurisdiction	Noise Level at Receiver Locations (dBA)[2]					Threshold Exceeded?[3]
			L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_{max} (Anytime)	
Daytime	**Lowest Residential Exterior Noise Level Limits**		**55**	**50**	**55**	**60**	**65**	**-**
Nighttime			**45**	**45**	**50**	**55**	**60**	**-**
R1	Residential	Temple City	47.2	-	-	-	-	Yes
R2	Residential		49.5	-	-	-	-	Yes
R3	Residential		43.1	-	-	-	-	No
R4	School[4]	El Monte	-	45.2	47.3	51.5	64.1	No
R5	School[4]		-	63.6	66.6	71.2	79.4	Yes
R6	Residential		-	36.5	39.3	43.7	52.2	No
R7	Residential		-	35.5	38.4	42.9	51.5	No
R8	Residential		-	24.9	26.5	29.4	42.8	No
R9	Residential		-	32.0	33.5	36.7	51.0	No
R10	Residential		-	35.5	37.0	40.1	54.3	No
R11	Residential		-	41.9	44.6	48.9	57.9	No

[1] See Exhibit 9-A for the receiver and noise source locations.
[2] Estimated Project operational noise levels as shown on Table 9-2.
[3] Do the estimated Project operational noise levels meet the operational noise level standards (Table 3-1)?
[4] School uses are only evaluated based on the daytime noise level standards since they do not represent sensitive receiver locations during the nighttime hours when schools are closed.
"E. Avg." = Logarithmic (energy) average

To reduce the *potentially significant* operational noise level impacts at receiver locations R1, R2, and R5, the construction of the following noise barriers is required:

- Minimum 10-foot high noise barriers at the northwest corner of the exterior loading dock area of Building 1;
- Minimum 14-foot high noise barrier adjacent to the Gidley Elementary School fields, playground, and athletic court areas at the eastern Building 1 loading dock area;
    - Transition barriers from 10 to 8 feet high:
        - north of the 14-foot high recommended noise barrier adjacent to Gidley Elementary School classroom buildings; and
        - south of the 14-foot high recommended noise barrier location.
- Minimum 5-foot high parapet/screening walls for all roof-top mechanical ventilation equipment on Buildings 1 and 2.

With the noise barriers shown on Exhibit 9-B, further detailed in the Executive Summary, the Project operational noise levels will range from 22.5 to 49.9 dBA L_{50} at sensitive receiver locations in the City of El Monte, and between 40.8 to 43.5 dBA L_{eq} at sensitive receiver locations in Temple City, as shown on Table 9-4. Table 9-5 shows that the Project operational noise levels will satisfy the City of El Monte and Temple City Municipal Code exterior noise level standards are all receiver locations, and the Project operational noise impacts will be *less than significant* with mitigation.

TABLE 9-4: MITIGATED PROJECT OPERATIONAL NOISE LEVELS

Receiver Location[1]	Noise Source[2]	Project Operational Noise Levels (dBA)[3]				
		L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_{max} (Anytime)
R1	Truck Unloading/Docking Activity	39.8	-	-	-	-
	Roof-Top Air Conditioning Unit	31.6	-	-	-	-
	Parking Lot Vehicle Movements	30.6	-	-	-	-
	Combined Noise Level:	40.8	-	-	-	-
R2	Truck Unloading/Docking Activity	41.2	-	-	-	-
	Roof-Top Air Conditioning Unit	37.1	-	-	-	-
	Parking Lot Vehicle Movements	36.2	-	-	-	-
	Combined Noise Level:	43.5	-	-	-	-
R3	Unloading/Docking Activity	41.0	-	-	-	-
	Roof-Top Air Conditioning Unit	31.0	-	-	-	-
	Parking Lot Vehicle Movements	35.4	-	-	-	-
	Combined Noise Level:	42.4	-	-	-	-
R4	Unloading/Docking Activity	-	33.7	36.7	41.3	49.5
	Roof-Top Air Conditioning Unit	-	33.1	34.8	36.1	36.9
	Parking Lot Vehicle Movements	-	40.0	41.0	46.0	62.9
	Combined Noise Level:	-	41.6	43.1	47.6	63.1
R5	Unloading/Docking Activity	-	49.8	52.8	57.4	65.6
	Roof-Top Air Conditioning Unit	-	31.0	32.7	34.0	34.8
	Parking Lot Vehicle Movements	-	30.7	31.7	36.7	53.6
	Combined Noise Level:	-	49.9	52.9	57.5	65.9
R6	Unloading/Docking Activity	-	35.8	38.8	43.4	51.6
	Roof-Top Air Conditioning Unit	-	22.3	24.0	25.3	26.1
	Parking Lot Vehicle Movements	-	20.5	21.5	26.5	43.4
	Combined Noise Level:	-	36.1	39.0	43.6	52.2
R7	Unloading/Docking Activity	-	35.1	38.1	42.7	50.9
	Roof-Top Air Conditioning Unit	-	18.9	20.6	21.9	22.7
	Parking Lot Vehicle Movements	-	19.3	20.3	25.3	42.2
	Combined Noise Level:	-	35.3	38.2	42.8	51.5
R8	Truck Unloading/Docking Activity	-	13.4	16.4	21.0	29.2
	Roof-Top Air Conditioning Unit	-	18.0	19.7	21.0	21.8
	Parking Lot Vehicle Movements	-	19.6	20.6	25.6	42.5
	Combined Noise Level:	-	22.5	24.0	27.9	42.7
R9	Truck Unloading/Docking Activity	-	18.1	21.1	25.7	33.9
	Roof-Top Air Conditioning Unit	-	24.5	26.2	27.5	28.3
	Parking Lot Vehicle Movements	-	27.9	28.9	33.9	50.8
	Combined Noise Level:	-	29.8	31.2	35.3	50.9

Receiver Location[1]	Noise Source[2]	Project Operational Noise Levels (dBA)[3]				
		L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_{max} (Anytime)
R10	Truck Unloading/Docking Activity	-	20.9	23.9	28.5	36.7
	Roof-Top Air Conditioning Unit	-	28.1	29.8	31.1	31.9
	Parking Lot Vehicle Movements	-	31.2	32.2	37.2	54.1
	Combined Noise Level:	-	33.2	34.6	38.6	54.2
R11	Truck Unloading/Docking Activity	-	40.7	43.7	48.3	56.5
	Roof-Top Air Conditioning Unit	-	29.5	31.2	32.5	33.3
	Parking Lot Vehicle Movements	-	29.1	30.1	35.1	52.0
	Combined Noise Level:	-	41.3	44.1	48.6	57.8

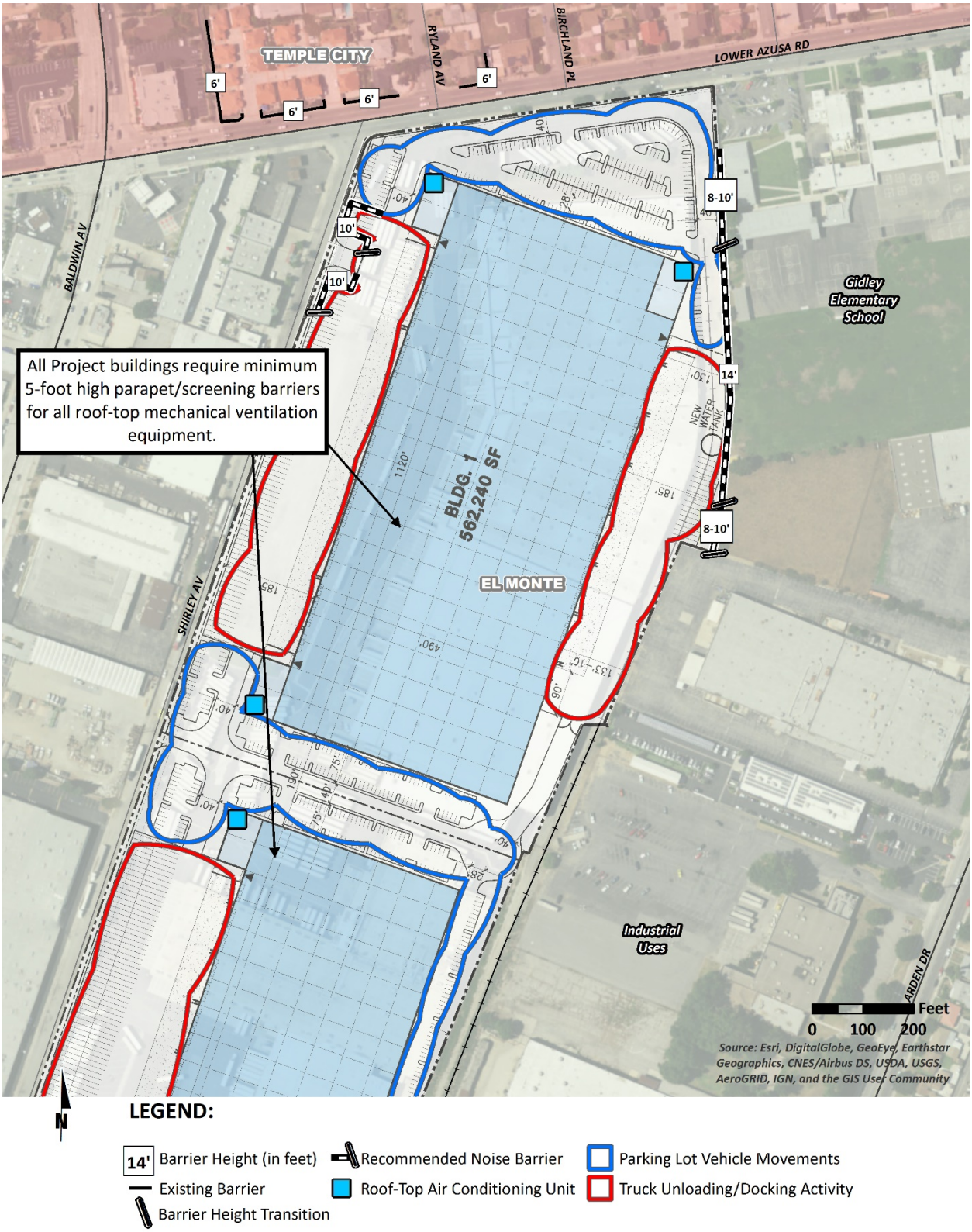
[1] See Exhibit 9-A for the receiver and noise source locations.
[2] Reference noise sources as shown on Table 9-1.
[3] Mitigated operational noise level calculations are provided in Appendix 9.1.
"E. Avg." = Logarithmic (energy) average

TABLE 9-5: MITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Land Use	Jurisdiction	Noise Level at Receiver Locations (dBA)[2]					Threshold Exceeded?[3]
			L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_{max} (Anytime)	
Daytime	**Lowest Residential Exterior Noise Level Limits**		**55**	**50**	**55**	**60**	**65**	**-**
Nighttime			**45**	**45**	**50**	**55**	**60**	**-**
R1	Residential	Temple City	40.8	-	-	-	-	No
R2	Residential		43.5	-	-	-	-	No
R3	Residential		42.4	-	-	-	-	No
R4	School[4]	El Monte	-	41.6	43.1	47.6	63.1	No
R5	School[4]		-	49.9	52.9	57.5	65.0	No
R6	Residential		-	36.1	39.0	43.6	52.2	No
R7	Residential		-	35.3	38.2	42.8	51.5	No
R8	Residential		-	22.5	24.0	27.9	42.7	No
R9	Residential		-	29.8	31.2	35.3	50.9	No
R10	Residential		-	33.2	34.6	38.6	54.2	No
R11	Residential		-	41.3	44.1	48.6	57.8	No

[1] See Exhibit 9-A for the receiver and noise source locations.
[2] Estimated Project operational noise levels as shown on Table 9-2.
[3] Do the mitigated Project operational noise levels meet the operational noise level standards (Table 3-1)?
[4] School uses are only evaluated based on the daytime noise level standards since they do not represent sensitive receiver locations during the nighttime hours when schools are closed.
"E. Avg." = Logarithmic (energy) average

EXHIBIT 9-B: OPERATIONAL NOISE MITIGATION MEASURES



9.4 PROJECT OPERATIONAL NOISE CONTRIBUTION

To describe the Project operational noise level contributions, the Project operational noise levels were combined with the existing ambient noise levels measurements for the off-site receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (6) Instead, they must be logarithmically added using the following base equation:

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

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 describe the Project noise level contributions. Noise levels that would be experienced at receiver locations when mitigated Project-source noise is added to the ambient daytime and nighttime conditions are presented on Tables 9-6 and 9-7, respectively.

As indicated on Tables 9-6 and 9-7, the Project will contribute an operational noise level increase during the daytime hours of up to 1.6 dBA L_{50} and during the nighttime hours of up to 4.8 dBA L_{50}. Based on the without Project (ambient) noise levels, the Project operational noise level increases will satisfy the significance criteria discussed in Section 4, and therefore, the increases at the sensitive receiver locations will be *less than significant*. On this basis, Project operational stationary-source noise would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project.

TABLE 9-6: DAYTIME OPERATIONAL NOISE LEVEL CONTRIBUTIONS

Receiver Location[1]	Jurisdiction	Project Operational Noise Levels (dBA)[2]		Measurement Location[3]	Reference Ambient Noise Levels (dBA)[4]		Combined Project and Ambient (dBA)[5]		Project Contribution (dBA)[6]		Threshold Exceeded?[7]	
		L_{eq} (E. Avg.)	L_{50} (30 mins)		L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{eq} (E. Avg.)	L_{50} (30 mins)
R1	Temple City	40.8	-	L1	69.3	-	69.3	-	0.0	-	No	-
R2		43.5	-	L2	76.0	-	76.0	-	0.0	-	No	-
R3		42.4	-	L3	73.8	-	73.8	-	0.0	-	No	-
R4	El Monte	-	41.6	L3	-	61.5	-	61.5	-	0.0	-	No
R5		-	49.9	L4	-	53.5	-	55.1	-	1.6	-	No
R6		-	36.1	L4	-	53.5	-	53.6	-	0.1	-	No
R7		-	35.3	L5	-	51.1	-	51.2	-	0.1	-	No
R8		-	22.5	L6	-	52.7	-	52.7	-	0.0	-	No
R9		-	29.8	L7	-	47.9	-	48.0	-	0.1	-	No
R10		-	33.2	L7	-	47.9	-	48.0	-	0.1	-	No
R11		-	41.3	L8	-	52.6	-	52.9	-	0.3	-	No

[1] See Exhibit 8-A for the sensitive receiver locations.
[2] Project operational noise levels as shown on Table 9-5. L_{eq} and L_{50} noise levels are shown based on Temple City and El Monte Municipal Code exterior noise level standards, respectively, for each receiver location within the given jurisdiction.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance Criteria as defined in Section 4.
"E. Avg." = Logarithmic (energy) average

TABLE 9-7: NIGHTTIME OPERATIONAL NOISE LEVEL CONTRIBUTIONS

Receiver Location[1]	Jurisdiction	Project Operational Noise Levels (dBA)[2]		Measurement Location[3]	Reference Ambient Noise Levels (dBA)[4]		Combined Project and Ambient (dBA)[5]		Project Contribution (dBA)[6]		Threshold Exceeded?[7]	
		L_{eq} (E. Avg.)	L_{50} (30 mins)		L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{eq} (E. Avg.)	L_{50} (30 mins)	L_{eq} (E. Avg.)	L_{50} (30 mins)
R1	Temple City	40.8	-	L1	64.8	-	64.8	-	0.0	-	No	-
R2		43.5	-	L2	71.5	-	71.5	-	0.0	-	No	-
R3		42.4	-	L3	68.2	-	68.2	-	0.0	-	No	-
R4	El Monte	-	41.6	L3	-	49.8	-	50.4	-	0.6	-	No
R5		-	49.9	L4	-	46.8	-	51.6	-	4.8	-	No
R6		-	36.1	L4	-	46.8	-	47.2	-	0.4	-	No
R7		-	35.3	L5	-	51.7	-	51.8	-	0.1	-	No
R8		-	22.5	L6	-	46.6	-	46.6	-	0.0	-	No
R9		-	29.8	L7	-	47.1	-	47.2	-	0.1	-	No
R10		-	33.2	L7	-	47.1	-	47.3	-	0.2	-	No
R11		-	41.3	L8	-	49.6	-	50.2	-	0.6	-	No

[1] See Exhibit 8-A for the sensitive receiver locations.
[2] Project operational noise levels as shown on Table 9-5. L_{eq} and L_{50} noise levels are shown based on Temple City and El Monte Municipal Code exterior noise level standards, respectively, for each receiver location within the given jurisdiction.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed nighttime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance Criteria as defined in Section 4.
"E. Avg." = Logarithmic (energy) average

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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 construction activity boundaries in relation to the nearby sensitive receiver locations.

10.1 CONSTRUCTION NOISE LEVELS

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages:

Mobile Equipment

- Demolition
- Site Preparation
- Grading
- Paving

Stationary Equipment

- Building Construction
- Architectural Coating

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to in excess of 80 dBA when measured at 50 feet. Hard site conditions are used in the construction noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source (i.e. construction equipment). For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver, and would be further reduced to 68 dBA at 200 feet from the source to the receiver. The construction stages used in this analysis are consistent with the data used to support the construction emissions in *Goodman Logistics Center Air Quality Impact Analysis* prepared by Urban Crossroads, Inc. (25)

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

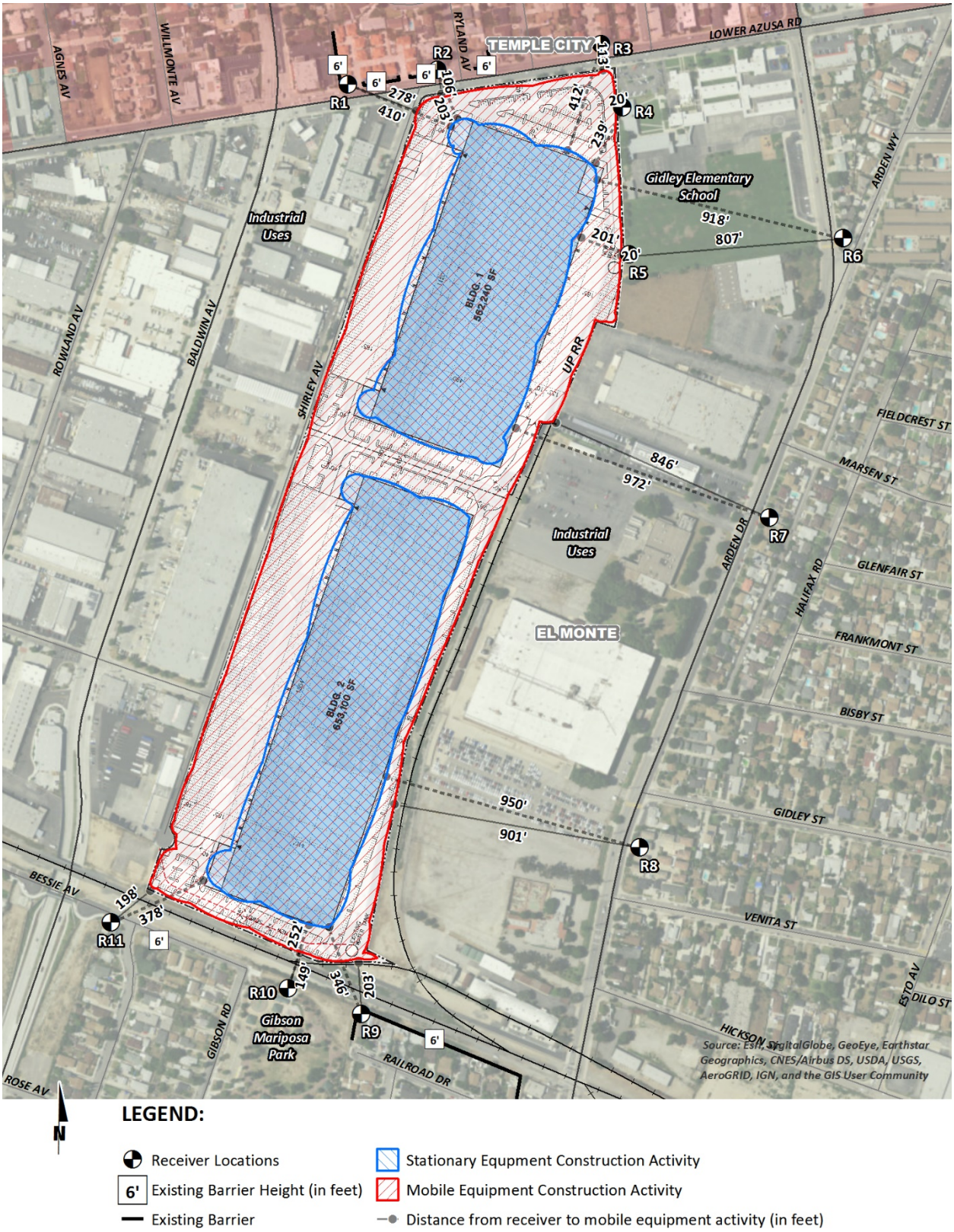
To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 10-1 provides a summary of the 17-construction reference noise level measurements. Since the reference noise levels were collected at varying distances, all construction noise level measurements presented on Table 10-1 have been adjusted to describe a common reference distance of 50 feet.

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

ID	Noise Source	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L_{eq})	Reference Noise Levels @ 50 Feet (dBA L_{eq})[7]
1	Truck Pass-Bys & Dozer Activity[1]	30'	63.6	59.2
2	Dozer Activity[1]	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities[2]	30'	71.9	67.5
4	Foundation Trenching[2]	30'	72.6	68.2
5	Rough Grading Activities[2]	30'	77.9	73.5
6	Framing[3]	30'	66.7	62.3
7	Water Truck Pass-By & Backup Alarm[4]	30'	76.3	71.9
8	Dozer Pass-By[4]	30'	84.0	79.6
9	Two Scrapers & Water Truck Pass-By[4]	30'	83.4	79.0
10	Two Scrapers Pass-By[4]	30'	83.7	79.3
11	Scraper, Water Truck, & Dozer Activity[4]	30'	79.7	75.3
12	Concrete Mixer Truck Movements[5]	50'	71.2	71.2
13	Concrete Paver Activities[5]	30'	70.0	65.6
14	Concrete Mixer Pour & Paving Activities[5]	30'	70.3	65.9
15	Concrete Mixer Backup Alarms & Air Brakes[5]	50'	71.6	71.6
16	Concrete Mixer Pour Activities[5]	50'	67.7	67.7
17	Forklift, Jackhammer, & Metal Truck Bed Loading	50'	67.9	67.9

[1] As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.
[2] As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.
[3] As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.
[4] As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.
[5] Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.
[6] As measured by Urban Crossroads, Inc. on 9/9/16 during the demolition of an existing paved parking lot at 41 Corporate Park in Irvine.
[7] Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

EXHIBIT 10-A: CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS



10.3 CONSTRUCTION NOISE ANALYSIS

Tables 10-2 to 10-7 show the Project construction stages and the reference construction noise levels used for each stage. Table 10-7 provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations in the City of El Monte. Based on the reference construction noise levels, the Project-related construction noise levels when the highest reference noise level is operating at the edge of primary construction activity nearest each sensitive receiver location will range from 59.7 to 87.5 dBA L_{eq} with mobile equipment, and from 44.9 to 56.1 dBA L_{eq} with stationary equipment at the sensitive receiver locations, as shown on Table 10-8.

TABLE 10-2: DEMOLITION MOBILE EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Forklift, Jackhammer, & Metal Truck Bed Activities	67.9
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	67.9

Receiver Location	Distance to Mobile Equip. Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	278'	-14.9	-5.0	48.0
R2	106'	-6.5	-5.0	56.4
R3	113'	-7.1	0.0	60.8
R4	20'	8.0	0.0	75.9
R5	20'	8.0	0.0	75.9
R6	807'	-24.2	0.0	43.7
R7	846'	-24.6	0.0	43.3
R8	901'	-25.1	0.0	42.8
R9	203'	-12.2	-5.0	50.7
R10	149'	-9.5	0.0	58.4
R11	198'	-12.0	0.0	55.9

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area (0 if no barrier attenuation is accounted for at the given receiver location).

TABLE 10-3: SITE PREPARATION MOBILE EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Dozer Pass-By	79.6
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	79.6

Receiver Location	Distance to Mobile Equip. Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	278'	-14.9	-5.0	59.7
R2	106'	-6.5	-5.0	68.0
R3	113'	-7.1	0.0	72.5
R4	20'	8.0	0.0	87.5
R5	20'	8.0	0.0	87.5
R6	807'	-24.2	0.0	55.4
R7	846'	-24.6	0.0	55.0
R8	901'	-25.1	0.0	54.4
R9	203'	-12.2	-5.0	62.4
R10	149'	-9.5	0.0	70.1
R11	198'	-12.0	0.0	67.6

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area (0 if no barrier attenuation is accounted for at the given receiver location).

TABLE 10-4: GRADING MOBILE EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Rough Grading Activities	73.5
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	73.5

Receiver Location	Distance to Mobile Equip. Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	278'	-14.9	-5.0	53.6
R2	106'	-6.5	-5.0	61.9
R3	113'	-7.1	0.0	66.4
R4	20'	8.0	0.0	81.4
R5	20'	8.0	0.0	81.4
R6	807'	-24.2	0.0	49.3
R7	846'	-24.6	0.0	48.9
R8	901'	-25.1	0.0	48.3
R9	203'	-12.2	-5.0	56.3
R10	149'	-9.5	0.0	64.0
R11	198'	-12.0	0.0	61.5

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area (0 if no barrier attenuation is accounted for at the given receiver location).

TABLE 10-5: PAVING MOBILE EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Concrete Mixer Truck Movements	71.2
Concrete Paver Activities	65.6
Concrete Mixer Pour & Paving Activities	65.9
Concrete Mixer Backup Alarms & Air Brakes	71.6
Concrete Mixer Pour Activities	67.7
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	71.6

Receiver Location	Distance to Mobile Equip. Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	278'	-14.9	-5.0	51.7
R2	106'	-6.5	-5.0	60.1
R3	113'	-7.1	0.0	64.5
R4	20'	8.0	0.0	79.6
R5	20'	8.0	0.0	79.6
R6	807'	-24.2	0.0	47.4
R7	846'	-24.6	0.0	47.0
R8	901'	-25.1	0.0	46.5
R9	203'	-12.2	-5.0	54.4
R10	149'	-9.5	0.0	62.1
R11	198'	-12.0	0.0	59.6

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area (0 if no barrier attenuation is accounted for at the given receiver location).

TABLE 10-6: BUILDING CONSTRUCTION STATIONARY EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Construction Vehicle Maintenance Activities	67.5
Foundation Trenching	68.2
Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	68.2

Receiver Location	Distance to Stationary Equip. Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	410'	-18.3	-5.0	44.9
R2	203'	-12.2	-5.0	51.0
R3	412'	-18.3	0.0	49.8
R4	239'	-13.6	0.0	54.6
R5	201'	-12.1	0.0	56.1
R6	918'	-25.3	0.0	42.9
R7	972'	-25.8	0.0	42.4
R8	950'	-25.6	0.0	42.6
R9	346'	-16.8	-5.0	46.4
R10	252'	-14.0	0.0	54.1
R11	378'	-17.6	0.0	50.6

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area (0 if no barrier attenuation is accounted for at the given receiver location).

TABLE 10-7: ARCHITECTURAL COATING STATIONARY EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Construction Vehicle Maintenance Activities	67.5
Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	67.5

Receiver Location	Distance to Stationary Equip. Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	410'	-18.3	-5.0	44.2
R2	203'	-12.2	-5.0	50.3
R3	412'	-18.3	0.0	49.1
R4	239'	-13.6	0.0	53.9
R5	201'	-12.1	0.0	55.4
R6	918'	-25.3	0.0	42.2
R7	972'	-25.8	0.0	41.7
R8	950'	-25.6	0.0	41.9
R9	346'	-16.8	-5.0	45.7
R10	252'	-14.0	0.0	53.4
R11	378'	-17.6	0.0	49.9

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers in the Project study area (0 if no barrier attenuation is accounted for at the given receiver location).

10.4 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from the edge of primary construction activity to each of the nearby receiver locations. As shown on Table 10-8, the unmitigated construction noise levels are expected to range from 59.7 to 87.5 dBA L_{eq} with mobile equipment, and 44.9 to 56.1 dBA L_{eq} with stationary equipment at the nearby receiver locations.

TABLE 10-8: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Hourly Noise Levels (dBA L_{eq})						Highest Construction Noise Levels (dBA L_{eq})[2]	
	Mobile Equipment				Stationary Equipment			
	Demolition	Site Preparation	Grading	Paving	Building Construction	Architectural Coating	Mobile Equip.	Stationary Equip.
R1	48.0	59.7	53.6	51.7	44.9	44.2	59.7	44.9
R2	56.4	68.0	61.9	60.1	51.0	50.3	68.0	51.0
R3	60.8	72.5	66.4	64.5	49.8	49.1	72.5	49.8
R4	75.9	87.5	81.4	79.6	54.6	53.9	87.5	54.6
R5	75.9	87.5	81.4	79.6	56.1	55.4	87.5	56.1
R6	43.7	55.4	49.3	47.4	42.9	42.2	55.4	42.9
R7	43.3	55.0	48.9	47.0	42.4	41.7	55.0	42.4
R8	42.8	54.4	48.3	46.5	42.6	41.9	54.4	42.6
R9	50.7	62.4	56.3	54.4	46.4	45.7	62.4	46.4
R10	58.4	70.1	64.0	62.1	54.1	53.4	70.1	54.1
R11	55.9	67.6	61.5	59.6	50.6	49.9	67.6	50.6

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Estimated construction noise levels during peak operating conditions.

Table 10-9 shows the highest construction noise levels at the potentially impacted receiver locations are expected to approach 87.5 dBA L_{eq} from mobile equipment, and 56.1 dBA L_{eq} for stationary equipment. The unmitigated construction noise levels will, therefore, exceed the mobile equipment noise level threshold of 75 dBA L_{eq} at two of the eleven receiver locations, R4 and R5, and satisfy the stationary equipment threshold of 60 dBA L_{eq} at all receiver locations. The noise impact due to unmitigated Project construction noise levels is, therefore, considered a *potentially significant* impact at R4 and R5, which both represent the Gidley Elementary School east of the Project, and mitigation is required to reduce the impacts.

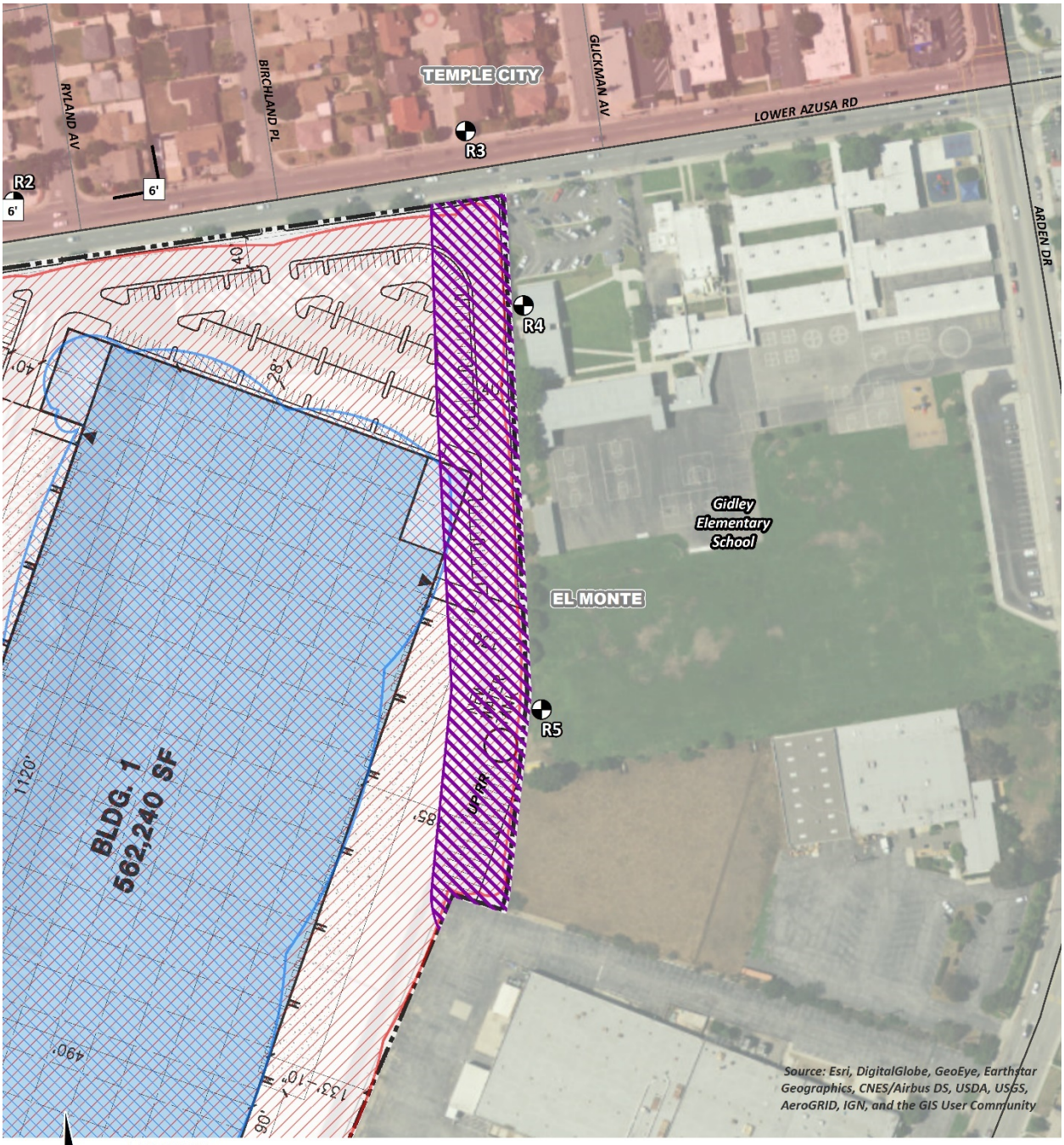
TABLE 10-9: CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})				Threshold Exceeded?[4]	
	Highest Construction Noise Levels[2]		Threshold[3]			
	Mobile Equip.	Stationary Equip.	Mobile Equip.	Stationary Equip.	Mobile Equip.	Stationary Equip.
R1	59.7	44.9	75	60	No	No
R2	68.0	51.0	75	60	No	No
R3	72.5	49.8	75	60	No	No
R4	87.5	54.6	75	60	Yes	No
R5	87.5	56.1	75	60	Yes	No
R6	55.4	42.9	75	60	No	No
R7	55.0	42.4	75	60	No	No
R8	54.4	42.6	75	60	No	No
R9	62.4	46.4	75	60	No	No
R10	70.1	54.1	75	60	No	No
R11	67.6	50.6	75	60	No	No

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Estimated construction noise levels during peak operating conditions, as shown on Table 10-8.
[3] Construction noise level threshold as shown on Table 4-2.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

Therefore, temporary construction noise mitigation measures are required to reduce these impacts at receiver locations R4 and R5. This includes a 100-foot buffer zone for large construction equipment (e.g. dozers, graders, scrapers, etc.) from the impacted receiver locations, as shown on Exhibit 10-B. The construction noise analysis presents a conservative approach with the highest noise-level-producing equipment for each stage of Project construction operating at the closest point from primary construction activity to the nearby sensitive receiver locations. This scenario is unlikely to occur during typical construction activities and likely overstates the construction noise levels which will be experienced at each receiver location.

EXHIBIT 10-B: CONSTRUCTION MITIGATION MEASURES



N

LEGEND:

- Receiver Locations
- Existing Barrier
- Stationary Equipment Construction Activity
- 8' Barrier Height (in feet)
- Mobile Equipment Construction Activity
- 100-foot buffer for large construction equipment (e.g., dozers, graders, etc.) capable of noise levels of greater than 87 dBA Leq at 10 feet over a 10-minute period.

Table 10-10 shows the mitigated construction noise levels at the potentially impacted receiver locations will be reduced to approach 73.5 dBA L_{eq} with the attenuation provided by the 100-foot buffer zone for large construction equipment (e.g., dozers, graders, scrapers, etc.) capable of generating noise levels greater than 87 dBA L_{eq} at 10 feet over a 10-minute period of activity. Therefore, with the Project construction mitigation measures described in the Executive Summary, the mitigated construction noise levels due to mobile equipment at receiver locations R4 and R5, representing the Gidley Elementary School, will satisfy the 75 dBA L_{eq} mobile equipment noise level standards, and the impact due to Project construction is considered *less than significant* with mitigation.

TABLE 10-10: MITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE

Receiver Location[1]	Highest Construction Noise Levels (dBA L_{eq})[2]	Distance Attenuation with 100-Foot Buffer (dBA L_{eq})[3]	Mitigated Construction Noise Levels (dBA L_{eq})	Mobile Equipment Threshold	Threshold Exceeded?
R4	87.5	-14.0	73.5	75	No
R5	87.5	-14.0	73.5	75	No

[1] Noise receiver locations are shown on Exhibit 10-B.
[2] Highest construction noise levels, as shown on Table 10-9.

10.5 CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to building, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences to cause a vibration impact.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-8 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-11 presents the expected

Project related vibration levels at each of the sensitive receiver locations based on the County of Los Angeles 0.01 in/sec RMS threshold for vibration.

At distances ranging from 20 to 901 feet from Project construction activity, construction vibration velocity levels are expected to approach 0.088 in/sec RMS, as shown on Table 10-11. Based on the County of Los Angeles vibration standards, the unmitigated Project construction vibration levels will exceed the 0.01 in/sec RMS threshold at two of the 11 receiver locations: R4 and R5, which both represent Gidley Elementary School. Therefore, the 100-foot buffer zone mitigation measure, previously identified to reduce construction noise levels, is required to reduce the vibration levels at receiver locations R4 and R5. With the 100-foot buffer zone for large construction equipment large construction equipment (e.g., dozers, graders, scrapers, etc.) capable of generating noise levels greater than 87 dBA L_{eq} at 10 feet over a 10-minute period of activity, the mitigated Project vibration levels will approach 0.008 in/sec RMS and will remain below the 0.01 in/sec RMS threshold, as shown on Table 10-12.

Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter. Moreover, construction at the Project site will be restricted to daytime hours consistent with City requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours.

TABLE 10-11: UNMITIGATED CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)	Receiver PPV Levels (in/sec)[2]					RMS Vibration Level[3]	Threshold Exceeded?[4]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Highest Vibration Levels		
R1	278'	0.000	0.001	0.002	0.002	0.002	0.002	No
R2	106'	0.000	0.004	0.009	0.010	0.010	0.007	No
R3	113'	0.000	0.004	0.008	0.009	0.009	0.007	No
R4	20'	0.004	0.049	0.106	0.124	0.124	0.088	Yes
R5	20'	0.004	0.049	0.106	0.124	0.124	0.088	Yes
R6	807'	0.000	0.000	0.000	0.000	0.000	0.000	No
R7	846'	0.000	0.000	0.000	0.000	0.000	0.000	No
R8	901'	0.000	0.000	0.000	0.000	0.000	0.000	No
R9	203'	0.000	0.002	0.003	0.004	0.004	0.003	No
R10	149'	0.000	0.002	0.005	0.006	0.006	0.004	No
R11	198'	0.000	0.002	0.003	0.004	0.004	0.003	No

[1] Receiver locations are shown on Exhibit 10-A.
[2] Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.
[3] Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.
[4] Does the peak vibration exceed the maximum acceptable vibration threshold shown on Table 3-3?

TABLE 10-12: MITIGATED CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)	Receiver PPV Levels (in/sec)[2]					RMS Vibration Level[3]	Threshold Exceeded?[4]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Highest Vibration Levels		
R1	278'	0.000	0.001	0.002	0.002	0.002	0.002	No
R2	106'	0.000	0.004	0.009	0.010	0.010	0.007	No
R3	113'	0.000	0.004	0.008	0.009	0.009	0.007	No
R4	100'	0.000	0.004	0.010	0.011	0.011	0.008	No
R5	100'	0.000	0.004	0.010	0.011	0.011	0.008	No
R6	807'	0.000	0.000	0.000	0.000	0.000	0.000	No
R7	846'	0.000	0.000	0.000	0.000	0.000	0.000	No
R8	901'	0.000	0.000	0.000	0.000	0.000	0.000	No
R9	203'	0.000	0.002	0.003	0.004	0.004	0.003	No
R10	149'	0.000	0.002	0.005	0.006	0.006	0.004	No
R11	198'	0.000	0.002	0.003	0.004	0.004	0.003	No

[1] Receiver locations are shown on Exhibit 10-A.
[2] Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.
[3] Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.
[4] Does the peak vibration exceed the maximum acceptable vibration threshold shown on Table 3-3?

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11 REFERENCES

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2. **Urban Crossroads, Inc.** *Goodman Logistics Center Traffic Impact Analysis.* December 2017.
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12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Goodman Logistics Center 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) 336-5979.

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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 Orange • February, 2011
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013

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APPENDIX 3.1:

CITY OF EL MONTE MUNICIPAL CODE

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Chapter 8.36 - NOISE CONTROL

Sections:

8.36.010 - Declaration of policy.

It is declared to be the policy of the city to prohibit unnecessary, excessive, and annoying noises from all sources subject to its police power. It is recognized that at certain levels noises are detrimental to the health and welfare of the citizenry and in the public interest shall be controlled or eliminated.

(Prior code § 5910)

8.36.020 - Definitions.

Unless the context otherwise clearly indicates, the words and phrases used in this chapter are defined as follows:

"A-weighted sound pressure level" means the sound pressure level as measured with a sound meter using the A-weighting network. The standard notation is dBA.

"Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

"Decibel" means a unit of level for measuring the volume of a sound, equal to the logarithm of the ratio of the sound pressure of a standard sound (.0002 microbars). The standard notation is dB.

"Fixed noise source" means a stationary device which creates sounds while fixed or motionless, including but not limited to industrial and commercial machinery and equipment, pumps, fans, compressors, generators, air conditioners and refrigeration equipment.

"Hertz" means the complete sequence of values of a periodic quantity which occurs during a period.

"Impact noise" means the noise produced by the collision of one mass in motion with a second mass which may be either in motion or at rest.

"Impulsive noise" means and includes any noise which is composed of momentary noises that are repeated at sufficiently slow rates, such that a sound level meter set at "slow" meter characteristics will show changes in sound pressure level greater than ten (10) dBA.

"Mobile noise source" means any noise source other than a fixed noise source.

"Noise disturbance" means any sound or noise which endangers or injures the safety or health of human beings or animals or which annoys or disturbs reasonable persons of normal sensitivities or which is of such a noise level or volume as would annoy or disturb reasonable persons of normal sensitivities or which endangers or injures personal or real property, or which violates the ambient noise standards set forth in Section of this chapter.

"Sound level meter" means a measurement instrument containing a microphone or amplifier, an output meter and "A" frequency weighting networks for the measurement of sound levels, which satisfies the pertinent requirements, in American Specifications for Type 2 Sound Level Meters S1.4-1971, or the most recent revision thereof.

"Steady noise" means noise for which the sound pressure level remains essentially constant during the period of observation. It does not vary more than six (6) dBA when measured with the "slow" meter response of a sound level meter.

(Prior code §§ 5920—5920.11)

8.36.030 - Sound level measurements.

Any sound level measurement made pursuant to the provisions of this chapter shall be measured with a sound level meter using the "A" weighting network and slow response as defined in Section 8.36.020.

(Prior code § 5930)

8.36.040 - Ambient noise standards.

A. The following ambient noise standards, unless otherwise specifically indicated, shall apply to all property within their assigned zoning districts and said standards shall constitute the permissible noise level:

Zone	Day 7:00 a.m. to 10:00 p.m.	Night 10:00 p.m. to 7:00 a.m.
Single-family	50 dBA	45 dBA
Multifamily	55 dBA	50 dBA
Commercial	65 dBA	60 dBA

Industrial	70 dBA	70 dBA

B. It is unlawful for any person to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by more than five (5) decibels for a cumulation period of fifteen (15) minutes in any hour.

C. At the boundary line between a residential zone and a commercial and/or manufacturing zone, the noise level of the residential zone shall be used.

D. If a residential use is located within a commercial or industrial zone, the ambient noise level shall not exceed fifty (50) dBA between the hours of ten p.m. and seven a.m.

E. Corrections to Noise Limits. The numerical limits given in subsection A of this section shall be adjusted by the following corrections, where appropriate:

Noise Condition	Correction in dBA
1. Impulsive sounds, pure tone or sounds with a cyclically varying amplitude (The following corrections apply to day only)	-5
2. Noise occurring for a cumulation period of more than 5 but less than 15 minutes in any hour.	+5
3. Noise occurring more than 1 but less than 5 minutes in any hour.	+10
4. Noise occurring less than 1 minute in any hour.	+15

(Prior code §§ 5940—5940.4)

8.36.050 - Special noise sources.

A. Radios, Television Sets, and Similar Devices. Any noise level from the use or operation of any radio receiving set, musical instruments, phonograph, television set, or other machine or device for the producing or reproducing of sound at any hour of the day, which exceeds the noise limit at the property line of any receiving property shall be a violation of the provisions of Section 8.36.040(A).

B. Machinery, Fans and Other Mechanical Devices. Any noise level from the use or operation of any machinery, equipment, pump, fan, air conditioning apparatus, refrigerating equipment, motor vehicle, or other mechanical or electrical device, or in repairing or rebuilding any motor vehicle which exceeds the noise limits at any property line, of any receiving property shall be a violation of the provisions of Section 8.36.040(A).

C. Construction of Building.

1. Except as otherwise permitted under subsections (C)(2) or (G) of this section, it is unlawful for any person within the city to operate power construction tools or equipment in the performance of any outside construction or repair work on buildings, structures, or projects in or adjacent to a residential area, except between the hours of six a.m. and seven p.m. Monday through Friday or between the hours of eight a.m. and seven p.m. on Saturday and Sunday.

2. Upon a written showing of good cause by a project applicant and the applicant's construction contractor or subcontractor, the Chief Building Official may conditionally relax the hourly restrictions of this subsection on a case-by-case basis, provided such authorization is made in writing. The Chief Building Official is authorized to impose such reasonable conditions as may be deemed necessary and/or desirable to mitigate any noise or other adverse impacts generated by the construction undertaking during specially authorized work hours. The conduct of operations in a manner inconsistent with or beyond the scope of any written authorization granted by the Chief Building Official shall be unlawful and shall constitute a violation of this section. The Chief Building Official shall establish reasonable criteria for the grant of special work hours requests which balances the desire of residents for peace and quiet during evening and early morning hours with the efficiencies derived from authorizing special work hours requests. In accordance with the Chief Building Official's established criteria, each individual request shall be evaluated on its individual merits and on the specific circumstances and characteristics of the project or undertaking. No one grant request shall serve as binding president for any subsequent request.

3. By City Council resolution, the city may also impose such reasonable fees as may be necessary to review, process and enforce requests for special operating hours.

D. Amplified Sound. The use of loudspeakers or sound amplifying equipment in the city which exceeds the noise limits at any property line of a receiving property shall be a violation of Section 8.36.040(A).

E. Loading/Unloading. In residential zones, the opening, closing or other handling of boxes, crates, containers, building materials, or similar objects in such a manner as to cause a noise disturbance is not permitted between the hours of ten p.m. and seven a.m.

F. Interior Noise in a Condominium, Two-Family or Multifamily Residential Unit. Notwithstanding other sections of this chapter, it is unlawful for any persons to create, maintain or cause to be created or maintained any noise within the interior of any condominium, two (2) family or multifamily residential unit which exceeds the noise limits indicated in Section 8.36.040(A).

G. Exemptions.

1. Lawfully conducted parades or assemblies;

2. Emergency work;

3. All operations and activities the control of which is by law exclusively vested in another agency of government;

4. Bells or chimes while being used in conjunction with religious or patriotic services;

5. The provisions of this regulation shall not preclude the construction, operation, maintenance, and repairs of equipment, apparatus, or facilities of park and recreation departments, public work projects, or essential public services and facilities, including those of public utilities subject to the regulatory jurisdiction of the California Public Utilities Commission.

H. Residential Proximity to Freeway. The permissible noise level standards as applied to residential properties within one hundred fifty (150) feet of freeway location shall be sixty-two (62) dBA between the hours of seven a.m. and ten p.m. and fifty-eighty (58) dBA between the hours of ten p.m. and seven a.m.

(Ord. 2728 § 2, 2008; Ord. 2470 § 1 (part), 1997: Ord. 2469 § 1 (part), 1997; prior code §§ 5950—5950.9)

8.36.060 - Noise level measurement.

A. The location selected for measuring exterior noise levels shall be at any point on the affected residential property. Affected residential property shall be the address from which the complaint was received. Interior noise measurements shall be made within the affected residential units.

B. The standards which may be considered in determining whether a violation of the provisions of this section exists, may include, but not be limited to, the following:

1. The level of the noise;

2. Whether the nature of the noise is usual or unusual;

3. The nature of the area within which the noise emanates;

4. The density of the inhabitation of the area within which the noise emanates;

5. The time of day or night:

6. The duration of the noise;

7. Whether the noise is produced by a commercial or noncommercial activity.

(Prior code §§ 5960—5960.2.7)

8.36.070 - Nonconforming uses.

Commercial or manufacturing uses abutting residential zones that exceed noise level standards shall be considered nonconforming uses. If the noise cannot be mitigated, the regulations specified in Chapter 17.06 of this code shall govern nonconforming uses in this chapter.

(Prior code § 5980)

8.36.080 - Noise disturbance prohibited.

No person shall create, conduct, maintain or cause a noise disturbance. No person shall host or conduct a private or public dance, party, gathering or event in a residential neighborhood or in another neighborhood inhabited for residential use where the sound or noise emanating therefrom constitutes a noise disturbance. The source or instrumentalities of a noise disturbance may be sized in conjunction with the abatement of a noise disturbance pursuant to Section 8.36.090 of this chapter.

(Prior code § 5991)

8.36.090 - Abatement of noise disturbance.

Any peace officer of the El Monte Police Department and any person empowered and authorized by Chapter 1.16 of this code to make arrests for violations of provisions of this code is empowered and authorized to summarily abate a noise disturbance pursuant to the authority of Chapter 8.44 of this title. (Amended during 1999 recodification; prior code § 5992)

8.36.100 - Costs for abatement of a noise disturbance assembly.

A. A noise disturbance assembly, as described below, is declared to be a public nuisance. In certain instances, the city may hold responsible persons civilly liable in accordance with this section, for costs incurred by the city in responding to a noise disturbance assembly. When a large party or gathering occurs on a private premises and a police officer determines that such a party or gathering poses a noise disturbance to reasonable persons of normal sensitivities under this chapter (the "noise disturbance assembly"), or that the noise disturbance assembly is for any other reason a threat to the public peace, health, safety or general welfare, the person(s) in apparent charge or control of the premises and/or the person(s) apparently responsible for the noise disturbance assembly (or if any of those persons may be a minor, then the parents or guardians of that minor) shall be held civilly liable jointly and severally, for the costs of the city associated with providing police personnel and other emergency services to respond to the noise disturbance assembly. Except as provided below, no person shall be held civilly liable for such costs unless a police officer of the El Monte Police Department has first provided a written or verbal warning to abate the noise disturbance assembly to a person apparently in charge or otherwise apparently responsible for such a public nuisance. Proof that such a warning has been given to a person in apparent charge or responsible for such a public nuisance shall be conclusively evidenced by a copy of a written notice of noise disturbance assembly as delivered by a police officer in a form as shall be approved by the City Administrator, and the Chief of Police. The form of such a notice shall provide for the time and date of the initial response of emergency public safety services to the scene of the noise disturbance assembly by the city, and also identified the police officer who delivered the notice. The notice may contain such other information as referenced in this chapter and this section as the City Administrator and the Police Chief may deem appropriate.

B. No such verbal or written notice shall be required to be given by a Police Officer as a prerequisite to the city initiating any civil liability collection proceeding under this section in instances in which the duty watch commander of the El Monte Police Department has first determined that the initial response to a call for emergency public safety services relating to a noise disturbance assembly may pose a significant risk to the safety of the peace officers and other emergency service personnel responding or dispatched to such a call or that other grounds exist for waiving or dispensing with the requirement of such a notice. Such a determination of the duty watch commander that the waiver of notice is appropriate in a particular instance shall be evidenced by a written memorandum of the duty watch commander which contains a description of the facts and circumstances which support such a finding.

C. The cost for abatement of a noise disturbance assembly which may be recovered by the city pursuant to this section shall not exceed the sum of one thousand dollars ($1,000.00) for a single incident. The costs for abatement of a noise disturbance assembly shall include the cost of providing police, fire fighting, rescue and emergency medical services at the scene of the public nuisance as well as the salaries of the public personnel responding to the public nuisance. The cost for abatement as authorized under this section constitutes a debt of the person(s) responsible for the public nuisance and is collectible by the city in the same manner as in the case of an obligation under a contract, expressed or implied. The city shall also separately assess the cost of its attorney's fees and court costs, including witness fees of peace officers and other emergency public safety services personnel, which may be associated with the collection of such abatement costs in any court proceeding.

D. The civil remedy as provided to the city by this section shall be cumulative to any other civil or criminal proceeding which the city may initiate against any person who may be responsible for a noise disturbance assembly, or otherwise involved with such a public nuisance or abatement. (Amended during 1999 recodification; prior code § 5993)

8.36.110 - Manner of enforcement—Violation and penalty.

A. The City Administrative Officer or his or her duly authorized designee is directed to enforce the provisions of this chapter. No persons shall interfere with, oppose or resist any authorized person charged with enforcement of this chapter while such person is engaged in the performance of his or her duty.

B. Violations—Misdemeanors. Any person violating the provisions of this chapter shall be deemed guilty of a misdemeanor and upon conviction thereof shall be

fined in an amount not exceeding five hundred dollars ($500.00) or be imprisoned in the county jail for a period not exceeding six (6) months or by both such fine and imprisonment. Each day such violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such.

C. Violations—Additional Remedies—Injunctions. As an additional remedy, the operation or maintenance of any device, instrument, vehicle, or machinery in violation of any provision of this chapter, which operation or maintenance causes or creates noise levels exceeding the noise levels or vibrations as specified in this chapter shall be deemed, and is declared to be a public nuisance and may be subject to abatement, pursuant to Chapter 8.44 of this title.

D. Violation of this chapter shall be prosecuted in the same manner as other misdemeanor violations of this code. No complaint shall be issued in the event the cause of violation is abated. In the event the alleged violator cannot be located in order to serve the notice of intention to prosecute, the notice as required herein shall be deemed to be given upon mailing such notice by registered or certified mail to the alleged violator at his or her last known address or at the place where the violation occurred.

(Prior code §§ 5970—5970.4)

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APPENDIX 3.2:

TEMPLE CITY MUNICIPAL CODE

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ARTICLE I. REGULATION OF EXCESSIVE NOISE

9-1I-0: INTENT:

At certain levels, sound becomes noise and may jeopardize the health, safety or general welfare of Temple City residents and degrade their quality of life. Pursuant to its police power, the city council hereby declares that noise shall be regulated in the manner described herein. This article is intended to establish citywide standards regulating noise. This article is not intended to establish thresholds of significance for the purpose of any analysis required by the California environmental quality act and no such thresholds are hereby established. (Ord. 08-920)

9-1I-1: EXEMPTIONS:

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

A. Facilities owned or operated by or for a governmental agency.

B. Capital improvement projects of a governmental agency.

C. The maintenance or repair of public properties.

D. Construction operation, maintenance, and repairs of equipment, apparatus, or facilities of the parks and recreation department, public works projects, or essential public services and facilities, including those of public utilities subject to the regulatory jurisdiction of the California public utilities commission.

E. Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile.

F. Public or private schools and school sponsored activities.

G. Private construction projects located one-fourth ($^1/_4$) of a mile or more from an inhabited dwelling.

H. Private construction projects located within one-fourth ($^1/_4$) of a mile from an inhabited dwelling, provided that construction does not occur between the hours of seven o'clock (7:00) P.M. and seven o'clock (7:00) A.M.

I. Property maintenance, including, but not limited to, the operation of lawn mowers, leaf blowers, etc., provided such maintenance occurs between the hours of seven o'clock (7:00) A.M. and seven o'clock (7:00) P.M.

J. Motor vehicles, other than off highway vehicles. This exemption does not include sound emanating from motor vehicle sound systems.

K. Heating and air conditioning equipment.

L. Safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety, and welfare.

M. The discharge of firearms consistent with all state and federal laws.

N. Any activity as to which the city council or planning commission has issued an exception based on hardship, or to execute phase-in requirements.

O. Involuntary noise.

P. Isolated singular noises (not exceeding 2 seconds) not repeated within sixty (60) minutes.

Q. Matters preempted by state or federal law.

R. Matters involving the reasonable exercise of constitutional guarantees unless outweighed by compelling governmental interests or appropriate exercise of the police power.

S. "Emergency work" as defined under section 9-1I-2 of this article.

T. Noise as to which there is specific consent from all affected persons. (Ord. 08-920)

9-1I-2: DEFINITIONS:

As used in this article, the following terms shall have the following meanings:

AUDIO EQUIPMENT: A television, stereo, radio, tape player, compact disc player, MP3 player, iPod or other similar device.

DECIBEL (dB): A unit for measuring the relative amplitude of a sound equal approximately to the smallest difference normally detectable by the human ear, the range of which includes approximately one hundred thirty (130) decibels on a scale beginning with zero decibels for the faintest detectable sound. Decibels are measured with a sound level meter using different methodologies as defined below:

A-Weighting (dBA): The standard A-weighted frequency response of a sound level meter, which de-emphasizes low and high frequencies of sound in a manner similar to the human ear for moderate sounds.

Maximum Sound Level (Lmax): The maximum sound level measured on a sound level meter.

EMERGENCY WORK: Work made necessary to restore property to a safe condition following a public calamity, or work required to protect persons or property from an imminent exposure to danger or work by public or private utility to restore utility service.

GOVERNMENTAL AGENCY: The United States, the state of California, the county of Los Angeles, the city of Temple City or any combination of these agencies.

MOTOR VEHICLE: A vehicle that is self-propelled.

MOTOR VEHICLE SOUND SYSTEM: A stereo, radio, tape player, compact disc player, MP3 player, iPod or other similar device.

NOISE: Any loud, discordant or disagreeable sound.

OCCUPIED PROPERTY: Property upon which is located a residence, business or industrial or manufacturing use.

OFF HIGHWAY VEHICLE: A motor vehicle designed to travel over any terrain.

PUBLIC OR PRIVATE SCHOOL: An institution conducting academic instruction at the preschool, elementary school, junior high school, high school, or college level.

PUBLIC PROPERTY: Property owned by a governmental agency or held open to the public, including, but not limited to, parks, streets, sidewalks, and alleys.

SENSITIVE RECEPTOR: A land use that is identified as sensitive to noise, including, but not limited to, residences, schools, hospitals, churches, rest homes, cemeteries or public libraries.

SOUND AMPLIFYING EQUIPMENT: A loudspeaker, microphone, megaphone or other similar device.

SOUND LEVEL METER: An instrument meeting the standards of the American National Standards Institute for type 1 or type 2 sound level meters or an instrument that provides equivalent data. (Ord. 08-920)

9-1I-3: GENERAL SOUND LEVEL STANDARDS:

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth by the following standards:

Zone	7:00 A.M. To 10:00 P.M.	10:00 P.M. To 7:00 A.M.

Residential	55 dBA	45 dBA
Commercial	65 dBA	55 dBA
Industrial	75 dBA	75 dBA

At the boundary line between two (2) of the above zones, the noise level of the quieter zone shall be used. (Ord. 08-920)

9-1I-4: SOUND LEVEL MEASUREMENT METHODOLOGY:

Sound level measurements may be made anywhere within the boundaries of an occupied property. The actual location of a sound level measurement shall be at the discretion of the enforcement officials identified in section 9-1I-6 of this article. Sound level measurements shall be made with a sound level meter. Immediately before a measurement is made, the sound level meter shall be calibrated utilizing an acoustical calibrator meeting the standards of the American National Standards Institute. Following a sound level measurement, the calibration of the sound level meter shall be reverified. Sound level meters and calibration equipment shall be certified annually. (Ord. 08-920)

9-1I-5: SPECIAL SOUND SOURCES STANDARDS:

The general sound level standards set forth in section 9-1I-3 of this article apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitute separate violations of this article.

A. Motor Vehicles:

1. Off Highway Vehicles:

   a. No person shall operate an off highway vehicle unless it is equipped with a USDA qualified spark arrester and a constantly operating and properly maintained muffler. A muffler is not considered constantly operating and properly maintained if it is equipped with a cutout, bypass or similar device.

   b. No person shall operate an off highway vehicle unless the noise emitted by the vehicle is not more than ninety six (96) dBA if the vehicle was manufactured on or after January 1, 1986, or is not more than one hundred one (101) dBA if the vehicle was manufactured before January 1, 1986. For purposes of this subsection, emitted noise shall be measured a distance of twenty inches (20") from the vehicle tailpipe using test procedures established by the Society Of Automotive Engineers under standard J-1287.

2. Sound Systems: No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, between the hours of ten o'clock (10:00) P.M. and seven o'clock (7:00) A.M., such that the sound system is audible to the human ear inside any inhabited dwelling. No person shall operate a motor vehicle sound system, whether affixed to the vehicle or not, at any other time such that the sound system is audible to the human ear at a distance greater than one hundred feet (100') from the vehicle.

B. Power Tools And Equipment: No person shall operate any power tools or equipment between the hours of ten o'clock (10:00) P.M. and seven o'clock (7:00) A.M. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than one hundred feet (100') from the power tools or equipment.

C. Audio Equipment: No person shall operate any audio equipment, whether portable or not, between the hours of ten o'clock (10:00) P.M. and seven o'clock (7:00) A.M. such that the equipment is audible to the human ear inside an inhabited dwelling other than a dwelling in which the equipment may be located. No person shall operate any audio equipment, whether portable or not, at any other time such that the equipment is audible to the human ear at a distance greater than one hundred feet (100') from the equipment.

D. Sound Amplifying Equipment And Live Music: No person shall install, use or operate sound amplifying equipment, or perform, or allow to be performed, live music unless such activities comply with the following requirements. To the extent that these requirements conflict with any conditions of approval attached to an underlying land use permit, these requirements shall control.

1. Sound amplifying equipment or live music is prohibited between the hours of ten o'clock (10:00) P.M. and seven o'clock (7:00) A.M. and sound emanating from sound amplifying equipment or live music at any other time shall not be audible to the human ear at a distance greater than two hundred feet (200') from the equipment or music.

2. The use of sound amplifying equipment or live music in a condominium complex which exceeds the noise limits as set forth in section 9-1I-3 of this article, measured at any property line, or, measured in another condominium unit within the complex, shall be in violation of this article. (Ord. 08-920)

9-1I-6: ENFORCEMENT:

City of Temple City code enforcement personnel and the Los Angeles County sheriff shall have the primary responsibility for enforcing this article; provided, however, code enforcement personnel and the sheriff may be assisted by the public health department. Violations shall be prosecuted as described in section 9-

1I-8 of this article, but nothing in this article shall prevent the sheriff, code enforcement or the department of public health from engaging in efforts to obtain voluntary compliance by means of warnings, notices, or educational programs. (Ord. 08-920)

9-1I-7: DUTY TO COOPERATE:

No person shall refuse to cooperate with, or obstruct, the enforcement officials identified in section 9-1I-6 of this article when they are engaged in the process of enforcing the provisions of this article. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this article. (Ord. 08-920)

9-1I-8: VIOLATIONS AND PENALTIES:

Any person who violates any provision of this article once or twice within a one hundred eighty (180) day period shall be guilty of an infraction. Any person who violates any provision of this article more than twice within a one hundred eighty (180) day period shall be guilty of a misdemeanor. Each day a violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such. Penalties shall not exceed the following amounts:

A. For the first violation within a one hundred eighty (180) day period the minimum mandatory fine shall be five hundred dollars ($500.00).

B. For the second violation within a one hundred eighty (180) day period the minimum mandatory fine shall be seven hundred fifty dollars ($750.00).

C. For any further violations within a one hundred eighty (180) day period the minimum mandatory fine shall be one thousand dollars ($1,000.00) or imprisonment in the county jail for a period not exceeding six (6) months, or both. (Ord. 08-920)

APPENDIX 5.1:

STUDY AREA PHOTOS

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L1_E
34, 5' 26.660000", 118, 2' 50.840000"

L1_N
34, 5' 26.290000", 118, 2' 50.670000"

L1_S
34, 5' 27.130000", 118, 2' 51.110000"

L1_W
34, 5' 26.910000", 118, 2' 51.000000"

L2_E
34, 5' 28.530000", 118, 2' 45.870000"

L2_N
34, 5' 28.490000", 118, 2' 45.890000"

L2_S
34, 5' 28.500000", 118, 2' 45.870000"

L2_W
34, 5' 28.490000", 118, 2' 45.870000"

L3_E
34, 5' 28.120000", 118, 2' 42.100000"

L3_N
34, 5' 28.190000", 118, 2' 41.940000"

L3_S
34, 5' 28.120000", 118, 2' 42.100000"

L3_W
34, 5' 28.200000", 118, 2' 41.940000"

L4_E
34, 5' 22.520000", 118, 2' 31.060000"

L4_N
34, 5' 22.560000", 118, 2' 30.840000"

L4_S
34, 5' 22.520000", 118, 2' 31.060000"

L4_W
34, 5' 23.660000", 118, 2' 32.600000"

L5_E
34, 5' 13.180000", 118, 2' 36.090000"

L5_N
34, 5' 13.390000", 118, 2' 36.060000"

L5_S
34, 5' 13.180000", 118, 2' 36.090000"

L5_W
34, 5' 13.180000", 118, 2' 36.090000"

L6_E
34, 4' 59.050000", 118, 2' 40.130000"

L6_N
34, 4' 59.050000", 118, 2' 40.130000"

L6_S
34, 4' 59.170000", 118, 2' 40.240000"

L6_W
34, 4' 59.060000", 118, 2' 40.150000"

L7_E
34, 4' 54.980000", 118, 2' 55.290000"

L7_N
34, 4' 55.000000", 118, 2' 55.780000"

L7_S
34, 4' 55.260000", 118, 2' 55.180000"

L7_W
34, 4' 55.260000", 118, 2' 55.180000"

L8_E
34, 4' 59.250000", 118, 3' 3.990000"

L8_N
34, 4' 59.190000", 118, 3' 3.940000"

L8_S
34, 4' 59.250000", 118, 3' 3.990000"

L8_W
34, 4' 59.250000", 118, 3' 3.990000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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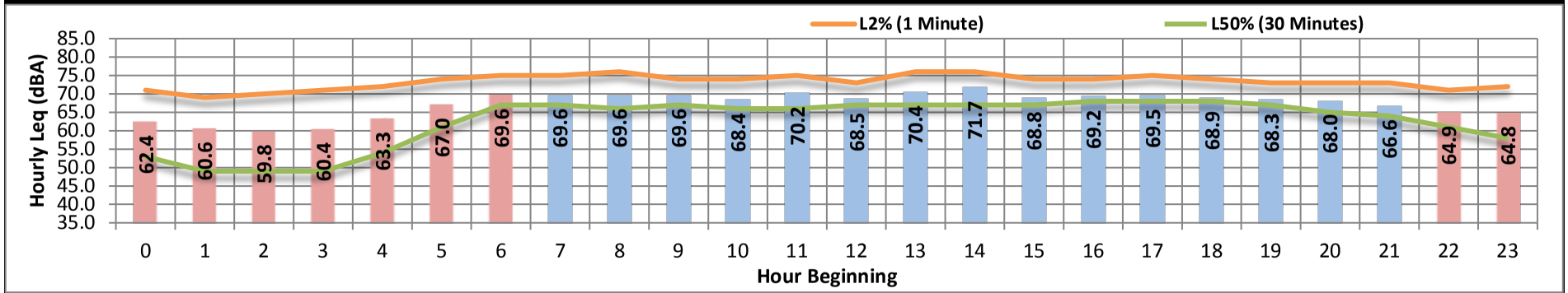
24-Hour Noise Level Measurement Summary

Project Name:	GLC Warehouse	*JN:*	11200	*Energy Average Leq*		*24-Hour*
Location:	L1 - Located northwest of the Project site on Lower Azusa Road adjacent to existing residential homes.	*Analyst:*	A. Wolfe	*Day*	*Night*	*CNEL*
		Date:	11/29/2017	69.3	64.8	72.6

Hourly Leq dBA Readings (unadjusted)



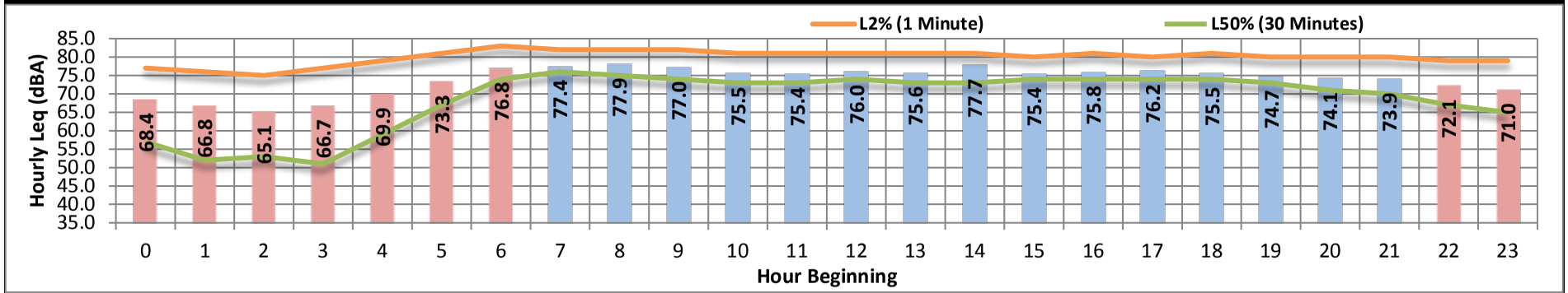
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	66.6	79.4	48.3	74.0	73.0	71.0	70.0	67.0	64.0	53.0	52.0	50.0
	Max	71.7	98.4	53.0	78.0	76.0	73.0	72.0	70.0	68.0	61.0	59.0	56.0
Energy Average:		69.3	Average:		75.9	74.3	72.4	71.5	69.3	66.7	58.3	55.9	52.3
Night	Min	59.8	76.7	44.1	71.0	69.0	66.0	64.0	53.0	49.0	46.0	46.0	45.0
	Max	69.6	86.0	51.9	76.0	75.0	74.0	73.0	71.0	67.0	58.0	55.0	54.0
Energy Average:		64.8	Average:		72.9	71.7	69.7	68.0	61.7	55.7	50.2	49.4	48.6
Hourly Summary													
Night	0	62.4	83.2	45.5	73.0	71.0	69.0	67.0	60.0	53.0	47.0	47.0	46.0
	1	60.6	84.3	44.1	71.0	69.0	67.0	65.0	56.0	49.0	46.0	46.0	45.0
	2	59.8	76.7	45.6	71.0	70.0	66.0	64.0	55.0	49.0	47.0	46.0	46.0
	3	60.4	77.4	45.8	72.0	71.0	68.0	65.0	53.0	49.0	47.0	47.0	46.0
	4	63.3	77.4	48.3	73.0	72.0	70.0	68.0	62.0	54.0	50.0	49.0	48.0
	5	67.0	82.8	49.8	75.0	74.0	73.0	72.0	67.0	61.0	52.0	51.0	50.0
	6	69.6	83.7	51.9	76.0	75.0	74.0	73.0	71.0	67.0	58.0	55.0	54.0
Day	7	69.6	89.0	53.0	77.0	75.0	73.0	72.0	70.0	67.0	59.0	57.0	55.0
	8	69.6	91.2	52.3	78.0	76.0	73.0	72.0	69.0	66.0	58.0	55.0	53.0
	9	69.6	92.0	50.5	76.0	74.0	73.0	72.0	69.0	67.0	59.0	57.0	53.0
	10	68.4	81.6	49.2	75.0	74.0	73.0	72.0	69.0	66.0	58.0	55.0	52.0
	11	70.2	97.4	48.3	77.0	75.0	72.0	71.0	69.0	66.0	58.0	55.0	50.0
	12	68.5	87.3	50.8	74.0	73.0	72.0	71.0	69.0	67.0	59.0	56.0	52.0
	13	70.4	94.4	48.9	78.0	76.0	73.0	72.0	70.0	67.0	59.0	56.0	52.0
	14	71.7	98.4	49.6	78.0	76.0	73.0	72.0	70.0	67.0	59.0	57.0	53.0
	15	68.8	79.4	51.9	74.0	74.0	72.0	72.0	70.0	67.0	60.0	58.0	54.0
	16	69.2	84.0	53.0	76.0	74.0	73.0	72.0	70.0	68.0	61.0	59.0	56.0
	17	69.5	87.4	49.5	76.0	75.0	73.0	72.0	70.0	68.0	61.0	58.0	51.0
	18	68.9	83.0	51.0	75.0	74.0	72.0	72.0	70.0	68.0	60.0	57.0	53.0
	19	68.3	80.9	50.1	75.0	73.0	72.0	71.0	69.0	67.0	56.0	54.0	51.0
	20	68.0	91.3	49.7	75.0	73.0	71.0	70.0	68.0	65.0	55.0	53.0	50.0
	21	66.6	84.5	49.6	74.0	73.0	71.0	70.0	67.0	64.0	53.0	52.0	50.0
Night	22	64.9	83.2	49.7	72.0	71.0	70.0	69.0	66.0	61.0	53.0	52.0	51.0
	23	64.8	86.0	50.6	73.0	72.0	70.0	69.0	65.0	58.0	52.0	52.0	51.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	GLC Warehouse	*JN:*	11200	*Energy Average Leq*		*24-Hour*
Location:	L2 - Located north of the Project site across Lower Azusa Road adjacent to an existing multi-family residential apartment building.	*Analyst:*	A. Wolfe	*Day*	*Night*	*CNEL*
		Date:	11/29/2017	76.0	71.5	79.3

Hourly Leq dBA Readings (unadjusted)



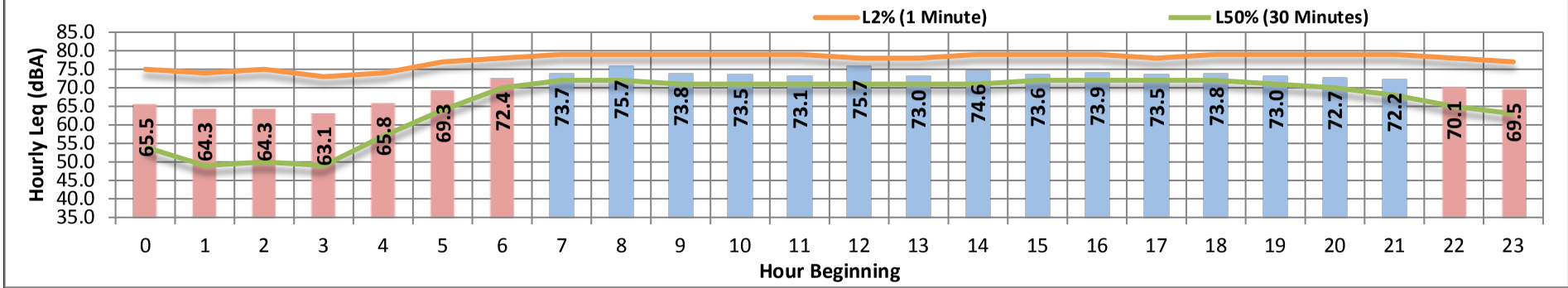
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	73.9	87.3	47.4	81.0	80.0	79.0	78.0	74.0	70.0	59.0	56.0	51.0
	Max	77.9	103.3	55.2	84.0	82.0	81.0	81.0	79.0	76.0	67.0	64.0	58.0
Energy Average:		76.0	Average:		81.9	80.9	79.7	79.1	76.3	73.4	63.7	60.0	54.1
Night	Min	65.1	83.7	45.1	77.0	75.0	72.0	69.0	57.0	51.0	47.0	46.0	46.0
	Max	76.8	94.3	53.7	83.0	83.0	82.0	81.0	78.0	74.0	61.0	58.0	55.0
Energy Average:		71.5	Average:		79.8	78.4	76.1	74.3	67.1	60.6	51.9	50.7	49.3
Hourly Summary													
Night	0	68.4	92.0	45.4	78.0	77.0	74.0	72.0	65.0	57.0	47.0	46.0	46.0
	1	66.8	91.1	45.1	78.0	76.0	73.0	71.0	61.0	52.0	48.0	47.0	46.0
	2	65.1	83.7	47.0	77.0	75.0	72.0	69.0	60.0	53.0	48.0	48.0	47.0
	3	66.7	85.9	46.5	79.0	77.0	74.0	71.0	57.0	51.0	48.0	48.0	47.0
	4	69.9	85.7	49.5	81.0	79.0	77.0	75.0	67.0	59.0	52.0	51.0	50.0
	5	73.3	86.9	50.6	82.0	81.0	79.0	78.0	73.0	67.0	55.0	54.0	52.0
	6	76.8	89.9	53.7	83.0	83.0	82.0	81.0	78.0	74.0	61.0	58.0	55.0
Day	7	77.4	92.2	55.2	83.0	82.0	81.0	81.0	79.0	76.0	66.0	62.0	58.0
	8	77.9	102.4	53.4	84.0	82.0	81.0	80.0	77.0	75.0	65.0	61.0	56.0
	9	77.0	100.9	51.2	83.0	82.0	80.0	80.0	77.0	74.0	64.0	60.0	53.0
	10	75.5	91.8	48.7	82.0	81.0	80.0	79.0	77.0	73.0	60.0	56.0	51.0
	11	75.4	90.1	49.9	82.0	81.0	80.0	79.0	76.0	73.0	64.0	59.0	52.0
	12	76.0	99.8	51.3	81.0	81.0	79.0	79.0	76.0	74.0	64.0	60.0	55.0
	13	75.6	92.9	50.1	82.0	81.0	80.0	79.0	76.0	73.0	63.0	59.0	52.0
	14	77.7	103.3	47.5	83.0	81.0	80.0	79.0	76.0	73.0	65.0	62.0	53.0
	15	75.4	89.4	53.4	81.0	80.0	79.0	79.0	76.0	74.0	65.0	62.0	56.0
	16	75.8	92.1	52.4	82.0	81.0	80.0	79.0	77.0	74.0	66.0	63.0	56.0
	17	76.2	100.6	47.4	81.0	80.0	79.0	79.0	76.0	74.0	67.0	64.0	56.0
	18	75.5	87.7	50.1	82.0	81.0	79.0	79.0	76.0	74.0	66.0	61.0	55.0
	19	74.7	87.3	52.0	81.0	80.0	79.0	78.0	76.0	73.0	62.0	58.0	54.0
	20	74.1	94.6	50.0	81.0	80.0	79.0	78.0	75.0	71.0	59.0	56.0	52.0
	21	73.9	94.8	51.4	81.0	80.0	79.0	78.0	74.0	70.0	59.0	57.0	53.0
Night	22	72.1	94.3	50.3	80.0	79.0	77.0	76.0	72.0	67.0	55.0	53.0	51.0
	23	71.0	89.5	49.1	80.0	79.0	77.0	76.0	71.0	65.0	53.0	51.0	50.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	GLC Warehouse	*JN:*	11200	*Energy Average Leq*		*24-Hour*
Location:	L3 - Located at the boundary between the Project site and the Gidley Elementary School on the south side of Lower Azusa Road.	*Analyst:*	A. Wolfe	*Day*	*Night*	*CNEL*
		Date:	11/29/2017	73.8	68.2	76.5

Hourly Leq dBA Readings (unadjusted)



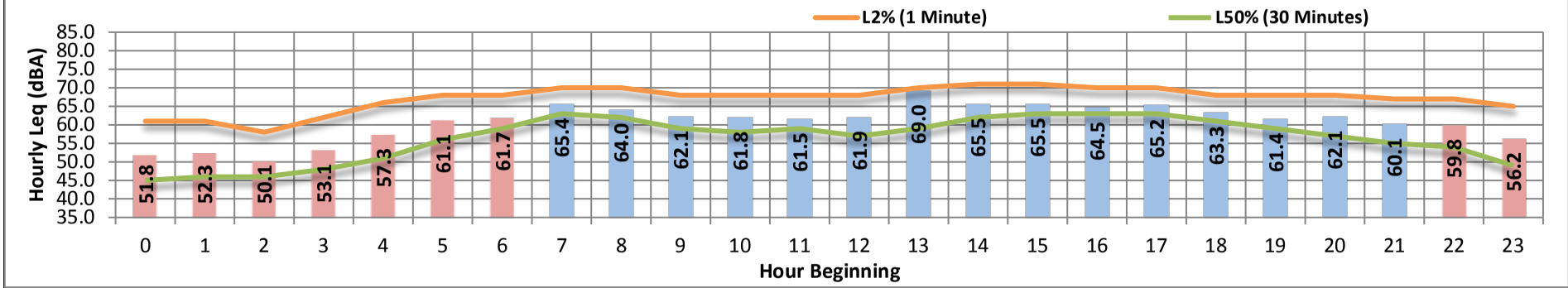
Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	72.2	82.8	47.2	79.0	78.0	77.0	76.0	73.0	68.0	57.0	54.0	50.0
	Max	75.7	103.5	54.5	81.0	79.0	78.0	77.0	75.0	72.0	65.0	62.0	57.0
Energy Average:		73.8	Average:		79.7	78.8	77.5	76.7	74.3	71.1	61.5	57.9	52.7
Night	Min	63.1	82.6	43.7	75.0	73.0	70.0	67.0	56.0	49.0	45.0	45.0	44.0
	Max	72.4	93.1	51.1	79.0	78.0	77.0	76.0	73.0	70.0	59.0	56.0	53.0
Energy Average:		68.2	Average:		77.0	75.7	73.2	71.4	64.3	57.9	49.8	48.6	47.2
Hourly Summary													
Night	0	65.5	82.6	43.7	76.0	75.0	72.0	70.0	63.0	54.0	46.0	45.0	44.0
	1	64.3	84.6	44.4	76.0	74.0	71.0	68.0	58.0	49.0	45.0	45.0	44.0
	2	64.3	83.8	44.7	77.0	75.0	71.0	68.0	56.0	50.0	46.0	45.0	45.0
	3	63.1	83.4	44.5	75.0	73.0	70.0	67.0	56.0	49.0	46.0	46.0	45.0
	4	65.8	83.1	47.7	76.0	74.0	72.0	71.0	64.0	57.0	50.0	49.0	48.0
	5	69.3	84.1	48.9	78.0	77.0	75.0	74.0	70.0	64.0	53.0	51.0	50.0
	6	72.4	90.7	51.1	79.0	78.0	77.0	76.0	73.0	70.0	59.0	56.0	53.0
Day	7	73.7	85.7	53.4	80.0	79.0	78.0	77.0	75.0	72.0	63.0	60.0	56.0
	8	75.7	102.6	49.3	81.0	79.0	78.0	77.0	75.0	72.0	62.0	59.0	52.0
	9	73.8	91.9	49.1	80.0	79.0	78.0	77.0	74.0	71.0	62.9	59.0	51.0
	10	73.5	93.6	48.3	80.0	79.0	78.0	77.0	74.0	71.0	59.0	55.0	50.0
	11	73.1	90.7	47.7	80.0	79.0	77.0	76.0	74.0	71.0	61.0	56.0	50.0
	12	75.7	103.5	49.0	79.0	78.0	77.0	77.0	74.0	71.0	61.0	58.0	53.0
	13	73.0	88.8	47.2	79.0	78.0	77.0	76.0	74.0	71.0	61.0	57.0	52.0
	14	74.6	99.4	49.7	81.0	79.0	77.0	76.0	74.0	71.0	62.0	58.0	53.0
	15	73.6	85.6	53.9	79.0	79.0	77.0	77.0	75.0	72.0	63.0	60.0	55.0
	16	73.9	87.8	54.5	80.0	79.0	78.0	77.0	75.0	72.0	65.0	62.0	57.0
	17	73.5	88.1	48.7	79.0	78.0	77.0	76.0	74.0	72.0	65.0	62.0	53.0
	18	73.8	82.8	50.4	79.0	79.0	78.0	77.0	75.0	72.0	63.0	59.0	53.0
	19	73.0	82.8	49.8	79.0	79.0	78.0	77.0	74.0	71.0	59.0	55.0	52.0
	20	72.7	90.3	49.1	79.0	79.0	77.0	77.0	74.0	70.0	58.0	55.0	51.0
	21	72.2	93.5	50.3	80.0	79.0	77.0	76.0	73.0	68.0	57.0	54.0	52.0
Night	22	70.1	84.0	48.0	78.0	78.0	76.0	75.0	70.0	65.0	53.0	51.0	48.0
	23	69.5	93.1	46.5	78.0	77.0	75.0	74.0	69.0	63.0	50.0	49.0	48.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	GLC Warehouse	*JN:*	11200	*Energy Average Leq*		*24-Hour*
Location:	L4 - Located east of the Project site adjacent to an existing residential home at the intersection of Arden Drive and Arden Way.	*Analyst:*	A. Wolfe	*Day*	*Night*	*CNEL*
		Date:	11/29/2017	64.2	57.7	66.2

Hourly Leq dBA Readings (unadjusted)



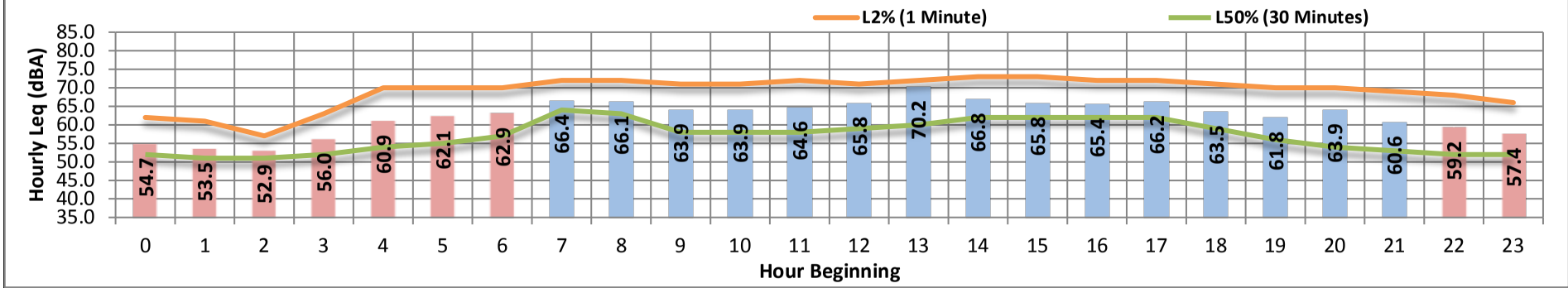
Time Period	Hour	Leq	Lmax	Lmin	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	60.1	74.2	41.5	69.0	67.0	64.0	63.0	59.0	55.0	49.0	48.0	44.0
	Max	69.0	97.7	51.6	75.0	71.0	68.0	68.0	65.0	63.0	58.0	57.0	54.0
Energy Average:		64.2	Average:		71.1	69.0	66.7	65.8	62.9	60.0	53.5	51.8	48.6
Night	Min	50.1	69.3	42.5	60.0	58.0	55.0	53.0	47.0	45.0	44.0	43.0	43.0
	Max	61.7	80.6	50.3	70.0	68.0	67.0	66.0	62.0	59.0	52.0	52.0	51.0
Energy Average:		57.7	Average:		65.8	64.0	61.6	59.7	53.8	50.4	46.8	46.2	45.7
Hourly Summary													
Night	0	51.8	69.3	42.5	63.0	61.0	58.0	56.0	48.0	45.0	44.0	43.0	43.0
	1	52.3	70.6	43.0	63.0	61.0	59.0	56.0	48.0	46.0	44.0	43.0	43.0
	2	50.1	69.4	43.4	60.0	58.0	55.0	53.0	47.0	46.0	44.0	44.0	44.0
	3	53.1	71.7	43.8	64.0	62.0	59.0	56.0	50.0	48.0	46.0	45.0	44.0
	4	57.3	78.7	46.5	68.0	66.0	63.0	60.0	54.0	51.0	48.0	48.0	47.0
	5	61.1	80.6	48.1	70.0	68.0	66.0	65.0	61.0	56.0	50.0	49.0	49.0
	6	61.7	73.4	50.3	69.0	68.0	67.0	66.0	62.0	59.0	52.0	52.0	51.0
Day	7	65.4	89.7	51.6	72.0	70.0	68.0	67.0	65.0	63.0	58.0	57.0	54.0
	8	64.0	84.0	48.5	71.0	70.0	68.0	67.0	64.0	62.0	56.0	54.0	51.0
	9	62.1	82.6	46.4	70.0	68.0	66.0	65.0	62.0	59.0	52.0	50.0	47.0
	10	61.8	82.5	43.1	69.0	68.0	66.0	65.0	62.0	58.0	51.0	48.0	45.0
	11	61.5	79.2	41.5	70.0	68.0	65.0	65.0	62.0	59.0	51.0	49.0	45.0
	12	61.9	85.2	42.0	70.0	68.0	65.0	64.0	61.0	57.0	50.0	48.0	44.0
	13	69.0	97.7	41.7	73.0	70.0	67.0	66.0	62.0	59.0	52.0	50.0	46.0
	14	65.5	87.7	45.9	75.0	71.0	68.0	67.0	64.0	62.0	56.0	55.0	50.0
	15	65.5	86.8	50.4	73.0	71.0	68.0	67.0	65.0	63.0	58.0	56.0	53.0
	16	64.5	77.5	49.4	71.0	70.0	68.0	68.0	65.0	63.0	57.0	55.0	52.0
	17	65.2	85.6	49.7	72.0	70.0	68.0	67.0	65.0	63.0	57.0	56.0	53.0
	18	63.3	80.4	45.5	70.0	68.0	67.0	66.0	64.0	61.0	55.0	53.0	49.0
	19	61.4	74.2	45.5	69.0	68.0	66.0	65.0	62.0	59.0	51.0	49.0	46.0
	20	62.1	83.0	47.1	72.0	68.0	66.0	65.0	61.0	57.0	50.0	49.0	47.0
	21	60.1	80.6	46.8	69.0	67.0	64.0	63.0	59.0	55.0	49.0	48.0	47.0
Night	22	59.8	80.3	45.2	69.0	67.0	65.0	64.0	59.0	54.0	48.0	47.0	45.0
	23	56.2	73.6	44.2	66.0	65.0	62.0	61.0	55.0	49.0	45.0	45.0	45.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	GLC Warehouse	*JN:*	11200	*Energy Average Leq*		*24-Hour*
Location:	L5 - Located east of the Project site on Arden Drive near existing industrial and residential uses.	*Analyst:*	A. Wolfe	*Day*	*Night*	*CNEL*
		Date:	11/29/2017	65.6	59.1	67.6

Hourly Leq dBA Readings (unadjusted)



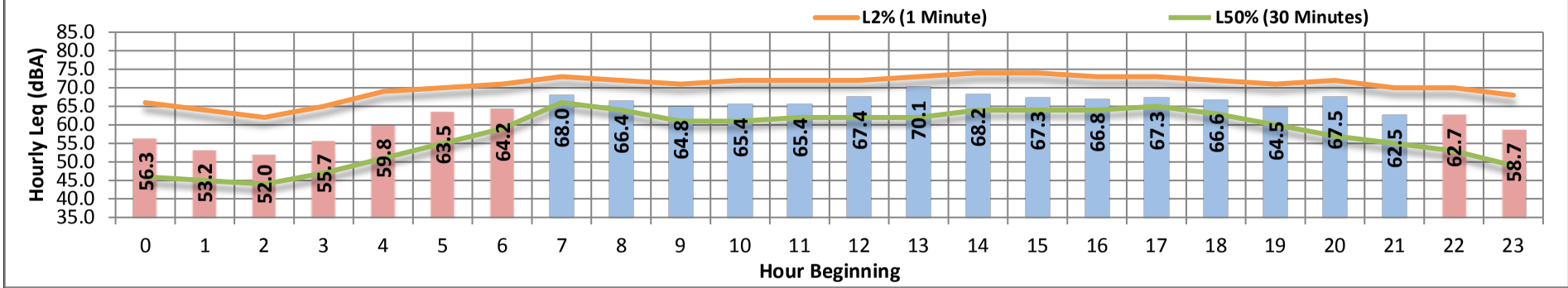
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	60.6	77.7	41.7	70.0	69.0	67.0	66.0	58.0	53.0	48.0	46.0	42.0
	Max	70.2	101.5	54.6	75.0	73.0	71.0	70.0	67.0	64.0	57.0	56.0	55.0
Energy Average:		65.6	Average:		72.7	71.4	69.5	68.5	64.2	59.3	51.1	49.7	46.9
Night	Min	52.9	71.4	49.4	61.0	57.0	54.0	53.0	51.0	51.0	50.0	50.0	49.0
	Max	62.9	84.4	53.1	72.0	70.0	69.0	68.0	62.0	57.0	54.0	53.0	53.0
Energy Average:		59.1	Average:		67.7	65.2	61.8	59.8	55.1	52.9	51.7	51.3	51.0
Hourly Summary													
Night	0	54.7	75.4	51.2	65.0	62.0	57.0	55.0	53.0	52.0	51.0	51.0	51.0
	1	53.5	72.2	49.4	64.0	61.0	55.0	53.0	51.0	51.0	50.0	50.0	49.0
	2	52.9	71.4	49.9	61.0	57.0	54.0	53.0	51.0	51.0	50.0	50.0	50.0
	3	56.0	81.3	50.4	66.0	63.0	57.0	55.0	53.0	52.0	51.0	51.0	50.0
	4	60.9	76.7	52.1	72.0	70.0	67.0	64.0	58.0	54.0	53.0	52.0	52.0
	5	62.1	84.4	53.0	72.0	70.0	68.0	66.0	59.0	55.0	54.0	53.0	53.0
	6	62.9	82.5	53.1	71.0	70.0	69.0	68.0	62.0	57.0	54.0	53.0	53.0
Day	7	66.4	78.7	54.6	72.0	72.0	71.0	70.0	67.0	64.0	57.0	56.0	55.0
	8	66.1	84.9	49.9	74.0	72.0	71.0	70.0	67.0	63.0	55.0	54.0	52.0
	9	63.9	82.9	44.7	72.0	71.0	69.0	68.0	64.0	58.0	49.0	48.0	46.0
	10	63.9	82.5	41.9	73.0	71.0	70.0	69.0	64.0	58.0	50.0	48.0	45.0
	11	64.6	89.7	41.7	73.0	72.0	70.0	69.0	64.0	58.0	48.0	46.0	42.0
	12	65.8	94.5	43.0	73.0	71.0	69.0	68.0	64.0	59.0	50.0	48.0	44.0
	13	70.2	101.5	42.7	74.0	72.0	70.0	69.0	65.0	60.0	51.0	49.0	45.0
	14	66.8	89.6	45.1	75.0	73.0	71.0	70.0	66.0	62.0	53.0	51.0	47.0
	15	65.8	86.0	45.7	74.0	73.0	71.0	70.0	66.0	62.0	52.0	50.0	47.0
	16	65.4	81.8	45.8	73.0	72.0	70.0	69.0	66.0	62.0	52.0	50.0	47.0
	17	66.2	88.5	45.7	73.0	72.0	70.0	69.1	66.0	62.0	53.0	50.0	47.0
	18	63.5	77.7	44.1	72.0	71.0	69.0	68.0	64.0	59.0	50.0	49.0	45.0
	19	61.8	77.8	45.2	71.0	70.0	68.0	67.0	62.0	56.0	49.0	48.0	46.0
	20	63.9	91.9	46.8	72.0	70.0	67.0	66.0	60.0	54.0	48.0	48.0	47.0
	21	60.6	78.4	49.1	70.0	69.0	67.0	66.0	58.0	53.0	50.0	50.0	49.0
Night	22	59.2	77.3	50.4	70.0	68.0	66.0	63.0	56.0	52.0	51.0	51.0	50.0
	23	57.4	76.9	50.9	68.0	66.0	63.0	61.0	53.0	52.0	51.0	51.0	51.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	GLC Warehouse	*JN:*	11200	*Energy Average Leq*		*24-Hour*
Location:	L6 - Located east of the Project site on Arden Way adjacent to existing residential homes between Gidley Street and Venita Street.	*Analyst:*	A. Wolfe	*Day*	*Night*	*CNEL*
		Date:	11/29/2017	66.9	60.3	69.0

Hourly Leq dBA Readings (unadjusted)



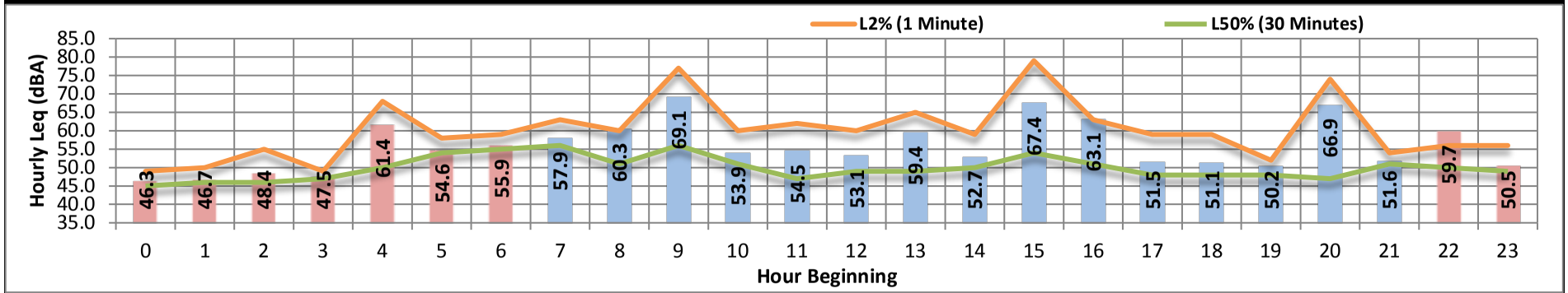
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	62.5	78.9	41.1	71.0	70.0	68.0	67.0	62.0	55.0	49.0	48.0	43.0
	Max	70.1	100.5	52.0	77.0	74.0	72.0	71.0	69.0	66.0	59.0	57.0	53.0
Energy Average:		66.9	Average:		73.9	72.3	70.3	69.3	66.1	62.0	52.7	50.6	47.7
Night	Min	52.0	70.9	42.1	64.0	62.0	56.0	53.0	45.0	44.0	43.0	43.0	42.0
	Max	64.2	90.0	48.4	73.0	71.0	69.0	68.0	64.0	59.0	51.0	50.0	49.0
Energy Average:		60.3	Average:		69.1	67.2	64.0	61.4	54.3	49.9	46.6	46.1	45.2
Hourly Summary													
Night	0	56.3	82.8	42.8	67.0	66.0	62.0	58.0	48.0	46.0	45.0	44.0	43.0
	1	53.2	70.9	42.7	66.0	64.0	59.0	55.0	46.0	45.0	44.0	43.0	43.0
	2	52.0	75.3	42.1	64.0	62.0	56.0	53.0	45.0	44.0	43.0	43.0	42.0
	3	55.7	72.8	42.7	67.0	65.0	62.0	58.0	55.0	47.0	44.0	44.0	43.0
	4	59.8	81.2	47.0	72.0	69.0	66.0	63.0	54.0	51.0	48.0	48.0	47.0
	5	63.5	90.0	47.5	72.0	70.0	68.0	67.0	61.0	55.0	50.0	49.0	48.0
	6	64.2	81.8	48.4	73.0	71.0	69.0	68.0	64.0	59.0	51.0	50.0	49.0
Day	7	68.0	85.8	52.0	74.0	73.0	72.0	71.0	69.0	66.0	59.0	57.0	53.0
	8	66.4	78.9	48.0	73.0	72.0	71.0	70.0	67.0	64.0	55.0	53.0	49.0
	9	64.8	89.2	46.2	72.0	71.0	69.0	68.0	65.0	61.0	51.0	50.0	47.0
	10	65.4	89.1	45.4	74.0	72.0	70.0	69.0	65.0	61.0	52.0	50.0	47.0
	11	65.4	84.4	41.1	74.0	72.0	70.0	69.0	66.0	62.0	51.0	48.0	43.0
	12	67.4	91.9	43.1	75.0	72.0	70.0	69.0	66.0	62.0	51.0	49.0	46.0
	13	70.1	100.5	42.0	75.0	73.0	70.0	69.0	66.0	62.0	51.0	48.0	44.0
	14	68.2	91.2	47.5	77.0	74.0	71.0	70.0	67.0	64.0	55.0	52.0	49.0
	15	67.3	86.3	47.6	77.0	74.0	71.0	70.0	67.0	64.0	54.0	52.0	49.0
	16	66.8	84.7	46.3	75.0	73.0	71.0	70.0	67.0	64.0	55.0	52.0	49.0
	17	67.3	89.3	47.8	74.0	73.0	71.0	70.0	68.0	65.0	55.0	52.0	49.0
	18	66.6	92.5	46.6	73.0	72.0	70.0	70.0	67.0	63.0	52.0	50.0	47.0
	19	64.5	78.9	46.2	72.0	71.0	70.0	69.0	66.0	60.0	50.0	48.0	47.0
	20	67.5	97.6	46.9	73.0	72.0	70.0	68.0	64.0	57.0	49.0	48.0	47.0
	21	62.5	82.1	49.3	71.0	70.0	68.0	67.0	62.0	55.0	51.0	50.0	50.0
Night	22	62.7	87.7	46.5	72.0	70.0	68.0	67.0	61.0	53.0	48.0	48.0	47.0
	23	58.7	75.6	44.6	69.0	68.0	66.0	64.0	55.0	49.0	46.0	46.0	45.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	GLC Warehouse	*JN:*	11200	*Energy Average Leq*		*24-Hour*
Location:	L7 - Located within Gibson Mariposa Park south of the Project site adjacent to existing Union Pacific Railroad lines.	*Analyst:*	A. Wolfe	*Day*	*Night*	*CNEL*
		Date:	11/29/2017	62.1	55.7	64.6

Hourly Leq dBA Readings (unadjusted)



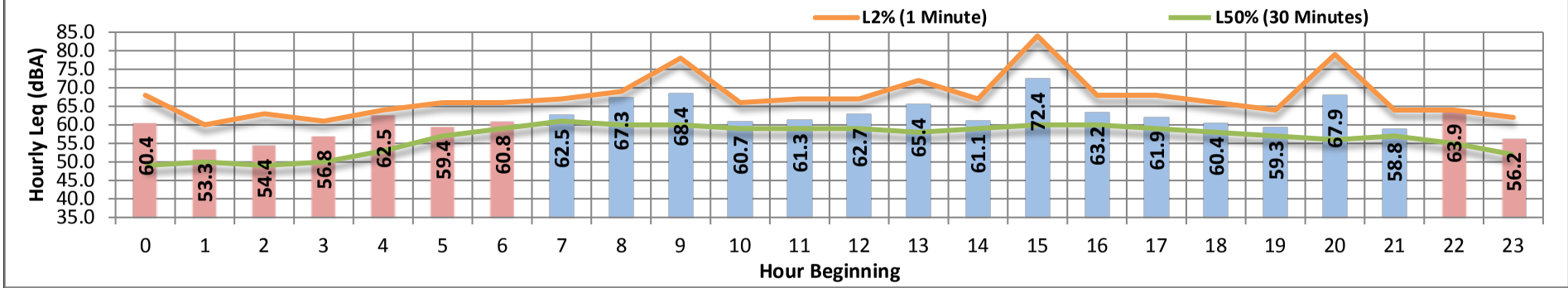
Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	50.2	61.9	42.2	54.0	52.0	51.0	50.0	48.0	47.0	43.0	43.0	42.0
	Max	69.1	96.8	51.4	82.0	79.0	75.0	71.0	61.0	56.0	53.0	52.0	52.0
Energy Average:		62.1	Average:		66.4	63.1	58.9	56.7	52.6	50.4	47.9	47.3	46.5
Night	Min	46.3	56.8	43.1	50.0	49.0	48.0	47.0	46.0	45.0	44.0	43.0	43.0
	Max	61.4	88.9	52.7	68.0	68.0	68.0	68.0	56.0	55.0	54.0	53.0	53.0
Energy Average:		55.7	Average:		57.0	55.6	54.0	53.3	50.3	49.1	47.1	46.7	46.3
Hourly Summary													
Night	0	46.3	65.5	43.1	51.0	49.0	48.0	47.0	46.0	45.0	44.0	43.0	43.0
	1	46.7	56.8	43.2	52.0	50.0	49.0	48.0	47.0	46.0	44.0	44.0	44.0
	2	48.4	64.2	43.8	58.0	55.0	51.0	50.0	47.0	46.0	44.0	44.0	44.0
	3	47.5	62.0	44.7	50.0	49.0	48.0	48.0	47.0	47.0	46.0	46.0	45.0
	4	61.4	77.8	46.5	68.0	68.0	68.0	68.0	53.0	50.0	48.0	48.0	47.0
	5	54.6	66.3	48.4	59.0	58.0	57.0	56.0	55.0	54.0	50.0	49.0	49.0
	6	55.9	62.4	52.7	60.0	59.0	58.0	57.0	56.0	55.0	54.0	53.0	53.0
Day	7	57.9	73.3	51.4	67.0	63.0	61.0	59.0	57.0	56.0	53.0	52.0	52.0
	8	60.3	83.0	48.7	74.0	60.0	57.0	56.0	52.0	51.0	50.0	50.0	49.0
	9	69.1	92.0	47.7	82.0	77.0	73.0	71.0	61.0	56.0	50.0	50.0	48.0
	10	53.9	66.0	45.6	61.0	60.0	58.0	57.0	54.0	51.0	48.0	47.0	46.0
	11	54.5	80.0	42.2	64.0	62.0	58.0	56.0	50.0	47.0	43.0	43.0	42.0
	12	53.1	67.9	44.6	61.0	60.0	58.0	57.0	53.0	49.0	47.0	46.0	45.0
	13	59.4	79.1	44.7	75.0	65.0	59.0	56.0	51.0	49.0	47.0	46.0	46.0
	14	52.7	70.5	46.0	61.0	59.0	57.0	56.0	52.0	50.0	48.0	47.0	46.0
	15	67.4	91.6	50.2	80.0	79.0	75.0	64.0	56.0	54.0	52.0	51.0	51.0
	16	63.1	91.2	45.8	65.0	63.0	57.0	56.0	53.0	51.0	47.0	47.0	46.0
	17	51.5	67.6	43.8	61.0	59.0	56.0	54.0	50.0	48.0	45.0	45.0	44.0
	18	51.1	64.6	43.7	60.0	59.0	56.0	54.0	50.0	48.0	45.0	45.0	44.0
	19	50.2	73.5	45.6	54.0	52.0	51.0	51.0	50.0	48.0	47.0	46.0	46.0
	20	66.9	96.8	45.2	76.0	74.0	55.0	50.0	48.0	47.0	46.0	46.0	45.0
	21	51.6	61.9	47.9	55.0	54.0	53.0	53.0	52.0	51.0	50.0	49.0	48.0
Night	22	59.7	88.9	46.5	58.0	56.0	53.0	53.0	51.0	50.0	48.0	47.0	47.0
	23	50.5	61.3	45.2	57.0	56.0	54.0	53.0	51.0	49.0	46.0	46.0	45.0

URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Project Name:	GLC Warehouse	*JN:*	11200	*Energy Average Leq*		*24-Hour*
Location:	L8 - Located southwest of the Project site near existing residential homes and the Baldwin Avenue undercrossing for existing Union Pacific Railroad lines.	*Analyst:*	A. Wolfe	*Day*	*Night*	*CNEL*
		Date:	11/29/2017	65.5	59.9	68.2

Hourly Leq dBA Readings (unadjusted)



Time Period	*Hour*	*Leq*	*Lmax*	*Lmin*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	58.8	74.2	45.0	65.0	64.0	62.0	62.0	59.0	56.0	50.0	49.0	46.0
	Max	72.4	92.6	54.6	85.0	84.0	80.0	68.0	63.0	61.0	57.0	57.0	56.0
Energy Average:		65.5	Average:		72.6	69.7	66.3	64.2	61.1	58.8	52.6	51.2	49.3
Night	Min	53.3	70.4	43.9	62.0	60.0	58.0	57.0	51.0	49.0	46.0	45.0	45.0
	Max	63.9	89.9	53.3	68.0	68.0	68.0	68.0	61.0	59.0	55.0	54.0	53.0
Energy Average:		59.9	Average:		65.3	63.8	61.7	60.6	55.6	52.7	49.6	48.7	48.1
Hourly Summary													
Night	0	60.4	77.3	43.9	68.0	68.0	68.0	68.0	55.0	49.0	46.0	45.0	45.0
	1	53.3	70.4	44.8	62.0	60.0	58.0	57.0	52.0	50.0	47.0	46.0	46.0
	2	54.4	73.7	45.5	65.0	63.0	59.0	57.0	52.0	49.0	47.0	46.0	46.0
	3	56.8	86.9	46.7	63.0	61.0	58.0	57.0	51.0	50.0	48.0	48.0	47.0
	4	62.5	88.3	49.3	66.0	64.0	61.0	59.0	56.0	53.0	51.0	50.0	50.0
	5	59.4	73.8	50.8	67.0	66.0	63.0	62.0	59.0	57.0	53.0	52.0	51.0
	6	60.8	71.7	53.3	67.0	66.0	65.0	64.0	61.0	59.0	55.0	54.0	53.0
Day	7	62.5	80.5	54.6	68.0	67.0	66.0	65.0	63.0	61.0	57.0	57.0	56.0
	8	67.3	89.0	50.6	81.0	69.0	66.0	65.0	62.0	60.0	55.0	54.0	52.0
	9	68.4	92.6	48.9	81.0	78.0	73.0	66.0	62.0	60.0	53.0	52.0	50.0
	10	60.7	74.2	47.1	67.0	66.0	65.0	64.0	61.0	59.0	53.0	51.0	49.0
	11	61.3	79.3	45.0	69.0	67.0	65.0	64.0	61.0	59.0	51.0	49.0	46.0
	12	62.7	91.1	45.2	69.0	67.0	65.0	64.0	61.0	59.0	52.0	49.0	47.0
	13	65.4	86.6	45.6	79.0	72.0	66.0	65.0	61.0	58.0	51.0	49.0	47.0
	14	61.1	78.9	46.3	69.0	67.0	65.0	64.0	61.0	59.0	52.0	51.0	48.0
	15	72.4	91.2	49.6	85.0	84.0	80.0	68.0	63.0	60.0	54.0	53.0	51.0
	16	63.2	85.4	49.6	70.0	68.0	66.0	65.0	62.0	60.0	54.0	52.0	51.0
	17	61.9	82.7	46.8	70.0	68.0	65.0	64.0	61.0	59.0	52.0	51.0	48.0
	18	60.4	77.2	46.3	67.0	66.0	64.0	63.0	61.0	58.0	51.0	49.0	47.0
	19	59.3	76.5	48.0	66.0	64.0	63.0	62.0	60.0	57.0	51.0	50.0	48.0
	20	67.9	89.4	46.7	83.0	79.0	64.0	62.0	59.0	56.0	50.0	49.0	48.0
	21	58.8	74.8	50.6	65.0	64.0	62.0	62.0	59.0	57.0	53.0	52.0	51.0
Night	22	63.9	89.9	47.7	66.0	64.0	62.0	61.0	58.0	55.0	50.0	49.0	48.0
	23	56.2	76.4	46.8	64.0	62.0	61.0	60.0	56.0	52.0	49.0	48.0	47.0

URBAN CROSSROADS

APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Temple City Bl.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,049	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,905	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.14	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.37	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.47	1.11	-1.20	-5.43	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:	69.5	67.6	65.7	60.6	68.8	69.4
Medium Trucks:	65.3	63.4	58.1	57.7	65.3	65.5
Heavy Trucks:	66.4	64.9	56.4	57.9	65.9	66.0
Vehicle Noise:	72.2	70.4	66.8	63.7	71.7	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	140	302	652
CNEL:	69	148	320	689

Wednesday, December 06, 2017

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Baldwin Av.
Road Segment: s/o Las Tunas Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,190	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,819	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.01	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.50	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.60	0.82	-1.20	-5.43	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:	69.1	67.1	65.2	60.2	68.4	68.9
Medium Trucks:	64.8	63.0	57.7	57.2	64.9	65.1
Heavy Trucks:	66.0	64.5	55.9	57.5	65.5	65.6
Vehicle Noise:	71.8	70.0	66.4	63.3	71.3	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	61	132	284	611
CNEL:	65	139	300	646

Wednesday, December 06, 2017

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Baldwin Av.
Road Segment: n/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,062	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,006	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.29	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.22	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.32	0.82	-1.20	-5.43	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	67.4	65.5	60.5	68.7	69.2
Medium Trucks:	65.1	63.3	57.9	57.5	65.1	65.3
Heavy Trucks:	66.3	64.8	56.2	57.7	65.8	65.9
Vehicle Noise:	72.1	70.3	66.6	63.6	71.6	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	137	296	638
CNEL:	67	145	313	674

Wednesday, December 06, 2017

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Baldwin Av.
Road Segment: s/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,781	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,478	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.45	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-13.06	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.16	1.11	-1.20	-5.43	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:	68.8	66.9	65.0	59.9	68.1	68.7
Medium Trucks:	64.6	62.7	57.4	57.0	64.6	64.8
Heavy Trucks:	65.7	64.2	55.7	57.2	65.2	65.3
Vehicle Noise:	71.5	69.7	66.1	63.0	71.0	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	126	272	586
CNEL:	62	133	288	619

Wednesday, December 06, 2017

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Baldwin Av.
Road Segment: s/o Gidley St.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,021	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,802	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.98	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.53	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.63	1.11	-1.20	-5.43	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	67.4	65.5	60.5	68.7	69.2
Medium Trucks:	65.1	63.3	57.9	57.5	65.1	65.3
Heavy Trucks:	66.3	64.7	56.2	57.7	65.8	65.9
Vehicle Noise:	72.1	70.2	66.6	63.5	71.6	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	137	295	636
CNEL:	67	145	312	672

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Baldwin Av.
Road Segment: s/o Rose Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,824	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,682	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.79	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.72	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.82	1.11	-1.20	-5.43	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:	69.2	67.2	65.3	60.3	68.5	69.0
Medium Trucks:	64.9	63.1	57.7	57.3	64.9	65.1
Heavy Trucks:	66.1	64.6	56.0	57.5	65.6	65.7
Vehicle Noise:	71.9	70.1	66.4	63.4	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	62	133	287	618
CNEL:	65	141	303	653

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Baldwin Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,520	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,152	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.07	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.44	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.54	1.11	-1.20	-5.43	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:	68.3	66.3	64.4	59.3	67.5	68.1
Medium Trucks:	64.2	62.4	57.0	56.6	64.2	64.5
Heavy Trucks:	65.9	64.4	55.9	57.4	65.4	65.5
Vehicle Noise:	71.2	69.4	65.6	62.7	70.7	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	56	120	259	559
CNEL:	59	127	274	589

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Baldwin Av.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,021	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,702	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.40	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-12.11	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.20	1.11	-1.20	-5.43	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:	67.6	65.6	63.7	58.7	66.9	67.4
Medium Trucks:	63.6	61.7	56.4	56.0	63.6	63.8
Heavy Trucks:	65.3	63.7	55.2	56.7	64.7	64.9
Vehicle Noise:	70.6	68.7	64.9	62.0	70.1	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	109	234	504
CNEL:	53	115	247	532

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Baldwin Av.
Road Segment: s/o Flair Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,837	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,984	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.84	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.68	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.77	1.11	-1.20	-5.43	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	66.0	64.1	59.1	67.3	67.8
Medium Trucks:	64.0	62.1	56.8	56.4	64.0	64.2
Heavy Trucks:	65.7	64.2	55.6	57.1	65.2	65.3
Vehicle Noise:	71.0	69.2	65.4	62.5	70.5	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	116	250	539
CNEL:	57	122	264	568

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Santa Anita Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,813	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,581	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.21	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-12.30	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.40	1.11	-1.20	-5.43	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:	67.4	65.4	63.5	58.5	66.7	67.2
Medium Trucks:	63.4	61.5	56.2	55.8	63.4	63.6
Heavy Trucks:	65.1	63.5	55.0	56.5	64.5	64.7
Vehicle Noise:	70.4	68.5	64.7	61.8	69.9	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	105	227	489
CNEL:	52	111	239	516

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Santa Anita Av.
Road Segment: s/o Ramona Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,785	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,779	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.86	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-10.65	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.75	1.11	-1.20	-5.43	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:	69.0	67.1	65.2	60.1	68.3	68.9
Medium Trucks:	65.0	63.2	57.8	57.4	65.0	65.2
Heavy Trucks:	66.7	65.2	56.7	58.2	66.2	66.3
Vehicle Noise:	72.0	70.2	66.4	63.5	71.5	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	136	293	631
CNEL:	67	143	309	665

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,065	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,007	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.53	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.98	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-18.08	1.98	-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:	68.8	66.8	64.9	59.9	68.1	68.6
Medium Trucks:	64.5	62.7	57.3	56.9	64.5	64.8
Heavy Trucks:	65.7	64.2	55.6	57.1	65.2	65.3
Vehicle Noise:	71.5	69.7	66.0	63.0	71.0	71.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	110	238	512
CNEL:	54	117	251	541

Wednesday, December 06, 2017

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Ellis Ln.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,374	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,337	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.19	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.32	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.41	1.98	-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:	69.4	67.5	65.6	60.5	68.7	69.3
Medium Trucks:	65.2	63.3	58.0	57.6	65.2	65.4
Heavy Trucks:	66.4	64.8	56.3	57.8	65.8	66.0
Vehicle Noise:	72.2	70.3	66.7	63.6	71.6	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	57	122	263	567
CNEL:	60	129	278	599

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,724	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,572	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.61	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.90	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.00	1.98	-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:	69.9	67.9	66.0	60.9	69.2	69.7
Medium Trucks:	65.6	63.8	58.4	58.0	65.6	65.8
Heavy Trucks:	66.8	65.2	56.7	58.2	66.3	66.4
Vehicle Noise:	72.6	70.7	67.1	64.0	72.1	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	60	130	280	604
CNEL:	64	138	296	638

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,528	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,753	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.91	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.60	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.70	1.98	-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:	70.2	68.2	66.3	61.2	69.4	70.0
Medium Trucks:	65.9	64.1	58.7	58.3	65.9	66.1
Heavy Trucks:	67.1	65.5	57.0	58.5	66.5	66.7
Vehicle Noise:	72.9	71.0	67.4	64.3	72.4	72.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	136	293	632
CNEL:	67	144	310	668

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,250	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,425	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	2.93	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.58	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.67	1.98	-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:	68.0	66.0	64.1	59.1	67.3	67.8
Medium Trucks:	64.0	62.1	56.8	56.4	64.0	64.2
Heavy Trucks:	65.7	64.1	55.6	57.1	65.1	65.3
Vehicle Noise:	71.0	69.1	65.3	62.4	70.5	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	102	219	472
CNEL:	50	107	231	497

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,402	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,340	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	2.78	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.73	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.83	1.98	-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:	67.8	65.8	63.9	58.9	67.1	67.6
Medium Trucks:	63.8	62.0	56.6	56.2	63.8	64.0
Heavy Trucks:	65.5	64.0	55.4	57.0	65.0	65.1
Vehicle Noise:	70.8	69.0	65.2	62.3	70.3	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	99	214	461
CNEL:	49	105	225	486

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,136	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,014	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.88	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.63	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.73	1.98	-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:	68.9	66.9	65.0	60.0	68.2	68.7
Medium Trucks:	64.9	63.1	57.7	57.3	64.9	65.1
Heavy Trucks:	66.6	65.1	56.5	58.1	66.1	66.2
Vehicle Noise:	71.9	70.1	66.3	63.4	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	55	117	253	545
CNEL:	57	124	267	575

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Peck Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,429	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,843	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.63	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.89	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.98	1.98	-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:	68.7	66.7	64.8	59.7	68.0	68.5
Medium Trucks:	64.6	62.8	57.5	57.1	64.7	64.9
Heavy Trucks:	66.4	64.8	56.3	57.8	65.8	66.0
Vehicle Noise:	71.6	69.8	66.0	63.1	71.1	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	113	243	524
CNEL:	55	119	257	553

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Valley Bl.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,922	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,892	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.70	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.81	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.91	1.11	-1.20	-5.43	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:	67.9	65.9	64.0	59.0	67.2	67.7
Medium Trucks:	63.8	62.0	56.7	56.3	63.9	64.1
Heavy Trucks:	65.6	64.0	55.5	57.0	65.0	65.2
Vehicle Noise:	70.8	69.0	65.2	62.3	70.4	70.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	114	245	528
CNEL:	56	120	258	556

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Valley Bl.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,680	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,568	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.18	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-12.33	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.43	1.11	-1.20	-5.43	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:	67.4	65.4	63.5	58.4	66.7	67.2
Medium Trucks:	63.3	61.5	56.2	55.7	63.3	63.6
Heavy Trucks:	65.0	63.5	55.0	56.5	64.5	64.7
Vehicle Noise:	70.3	68.5	64.7	61.8	69.8	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	105	226	487
CNEL:	51	111	239	514

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Loftus Dr.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,222	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,322	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	20	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.0	feet
Centerline Dist. to Observer:	32.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	30.806
Medium Trucks:	30.517
Heavy Trucks:	30.545

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.30	3.05	-1.20	-4.51	0.000	0.000
Medium Trucks:	75.75	-15.21	3.11	-1.20	-4.86	0.000	0.000
Heavy Trucks:	81.57	-19.31	3.11	-1.20	-5.72	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:	66.5	64.5	62.6	57.5	65.7	66.3
Medium Trucks:	62.5	60.6	55.3	54.9	62.5	62.7
Heavy Trucks:	64.2	62.6	54.1	55.6	63.6	63.8
Vehicle Noise:	69.4	67.6	63.8	60.9	68.9	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	59	126	272
CNEL:	29	62	133	287

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Temple City Bl.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,168	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,917	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.26%
Medium Trucks:	78.6%	5.7%	15.7%	2.69%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.16	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.37	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.47	1.11	-1.20	-5.43	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:	69.5	67.6	65.7	60.6	68.8	69.4
Medium Trucks:	65.3	63.4	58.1	57.7	65.3	65.5
Heavy Trucks:	66.4	64.9	56.4	57.9	65.9	66.0
Vehicle Noise:	72.2	70.4	66.8	63.7	71.7	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	141	303	653
CNEL:	69	149	320	690

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Baldwin Av.
Road Segment: s/o Las Tunas Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,336	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,834	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.17%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.13%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.03	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.47	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.29	0.82	-1.20	-5.43	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:	69.1	67.2	65.3	60.2	68.4	69.0
Medium Trucks:	64.9	63.0	57.7	57.3	64.9	65.1
Heavy Trucks:	66.3	64.8	56.3	57.8	65.8	65.9
Vehicle Noise:	71.9	70.1	66.4	63.4	71.4	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	62	134	288	621
CNEL:	66	141	304	656

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Baldwin Av.
Road Segment: n/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,208	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,021	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.17%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.12%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.31	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.20	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.03	0.82	-1.20	-5.43	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	67.4	65.5	60.5	68.7	69.2
Medium Trucks:	65.1	63.3	58.0	57.5	65.2	65.4
Heavy Trucks:	66.6	65.1	56.5	58.0	66.1	66.2
Vehicle Noise:	72.2	70.4	66.7	63.7	71.7	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	139	300	647
CNEL:	68	147	317	684

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Baldwin Av.
Road Segment: s/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,835	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,484	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.03%
Medium Trucks:	78.6%	5.7%	15.7%	2.74%
Heavy Trucks:	84.5%	3.0%	12.5%	1.23%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.45	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-13.00	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.47	1.11	-1.20	-5.43	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:	68.8	66.9	65.0	59.9	68.1	68.7
Medium Trucks:	64.6	62.8	57.4	57.0	64.6	64.9
Heavy Trucks:	66.4	64.9	56.4	57.9	65.9	66.0
Vehicle Noise:	71.7	69.9	66.2	63.2	71.2	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	60	130	281	605
CNEL:	64	137	296	638

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Baldwin Av.
Road Segment: s/o Gidley St.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,166	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,917	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	94.91%
Medium Trucks:	78.6%	5.7%	15.7%	2.85%
Heavy Trucks:	84.5%	3.0%	12.5%	2.24%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.10	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.13	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-13.17	1.11	-1.20	-5.43	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:	69.5	67.5	65.6	60.6	68.8	69.3
Medium Trucks:	65.5	63.7	58.3	57.9	65.5	65.7
Heavy Trucks:	69.7	68.2	59.7	61.2	69.2	69.3
Vehicle Noise:	73.4	71.6	67.2	64.9	72.9	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	78	168	361	779
CNEL:	82	176	379	816

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Baldwin Av.
Road Segment: s/o Rose Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,969	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,797	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	94.85%
Medium Trucks:	78.6%	5.7%	15.7%	2.85%
Heavy Trucks:	84.5%	3.0%	12.5%	2.29%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.91	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.31	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-13.25	1.11	-1.20	-5.43	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	67.3	65.4	60.4	68.6	69.1
Medium Trucks:	65.3	63.5	58.1	57.7	65.3	65.6
Heavy Trucks:	69.6	68.1	59.6	61.1	69.1	69.3
Vehicle Noise:	73.2	71.5	67.0	64.7	72.7	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	76	164	354	762
CNEL:	80	172	371	799

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Baldwin Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,254	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,225	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.16%
Medium Trucks:	78.6%	5.7%	15.7%	2.84%
Heavy Trucks:	84.5%	3.0%	12.5%	2.00%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.12	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.13	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-12.64	1.11	-1.20	-5.43	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:	68.3	66.3	64.4	59.4	67.6	68.1
Medium Trucks:	64.5	62.7	57.4	56.9	64.5	64.8
Heavy Trucks:	68.8	67.3	58.8	60.3	68.3	68.4
Vehicle Noise:	72.4	70.6	66.1	63.8	71.9	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	143	309	666
CNEL:	70	150	324	697

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Baldwin Av.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,448	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,745	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.61%
Medium Trucks:	78.6%	5.7%	15.7%	2.78%
Heavy Trucks:	84.5%	3.0%	12.5%	1.61%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.44	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.92	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.30	1.11	-1.20	-5.43	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:	67.6	65.6	63.8	58.7	66.9	67.4
Medium Trucks:	63.7	61.9	56.6	56.1	63.8	64.0
Heavy Trucks:	67.2	65.7	57.1	58.6	66.7	66.8
Vehicle Noise:	71.3	69.5	65.2	62.7	70.8	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	56	121	261	562
CNEL:	59	127	274	590

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Baldwin Av.
Road Segment: s/o Flair Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,264	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,026	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.67%
Medium Trucks:	78.6%	5.7%	15.7%	2.77%
Heavy Trucks:	84.5%	3.0%	12.5%	1.56%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.87	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.51	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.01	1.11	-1.20	-5.43	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	64.2	59.1	67.3	67.9
Medium Trucks:	64.2	62.3	57.0	56.6	64.2	64.4
Heavy Trucks:	67.5	65.9	57.4	58.9	66.9	67.1
Vehicle Noise:	71.6	69.9	65.6	63.1	71.1	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	128	276	595
CNEL:	62	135	290	625

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Santa Anita Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,932	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,593	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.26%
Medium Trucks:	78.6%	5.7%	15.7%	2.69%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.23	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-12.30	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.40	1.11	-1.20	-5.43	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:	67.4	65.4	63.5	58.5	66.7	67.2
Medium Trucks:	63.4	61.5	56.2	55.8	63.4	63.6
Heavy Trucks:	65.1	63.5	55.0	56.5	64.5	64.7
Vehicle Noise:	70.4	68.6	64.8	61.8	69.9	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	106	227	490
CNEL:	52	111	240	517

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Santa Anita Av.
Road Segment: s/o Ramona Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,904	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,790	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.25%
Medium Trucks:	78.6%	5.7%	15.7%	2.70%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.87	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-10.65	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.75	1.11	-1.20	-5.43	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:	69.1	67.1	65.2	60.1	68.3	68.9
Medium Trucks:	65.0	63.2	57.8	57.4	65.0	65.2
Heavy Trucks:	66.7	65.2	56.7	58.2	66.2	66.3
Vehicle Noise:	72.0	70.2	66.4	63.5	71.5	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	136	293	631
CNEL:	67	143	309	666

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,152	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,015	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.12%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.16%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.55	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.94	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.65	1.98	-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:	68.8	66.8	64.9	59.9	68.1	68.6
Medium Trucks:	64.6	62.7	57.4	57.0	64.6	64.8
Heavy Trucks:	66.1	64.6	56.1	57.6	65.6	65.7
Vehicle Noise:	71.6	69.8	66.1	63.1	71.1	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	113	242	522
CNEL:	55	119	256	552

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Ellis Ln.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,520	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,352	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.15%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.14%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.22	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.28	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.04	1.98	-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:	69.5	67.5	65.6	60.5	68.8	69.3
Medium Trucks:	65.2	63.4	58.0	57.6	65.2	65.5
Heavy Trucks:	66.7	65.2	56.7	58.2	66.2	66.3
Vehicle Noise:	72.3	70.5	66.7	63.7	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	58	124	268	577
CNEL:	61	131	283	610

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,016	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,602	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.08%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.21%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.65	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.84	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.33	1.98	-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:	69.9	67.9	66.0	61.0	69.2	69.7
Medium Trucks:	65.7	63.8	58.5	58.1	65.7	65.9
Heavy Trucks:	67.4	65.9	57.4	58.9	66.9	67.0
Vehicle Noise:	72.8	71.0	67.2	64.3	72.3	72.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	62	135	290	625
CNEL:	66	142	306	659

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,820	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,782	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.09%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.20%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.94	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.55	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.08	1.98	-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:	70.2	68.2	66.3	61.3	69.5	70.0
Medium Trucks:	65.9	64.1	58.8	58.3	66.0	66.2
Heavy Trucks:	67.7	66.2	57.6	59.1	67.2	67.3
Vehicle Noise:	73.1	71.3	67.5	64.5	72.6	72.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	141	303	652
CNEL:	69	148	319	688

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,483	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,448	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.06%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.23%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	2.97	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.52	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.97	1.98	-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:	68.0	66.0	64.1	59.1	67.3	67.8
Medium Trucks:	64.0	62.2	56.8	56.4	64.0	64.2
Heavy Trucks:	66.4	64.9	56.3	57.8	65.9	66.0
Vehicle Noise:	71.2	69.4	65.4	62.7	70.7	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	106	227	490
CNEL:	52	111	239	516

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,635	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,363	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.05%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.23%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	2.81	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.67	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.10	1.98	-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:	67.9	65.9	64.0	58.9	67.1	67.7
Medium Trucks:	63.9	62.0	56.7	56.3	63.9	64.1
Heavy Trucks:	66.2	64.7	56.2	57.7	65.7	65.9
Vehicle Noise:	71.1	69.3	65.3	62.5	70.6	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	48	103	222	479
CNEL:	50	109	234	504

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,369	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,037	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.09%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.19%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.91	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.58	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.15	1.98	-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:	68.9	67.0	65.1	60.0	68.2	68.8
Medium Trucks:	64.9	63.1	57.8	57.4	65.0	65.2
Heavy Trucks:	67.2	65.7	57.1	58.6	66.7	66.8
Vehicle Noise:	72.1	70.3	66.4	63.6	71.6	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	56	121	261	562
CNEL:	59	128	275	592

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Peck Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,602	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,860	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.07%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.20%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.64	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.83	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.38	1.98	-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:	68.7	66.7	64.8	59.8	68.0	68.5
Medium Trucks:	64.7	62.9	57.5	57.1	64.7	64.9
Heavy Trucks:	67.0	65.4	56.9	58.4	66.4	66.6
Vehicle Noise:	71.8	70.1	66.1	63.3	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	117	251	541
CNEL:	57	123	265	570

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Valley Bl.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,128	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,913	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.17%
Medium Trucks:	78.6%	5.7%	15.7%	2.70%
Heavy Trucks:	84.5%	3.0%	12.5%	1.12%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.73	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.78	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.61	1.11	-1.20	-5.43	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:	67.9	65.9	64.0	59.0	67.2	67.7
Medium Trucks:	63.9	62.0	56.7	56.3	63.9	64.1
Heavy Trucks:	65.9	64.3	55.8	57.3	65.3	65.5
Vehicle Noise:	71.0	69.2	65.3	62.4	70.5	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	116	249	537
CNEL:	57	122	263	566

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Valley Bl.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,767	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,577	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.15%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.13%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.19	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-12.30	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.09	1.11	-1.20	-5.43	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:	67.4	65.4	63.5	58.5	66.7	67.2
Medium Trucks:	63.4	61.5	56.2	55.8	63.4	63.6
Heavy Trucks:	65.4	63.9	55.3	56.8	64.9	65.0
Vehicle Noise:	70.4	68.6	64.8	61.9	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	107	230	496
CNEL:	52	113	243	523

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing + Project
Road Name: Loftus Dr.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,530	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,353	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	20	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.0	feet
Centerline Dist. to Observer:	32.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	94.93%
Medium Trucks:	78.6%	5.7%	15.7%	2.88%
Heavy Trucks:	84.5%	3.0%	12.5%	2.19%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	30.806
Medium Trucks:	30.517
Heavy Trucks:	30.545

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.34	3.05	-1.20	-4.51	0.000	0.000
Medium Trucks:	75.75	-14.84	3.11	-1.20	-4.86	0.000	0.000
Heavy Trucks:	81.57	-16.03	3.11	-1.20	-5.72	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:	66.5	64.5	62.6	57.6	65.8	66.3
Medium Trucks:	62.8	61.0	55.6	55.2	62.8	63.1
Heavy Trucks:	67.4	65.9	57.4	58.9	66.9	67.1
Vehicle Noise:	70.8	69.0	64.4	62.3	70.3	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	72	155	334
CNEL:	35	75	162	349

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Temple City Bl.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,705	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,971	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.24	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.27	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.37	1.11	-1.20	-5.43	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:	69.6	67.6	65.8	60.7	68.9	69.4
Medium Trucks:	65.3	63.5	58.2	57.8	65.4	65.6
Heavy Trucks:	66.5	65.0	56.5	58.0	66.0	66.1
Vehicle Noise:	72.3	70.5	66.9	63.8	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	143	307	661
CNEL:	70	151	324	699

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Las Tunas Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,706	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,871	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.09	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.42	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.52	0.82	-1.20	-5.43	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:	69.2	67.2	65.3	60.3	68.5	69.0
Medium Trucks:	64.9	63.1	57.7	57.3	64.9	65.1
Heavy Trucks:	66.1	64.6	56.0	57.5	65.6	65.7
Vehicle Noise:	71.9	70.1	66.4	63.4	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	62	133	287	619
CNEL:	65	141	304	654

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Baldwin Av.
Road Segment: n/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,578	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,058	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.36	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.15	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.25	0.82	-1.20	-5.43	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:	69.5	67.5	65.6	60.5	68.8	69.3
Medium Trucks:	65.2	63.3	58.0	57.6	65.2	65.4
Heavy Trucks:	66.4	64.8	56.3	57.8	65.8	66.0
Vehicle Noise:	72.2	70.3	66.7	63.6	71.7	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	139	300	645
CNEL:	68	147	317	682

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,578	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,558	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.59	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.92	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.02	1.11	-1.20	-5.43	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:	69.0	67.0	65.1	60.1	68.3	68.8
Medium Trucks:	64.7	62.9	57.5	57.1	64.7	64.9
Heavy Trucks:	65.9	64.4	55.8	57.3	65.4	65.5
Vehicle Noise:	71.7	69.9	66.2	63.2	71.2	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	60	129	278	599
CNEL:	63	136	294	633

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Gidley St.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,817	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,882	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.10	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.41	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.51	1.11	-1.20	-5.43	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:	69.5	67.5	65.6	60.6	68.8	69.3
Medium Trucks:	65.2	63.4	58.0	57.6	65.2	65.5
Heavy Trucks:	66.4	64.9	56.3	57.8	65.9	66.0
Vehicle Noise:	72.2	70.4	66.7	63.7	71.7	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	140	301	648
CNEL:	69	148	318	685

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Rose Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,729	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,773	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.94	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.57	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.67	1.11	-1.20	-5.43	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	67.3	65.5	60.4	68.6	69.1
Medium Trucks:	65.1	63.2	57.9	57.5	65.1	65.3
Heavy Trucks:	66.2	64.7	56.2	57.7	65.7	65.8
Vehicle Noise:	72.0	70.2	66.6	63.5	71.5	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	136	293	632
CNEL:	67	144	310	668

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,227	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,223	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.17	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.34	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.44	1.11	-1.20	-5.43	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:	68.3	66.4	64.5	59.4	67.6	68.2
Medium Trucks:	64.3	62.5	57.1	56.7	64.3	64.6
Heavy Trucks:	66.0	64.5	56.0	57.5	65.5	65.6
Vehicle Noise:	71.3	69.5	65.7	62.8	70.8	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	57	122	263	567
CNEL:	60	129	278	598

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,727	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,773	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.52	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.99	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.09	1.11	-1.20	-5.43	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:	67.7	65.7	63.8	58.8	67.0	67.5
Medium Trucks:	63.7	61.8	56.5	56.1	63.7	63.9
Heavy Trucks:	65.4	63.9	55.3	56.8	64.9	65.0
Vehicle Noise:	70.7	68.9	65.0	62.1	70.2	70.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	111	238	513
CNEL:	54	117	251	541

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Flair Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,543	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,054	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.94	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.57	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.67	1.11	-1.20	-5.43	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:	68.1	66.1	64.2	59.2	67.4	67.9
Medium Trucks:	64.1	62.2	56.9	56.5	64.1	64.3
Heavy Trucks:	65.8	64.3	55.7	57.2	65.3	65.4
Vehicle Noise:	71.1	69.3	65.5	62.6	70.6	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	55	118	254	547
CNEL:	58	124	268	577

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Santa Anita Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,719	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,672	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.36	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-12.15	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.25	1.11	-1.20	-5.43	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	63.7	58.6	66.8	67.4
Medium Trucks:	63.5	61.7	56.3	55.9	63.5	63.7
Heavy Trucks:	65.2	63.7	55.1	56.7	64.7	64.8
Vehicle Noise:	70.5	68.7	64.9	62.0	70.0	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	108	232	500
CNEL:	53	114	245	528

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Santa Anita Av.
Road Segment: s/o Ramona Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,327	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,933	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	5.03	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-10.48	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.57	1.11	-1.20	-5.43	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:	69.2	67.2	65.3	60.3	68.5	69.0
Medium Trucks:	65.2	63.3	58.0	57.6	65.2	65.4
Heavy Trucks:	66.9	65.4	56.8	58.3	66.4	66.5
Vehicle Noise:	72.2	70.4	66.6	63.7	71.7	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	140	301	648
CNEL:	68	147	317	683

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,247	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,025	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.57	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.94	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-18.04	1.98	-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:	68.8	66.8	64.9	59.9	68.1	68.6
Medium Trucks:	64.6	62.7	57.4	57.0	64.6	64.8
Heavy Trucks:	65.7	64.2	55.7	57.2	65.2	65.3
Vehicle Noise:	71.5	69.7	66.1	63.0	71.0	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	111	239	515
CNEL:	54	117	253	544

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Ellis Ln.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,556	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,356	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.23	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.28	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.38	1.98	-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:	69.5	67.5	65.6	60.6	68.8	69.3
Medium Trucks:	65.2	63.4	58.0	57.6	65.2	65.5
Heavy Trucks:	66.4	64.9	56.3	57.8	65.9	66.0
Vehicle Noise:	72.2	70.4	66.7	63.7	71.7	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	57	123	264	570
CNEL:	60	130	279	602

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,215	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,622	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.69	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.82	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.92	1.98	-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:	69.9	68.0	66.1	61.0	69.2	69.8
Medium Trucks:	65.7	63.8	58.5	58.1	65.7	65.9
Heavy Trucks:	66.9	65.3	56.8	58.3	66.3	66.5
Vehicle Noise:	72.7	70.8	67.2	64.1	72.1	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	61	132	284	612
CNEL:	65	139	300	647

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,018	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,802	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.98	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.53	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.63	1.98	-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:	70.2	68.3	66.4	61.3	69.5	70.1
Medium Trucks:	66.0	64.1	58.8	58.4	66.0	66.2
Heavy Trucks:	67.1	65.6	57.1	58.6	66.6	66.8
Vehicle Noise:	72.9	71.1	67.5	64.4	72.4	72.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	138	297	640
CNEL:	68	146	314	676

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,752	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,475	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.02	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.49	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.59	1.98	-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:	68.1	66.1	64.2	59.1	67.4	67.9
Medium Trucks:	64.0	62.2	56.9	56.4	64.1	64.3
Heavy Trucks:	65.8	64.2	55.7	57.2	65.2	65.4
Vehicle Noise:	71.0	69.2	65.4	62.5	70.5	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	48	103	222	478
CNEL:	50	109	234	504

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,904	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,390	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	2.87	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.64	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.74	1.98	-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:	67.9	65.9	64.0	59.0	67.2	67.7
Medium Trucks:	63.9	62.1	56.7	56.3	63.9	64.1
Heavy Trucks:	65.6	64.1	55.5	57.1	65.1	65.2
Vehicle Noise:	70.9	69.1	65.3	62.4	70.4	70.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	47	101	217	467
CNEL:	49	106	229	493

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,060	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,106	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.01	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.50	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.60	1.98	-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:	69.0	67.1	65.2	60.1	68.3	68.9
Medium Trucks:	65.0	63.2	57.9	57.4	65.0	65.3
Heavy Trucks:	66.7	65.2	56.7	58.2	66.2	66.4
Vehicle Noise:	72.0	70.2	66.4	63.5	71.5	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	56	120	258	556
CNEL:	59	126	272	587

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Peck Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,245	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,925	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.75	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.76	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.86	1.98	-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:	68.8	66.8	64.9	59.9	68.1	68.6
Medium Trucks:	64.8	62.9	57.6	57.2	64.8	65.0
Heavy Trucks:	66.5	65.0	56.4	57.9	66.0	66.1
Vehicle Noise:	71.8	70.0	66.1	63.2	71.3	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	115	248	534
CNEL:	56	121	262	564

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Valley Bl.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,144	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,014	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.88	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.63	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.73	1.11	-1.20	-5.43	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:	68.1	66.1	64.2	59.1	67.3	67.9
Medium Trucks:	64.0	62.2	56.9	56.4	64.0	64.3
Heavy Trucks:	65.7	64.2	55.7	57.2	65.2	65.4
Vehicle Noise:	71.0	69.2	65.4	62.5	70.5	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	117	252	542
CNEL:	57	123	266	572

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Valley Bl.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,145	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,615	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.26	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-12.25	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.35	1.11	-1.20	-5.43	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:	67.4	65.5	63.6	58.5	66.7	67.3
Medium Trucks:	63.4	61.6	56.2	55.8	63.4	63.6
Heavy Trucks:	65.1	63.6	55.1	56.6	64.6	64.7
Vehicle Noise:	70.4	68.6	64.8	61.9	69.9	70.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	106	229	493
CNEL:	52	112	241	520

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 Without Project
Road Name: Loftus Dr.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,222	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,322	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	20	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.0	feet
Centerline Dist. to Observer:	32.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	30.806
Medium Trucks:	30.517
Heavy Trucks:	30.545

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.30	3.05	-1.20	-4.51	0.000	0.000
Medium Trucks:	75.75	-15.21	3.11	-1.20	-4.86	0.000	0.000
Heavy Trucks:	81.57	-19.31	3.11	-1.20	-5.72	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:	66.5	64.5	62.6	57.5	65.7	66.3
Medium Trucks:	62.5	60.6	55.3	54.9	62.5	62.7
Heavy Trucks:	64.2	62.6	54.1	55.6	63.6	63.8
Vehicle Noise:	69.4	67.6	63.8	60.9	68.9	69.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	59	126	272
CNEL:	29	62	133	287

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Temple City Bl.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,824	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,982	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.26%
Medium Trucks:	78.6%	5.7%	15.7%	2.70%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.25	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.27	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.37	1.11	-1.20	-5.43	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:	69.6	67.7	65.8	60.7	68.9	69.5
Medium Trucks:	65.3	63.5	58.2	57.8	65.4	65.6
Heavy Trucks:	66.5	65.0	56.5	58.0	66.0	66.1
Vehicle Noise:	72.3	70.5	66.9	63.8	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	143	307	662
CNEL:	70	151	325	700

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Baldwin Av.
Road Segment: s/o Las Tunas Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,852	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,885	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.17%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.12%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.11	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.40	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.22	0.82	-1.20	-5.43	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:	69.2	67.2	65.3	60.3	68.5	69.0
Medium Trucks:	64.9	63.1	57.8	57.3	65.0	65.2
Heavy Trucks:	66.4	64.9	56.3	57.8	65.9	66.0
Vehicle Noise:	72.0	70.2	66.5	63.5	71.5	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	135	292	628
CNEL:	66	143	308	663

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Baldwin Av.
Road Segment: n/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,724	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,072	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.17%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.12%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.38	0.79	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	77.72	-12.12	0.82	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-15.96	0.82	-1.20	*-5.43*	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:	69.5	67.5	65.6	60.6	68.8	69.3
Medium Trucks:	65.2	63.4	58.0	57.6	65.2	65.4
Heavy Trucks:	66.7	65.1	56.6	58.1	66.1	66.3
Vehicle Noise:	72.3	70.4	66.7	63.7	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	141	304	655
CNEL:	69	149	321	691

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Baldwin Av.
Road Segment: s/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,632	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,563	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.04%
Medium Trucks:	78.6%	5.7%	15.7%	2.74%
Heavy Trucks:	84.5%	3.0%	12.5%	1.23%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.59	1.08	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	77.72	-12.87	1.11	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-16.35	1.11	-1.20	*-5.43*	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:	69.0	67.0	65.1	60.1	68.3	68.8
Medium Trucks:	64.8	62.9	57.6	57.2	64.8	65.0
Heavy Trucks:	66.5	65.0	56.5	58.0	66.0	66.2
Vehicle Noise:	71.9	70.1	66.3	63.3	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	62	133	286	617
CNEL:	65	140	302	651

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Baldwin Av.
Road Segment: s/o Gidley St.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,962	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,996	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	94.95%
Medium Trucks:	78.6%	5.7%	15.7%	2.84%
Heavy Trucks:	84.5%	3.0%	12.5%	2.21%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.21	1.08	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	77.72	-12.02	1.11	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-13.11	1.11	-1.20	*-5.43*	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:	69.6	67.6	65.7	60.7	68.9	69.4
Medium Trucks:	65.6	63.8	58.4	58.0	65.6	65.8
Heavy Trucks:	69.8	68.3	59.7	61.2	69.3	69.4
Vehicle Noise:	73.5	71.7	67.3	65.0	73.0	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	79	170	366	789
CNEL:	83	178	384	828

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Baldwin Av.
Road Segment: s/o Rose Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,874	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,887	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	94.90%
Medium Trucks:	78.6%	5.7%	15.7%	2.85%
Heavy Trucks:	84.5%	3.0%	12.5%	2.25%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.05	1.08	-1.20	*-4.65*	0.000	0.000
Medium Trucks:	77.72	-12.18	1.11	-1.20	*-4.87*	0.000	0.000
Heavy Trucks:	82.99	-13.19	1.11	-1.20	*-5.43*	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	65.6	60.5	68.7	69.3
Medium Trucks:	65.4	63.6	58.3	57.9	65.5	65.7
Heavy Trucks:	69.7	68.2	59.6	61.2	69.2	69.3
Vehicle Noise:	73.4	71.6	67.2	64.8	72.9	73.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	77	167	360	775
CNEL:	81	175	377	812

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Baldwin Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,961 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,296 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	56 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.18%
Medium Trucks:	78.6%	5.7%	15.7%	2.84%
Heavy Trucks:	84.5%	3.0%	12.5%	1.98%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.22	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.04	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-12.59	1.11	-1.20	-5.43	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:	68.4	66.4	64.5	59.5	67.7	68.2
Medium Trucks:	64.6	62.8	57.4	57.0	64.6	64.9
Heavy Trucks:	68.9	67.4	58.8	60.3	68.4	68.5
Vehicle Noise:	72.4	70.7	66.2	63.9	71.9	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	145	313	674
CNEL:	71	152	327	705

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Baldwin Av.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,154 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,815 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	56 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.63%
Medium Trucks:	78.6%	5.7%	15.7%	2.78%
Heavy Trucks:	84.5%	3.0%	12.5%	1.59%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.56	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.81	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.22	1.11	-1.20	-5.43	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:	67.7	65.8	63.9	58.8	67.0	67.6
Medium Trucks:	63.8	62.0	56.7	56.3	63.9	64.1
Heavy Trucks:	67.2	65.7	57.2	58.7	66.7	66.9
Vehicle Noise:	71.4	69.6	65.3	62.8	70.9	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	57	123	265	570
CNEL:	60	129	278	599

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Baldwin Av.
Road Segment: s/o Flair Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,970 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,097 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	56 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.68%
Medium Trucks:	78.6%	5.7%	15.7%	2.77%
Heavy Trucks:	84.5%	3.0%	12.5%	1.55%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.97	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.41	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-13.95	1.11	-1.20	-5.43	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:	68.1	66.2	64.3	59.2	67.4	68.0
Medium Trucks:	64.2	62.4	57.1	56.7	64.3	64.5
Heavy Trucks:	67.5	66.0	57.5	59.0	67.0	67.1
Vehicle Noise:	71.7	69.9	65.7	63.2	71.2	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	60	130	280	603
CNEL:	63	136	294	633

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Santa Anita Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,838 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,684 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	56 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.26%
Medium Trucks:	78.6%	5.7%	15.7%	2.69%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.38	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-12.15	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.25	1.11	-1.20	-5.43	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:	67.6	65.6	63.7	58.6	66.8	67.4
Medium Trucks:	63.5	61.7	56.3	55.9	63.5	63.7
Heavy Trucks:	65.2	63.7	55.1	56.7	64.7	64.8
Vehicle Noise:	70.5	68.7	64.9	62.0	70.0	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	108	233	501
CNEL:	53	114	245	529

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Santa Anita Av.
Road Segment: s/o Ramona Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,446	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,945	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.25%
Medium Trucks:	78.6%	5.7%	15.7%	2.70%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	5.05	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-10.48	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.57	1.11	-1.20	-5.43	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:	69.2	67.3	65.4	60.3	68.5	69.1
Medium Trucks:	65.2	63.3	58.0	57.6	65.2	65.4
Heavy Trucks:	66.9	65.4	56.8	58.3	66.4	66.5
Vehicle Noise:	72.2	70.4	66.6	63.7	71.7	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	140	301	648
CNEL:	68	147	317	684

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,334	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,033	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.12%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.16%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.58	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.90	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.61	1.98	-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:	68.8	66.9	65.0	59.9	68.1	68.7
Medium Trucks:	64.6	62.8	57.4	57.0	64.6	64.8
Heavy Trucks:	66.2	64.6	56.1	57.6	65.6	65.8
Vehicle Noise:	71.7	69.8	66.1	63.1	71.2	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	113	244	526
CNEL:	55	120	258	555

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Ellis Ln.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	23,702	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,370	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.15%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.14%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.25	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.25	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.01	1.98	-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:	69.5	67.5	65.6	60.6	68.8	69.3
Medium Trucks:	65.2	63.4	58.1	57.7	65.3	65.5
Heavy Trucks:	66.8	65.2	56.7	58.2	66.2	66.4
Vehicle Noise:	72.3	70.5	66.8	63.8	71.8	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	58	125	269	580
CNEL:	61	132	284	613

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,507	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,651	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.08%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.21%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.73	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.76	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.26	1.98	-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:	70.0	68.0	66.1	61.1	69.3	69.8
Medium Trucks:	65.7	63.9	58.6	58.1	65.8	66.0
Heavy Trucks:	67.5	66.0	57.4	59.0	67.0	67.1
Vehicle Noise:	72.9	71.1	67.3	64.3	72.4	72.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	136	293	632
CNEL:	67	144	310	667

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,310	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,831	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.09%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.20%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.02	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.48	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.01	1.98	-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:	70.3	68.3	66.4	61.4	69.6	70.1
Medium Trucks:	66.0	64.2	58.8	58.4	66.0	66.3
Heavy Trucks:	67.8	66.2	57.7	59.2	67.2	67.4
Vehicle Noise:	73.1	71.3	67.6	64.6	72.6	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	142	306	660
CNEL:	70	150	323	696

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,985	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,498	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.06%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.22%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.06	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.43	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.89	1.98	-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:	68.1	66.1	64.2	59.2	67.4	67.9
Medium Trucks:	64.1	62.3	56.9	56.5	64.1	64.3
Heavy Trucks:	66.5	64.9	56.4	57.9	65.9	66.1
Vehicle Noise:	71.3	69.5	65.5	62.8	70.8	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	107	230	496
CNEL:	52	113	243	523

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,137	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,414	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.05%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.23%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	2.91	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.58	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.02	1.98	-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:	67.9	66.0	64.1	59.0	67.2	67.8
Medium Trucks:	64.0	62.1	56.8	56.4	64.0	64.2
Heavy Trucks:	66.3	64.8	56.3	57.8	65.8	65.9
Vehicle Noise:	71.1	69.3	65.4	62.6	70.6	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	105	225	486
CNEL:	51	110	237	511

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,293	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,129	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.10%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.19%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.04	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.45	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.04	1.98	-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:	69.1	67.1	65.2	60.2	68.4	68.9
Medium Trucks:	65.1	63.2	57.9	57.5	65.1	65.3
Heavy Trucks:	67.3	65.8	57.2	58.7	66.8	66.9
Vehicle Noise:	72.2	70.4	66.5	63.7	71.7	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	57	123	266	573
CNEL:	60	130	280	604

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Peck Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,418	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,942	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.08%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.20%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.77	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.71	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.27	1.98	-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:	68.8	66.8	64.9	59.9	68.1	68.6
Medium Trucks:	64.8	63.0	57.6	57.2	64.8	65.1
Heavy Trucks:	67.1	65.6	57.0	58.5	66.6	66.7
Vehicle Noise:	72.0	70.2	66.2	63.4	71.5	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	55	119	256	551
CNEL:	58	125	269	581

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Valley Bl.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,350	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,035	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.18%
Medium Trucks:	78.6%	5.7%	15.7%	2.70%
Heavy Trucks:	84.5%	3.0%	12.5%	1.12%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.91	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.60	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.44	1.11	-1.20	-5.43	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:	68.1	66.1	64.2	59.2	67.4	67.9
Medium Trucks:	64.1	62.2	56.9	56.5	64.1	64.3
Heavy Trucks:	66.0	64.5	56.0	57.5	65.5	65.6
Vehicle Noise:	71.1	69.3	65.5	62.6	70.6	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	55	119	256	551
CNEL:	58	125	270	581

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Valley Bl.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,232	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,623	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.15%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.13%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.27	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-12.22	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.01	1.11	-1.20	-5.43	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:	67.4	65.5	63.6	58.5	66.7	67.3
Medium Trucks:	63.4	61.6	56.3	55.8	63.5	63.7
Heavy Trucks:	65.5	63.9	55.4	56.9	64.9	65.1
Vehicle Noise:	70.5	68.7	64.8	62.0	70.0	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	108	233	502
CNEL:	53	114	246	529

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OY 2020 With Project
Road Name: Loftus Dr.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,530	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,353	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	20	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.0	feet
Centerline Dist. to Observer:	32.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	94.93%
Medium Trucks:	78.6%	5.7%	15.7%	2.88%
Heavy Trucks:	84.5%	3.0%	12.5%	2.19%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	30.806
Medium Trucks:	30.517
Heavy Trucks:	30.545

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.34	3.05	-1.20	-4.51	0.000	0.000
Medium Trucks:	75.75	-14.84	3.11	-1.20	-4.86	0.000	0.000
Heavy Trucks:	81.57	-16.03	3.11	-1.20	-5.72	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:	66.5	64.5	62.6	57.6	65.8	66.3
Medium Trucks:	62.8	61.0	55.6	55.2	62.8	63.1
Heavy Trucks:	67.4	65.9	57.4	58.9	66.9	67.1
Vehicle Noise:	70.8	69.0	64.4	62.3	70.3	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	33	72	155	334
CNEL:	35	75	162	349

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Temple City Bl.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,741	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,174	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.52	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-11.99	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.09	1.11	-1.20	-5.43	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:	69.9	67.9	66.0	61.0	69.2	69.7
Medium Trucks:	65.6	63.8	58.5	58.0	65.7	65.9
Heavy Trucks:	66.8	65.3	56.7	58.3	66.3	66.4
Vehicle Noise:	72.6	70.8	67.2	64.1	72.1	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	149	321	691
CNEL:	73	157	339	731

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Las Tunas Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,802	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,080	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.39	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.12	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.22	0.82	-1.20	-5.43	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:	69.5	67.5	65.6	60.6	68.8	69.3
Medium Trucks:	65.2	63.4	58.0	57.6	65.2	65.5
Heavy Trucks:	66.4	64.9	56.3	57.8	65.9	66.0
Vehicle Noise:	72.2	70.4	66.7	63.7	71.7	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	65	140	301	649
CNEL:	69	148	318	685

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Baldwin Av.
Road Segment: n/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,849	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,285	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.67	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-11.84	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.94	0.82	-1.20	-5.43	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:	69.8	67.8	65.9	60.9	69.1	69.6
Medium Trucks:	65.5	63.7	58.3	57.9	65.5	65.7
Heavy Trucks:	66.7	65.2	56.6	58.1	66.2	66.3
Vehicle Noise:	72.5	70.7	67.0	64.0	72.0	72.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	68	146	314	677
CNEL:	72	154	332	715

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,078	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,708	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.83	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.68	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.78	1.11	-1.20	-5.43	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:	69.2	67.2	65.3	60.3	68.5	69.0
Medium Trucks:	64.9	63.1	57.8	57.4	65.0	65.2
Heavy Trucks:	66.1	64.6	56.1	57.6	65.6	65.7
Vehicle Noise:	71.9	70.1	66.5	63.4	71.4	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	62	134	289	622
CNEL:	66	142	305	657

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Gidley St.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,387	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,939	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.19	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.32	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.42	1.11	-1.20	-5.43	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:	69.6	67.6	65.7	60.7	68.9	69.4
Medium Trucks:	65.3	63.5	58.1	57.7	65.3	65.5
Heavy Trucks:	66.5	65.0	56.4	57.9	66.0	66.1
Vehicle Noise:	72.3	70.5	66.8	63.8	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	141	305	657
CNEL:	69	150	322	694

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Rose Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,618	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,062	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.37	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.14	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.24	1.11	-1.20	-5.43	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:	69.8	67.8	65.9	60.8	69.0	69.6
Medium Trucks:	65.5	63.6	58.3	57.9	65.5	65.7
Heavy Trucks:	66.7	65.1	56.6	58.1	66.1	66.3
Vehicle Noise:	72.5	70.6	67.0	63.9	72.0	72.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	145	313	675
CNEL:	71	154	331	713

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,441	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,444	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.46	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.05	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.15	1.11	-1.20	-5.43	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:	68.6	66.7	64.8	59.7	67.9	68.5
Medium Trucks:	64.6	62.8	57.4	57.0	64.6	64.8
Heavy Trucks:	66.3	64.8	56.3	57.8	65.8	65.9
Vehicle Noise:	71.6	69.8	66.0	63.1	71.1	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	128	275	593
CNEL:	63	135	290	625

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,525	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,953	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.79	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.72	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.82	1.11	-1.20	-5.43	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	66.0	64.1	59.0	67.3	67.8
Medium Trucks:	63.9	62.1	56.8	56.3	64.0	64.2
Heavy Trucks:	65.7	64.1	55.6	57.1	65.1	65.3
Vehicle Noise:	70.9	69.1	65.3	62.4	70.4	70.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	115	248	535
CNEL:	56	122	262	564

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Baldwin Av.
Road Segment: s/o Flair Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,602	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,260	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.22	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.29	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.39	1.11	-1.20	-5.43	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:	68.4	66.4	64.5	59.5	67.7	68.2
Medium Trucks:	64.4	62.5	57.2	56.8	64.4	64.6
Heavy Trucks:	66.1	64.6	56.0	57.5	65.6	65.7
Vehicle Noise:	71.4	69.6	65.8	62.9	70.9	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	57	123	265	571
CNEL:	60	130	280	603

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Santa Anita Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,205	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,821	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.59	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.92	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.02	1.11	-1.20	-5.43	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:	67.8	65.8	63.9	58.8	67.1	67.6
Medium Trucks:	63.7	61.9	56.6	56.1	63.8	64.0
Heavy Trucks:	65.5	63.9	55.4	56.9	64.9	65.1
Vehicle Noise:	70.7	68.9	65.1	62.2	70.2	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	241	519
CNEL:	55	118	254	547

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Santa Anita Av.
Road Segment: s/o Ramona Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,287	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,129	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	5.25	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-10.26	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.36	1.11	-1.20	-5.43	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	67.4	65.6	60.5	68.7	69.2
Medium Trucks:	65.4	63.6	58.2	57.8	65.4	65.6
Heavy Trucks:	67.1	65.6	57.0	58.6	66.6	66.7
Vehicle Noise:	72.4	70.6	66.8	63.9	71.9	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	144	310	669
CNEL:	71	152	327	705

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	21,925	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,193	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.92	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.59	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.69	1.98	-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:	69.2	67.2	65.3	60.2	68.5	69.0
Medium Trucks:	64.9	63.1	57.7	57.3	64.9	65.1
Heavy Trucks:	66.1	64.6	56.0	57.5	65.6	65.7
Vehicle Noise:	71.9	70.1	66.4	63.3	71.4	71.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	54	117	252	543
CNEL:	57	124	266	574

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Ellis Ln.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,540	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,554	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.58	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.93	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.03	1.98	-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:	69.8	67.9	66.0	60.9	69.1	69.7
Medium Trucks:	65.6	63.7	58.4	58.0	65.6	65.8
Heavy Trucks:	66.7	65.2	56.7	58.2	66.2	66.3
Vehicle Noise:	72.5	70.7	67.1	64.0	72.0	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	60	130	279	601
CNEL:	64	137	295	635

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,108	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,811	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.00	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.51	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.61	1.98	-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:	70.2	68.3	66.4	61.3	69.5	70.1
Medium Trucks:	66.0	64.1	58.8	58.4	66.0	66.2
Heavy Trucks:	67.2	65.6	57.1	58.6	66.6	66.8
Vehicle Noise:	73.0	71.1	67.5	64.4	72.5	72.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	138	297	641
CNEL:	68	146	314	677

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,079	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,008	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.29	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.22	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.32	1.98	-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:	70.5	68.6	66.7	61.6	69.8	70.4
Medium Trucks:	66.3	64.4	59.1	58.7	66.3	66.5
Heavy Trucks:	67.5	65.9	57.4	58.9	66.9	67.1
Vehicle Noise:	73.2	71.4	67.8	64.7	72.7	73.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	144	311	671
CNEL:	71	153	329	709

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,497	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,650	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.32	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.19	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.29	1.98	-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:	68.4	66.4	64.5	59.4	67.7	68.2
Medium Trucks:	64.3	62.5	57.2	56.7	64.4	64.6
Heavy Trucks:	66.1	64.5	56.0	57.5	65.5	65.7
Vehicle Noise:	71.3	69.5	65.7	62.8	70.8	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	50	108	232	500
CNEL:	53	114	245	528

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,571 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,557 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	50 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.17	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.35	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.44	1.98	-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:	68.2	66.2	64.3	59.3	67.5	68.0
Medium Trucks:	64.2	62.3	57.0	56.6	64.2	64.4
Heavy Trucks:	65.9	64.4	55.8	57.3	65.4	65.5
Vehicle Noise:	71.2	69.4	65.6	62.7	70.7	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	49	105	227	489
CNEL:	52	111	239	515

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,929 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,293 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	50 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.26	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.25	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.35	1.98	-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	67.3	65.4	60.4	68.6	69.1
Medium Trucks:	65.3	63.4	58.1	57.7	65.3	65.5
Heavy Trucks:	67.0	65.5	56.9	58.4	66.5	66.6
Vehicle Noise:	72.3	70.5	66.7	63.8	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	58	125	268	578
CNEL:	61	131	283	610

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Peck Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,064 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,106 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	50 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.01	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.50	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.60	1.98	-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:	69.1	67.1	65.2	60.1	68.3	68.9
Medium Trucks:	65.0	63.2	57.9	57.4	65.0	65.3
Heavy Trucks:	66.7	65.2	56.7	58.2	66.2	66.4
Vehicle Noise:	72.0	70.2	66.4	63.5	71.5	71.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	56	120	258	556
CNEL:	59	126	272	587

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Valley Bl.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,602 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,160 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	56 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.08	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.43	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.52	1.11	-1.20	-5.43	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:	68.3	66.3	64.4	59.3	67.6	68.1
Medium Trucks:	64.2	62.4	57.1	56.6	64.2	64.5
Heavy Trucks:	65.9	64.4	55.9	57.4	65.4	65.6
Vehicle Noise:	71.2	69.4	65.6	62.7	70.7	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	56	121	260	560
CNEL:	59	127	274	590

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Valley Bl.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,060	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,806	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.57	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.94	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.04	1.11	-1.20	-5.43	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:	67.7	65.8	63.9	58.8	67.0	67.6
Medium Trucks:	63.7	61.9	56.5	56.1	63.7	64.0
Heavy Trucks:	65.4	63.9	55.4	56.9	64.9	65.0
Vehicle Noise:	70.7	68.9	65.1	62.2	70.2	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	111	240	517
CNEL:	55	117	253	545

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 Without Project
Road Name: Loftus Dr.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,447	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	1,445	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	20	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	32.0	feet
Centerline Dist. to Observer:	32.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.24%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	30.806
Medium Trucks:	30.517
Heavy Trucks:	30.545

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.69	3.05	-1.20	-4.51	0.000	0.000
Medium Trucks:	75.75	-14.83	3.11	-1.20	-4.86	0.000	0.000
Heavy Trucks:	81.57	-18.92	3.11	-1.20	-5.72	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:	66.8	64.9	63.0	57.9	66.1	66.7
Medium Trucks:	62.8	61.0	55.7	55.2	62.9	63.1
Heavy Trucks:	64.6	63.0	54.5	56.0	64.0	64.2
Vehicle Noise:	69.8	68.0	64.2	61.3	69.3	69.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	29	62	134	289
CNEL:	30	66	141	304

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Temple City Bl.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,860	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,186	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.26%
Medium Trucks:	78.6%	5.7%	15.7%	2.70%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.54	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-11.99	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.09	1.11	-1.20	-5.43	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:	69.9	68.0	66.1	61.0	69.2	69.8
Medium Trucks:	65.6	63.8	58.5	58.0	65.7	65.9
Heavy Trucks:	66.8	65.3	56.7	58.3	66.3	66.4
Vehicle Noise:	72.6	70.8	67.2	64.1	72.1	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	149	321	692
CNEL:	73	158	340	732

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Baldwin Av.
Road Segment: s/o Las Tunas Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,948	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,095	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.17%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.12%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.41	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.09	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.93	0.82	-1.20	-5.43	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:	69.5	67.5	65.6	60.6	68.8	69.3
Medium Trucks:	65.2	63.4	58.1	57.7	65.3	65.5
Heavy Trucks:	66.7	65.2	56.6	58.1	66.2	66.3
Vehicle Noise:	72.3	70.5	66.8	63.8	71.8	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	142	305	658
CNEL:	69	150	322	695

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Baldwin Av.
Road Segment: n/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,995	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,300	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.18%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.12%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	43.589
Medium Trucks:	43.386
Heavy Trucks:	43.405

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.69	0.79	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-11.81	0.82	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.67	0.82	-1.20	-5.43	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:	69.8	67.8	65.9	60.9	69.1	69.6
Medium Trucks:	65.5	63.7	58.3	57.9	65.5	65.8
Heavy Trucks:	66.9	65.4	56.9	58.4	66.4	66.6
Vehicle Noise:	72.6	70.7	67.1	64.0	72.1	72.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	148	318	686
CNEL:	72	156	336	724

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Baldwin Av.
Road Segment: s/o Lower Azusa Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,132	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,713	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.05%
Medium Trucks:	78.6%	5.7%	15.7%	2.73%
Heavy Trucks:	84.5%	3.0%	12.5%	1.22%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.83	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-12.62	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.14	1.11	-1.20	-5.43	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:	69.2	67.2	65.3	60.3	68.5	69.0
Medium Trucks:	65.0	63.2	57.8	57.4	65.0	65.2
Heavy Trucks:	66.8	65.2	56.7	58.2	66.2	66.4
Vehicle Noise:	72.1	70.3	66.5	63.6	71.6	72.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	64	138	297	640
CNEL:	68	146	313	675

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Baldwin Av.
Road Segment: s/o Gidley St.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,532	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,053	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	94.97%
Medium Trucks:	78.6%	5.7%	15.7%	2.84%
Heavy Trucks:	84.5%	3.0%	12.5%	2.19%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.30	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-11.94	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-13.08	1.11	-1.20	-5.43	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:	69.7	67.7	65.8	60.8	69.0	69.5
Medium Trucks:	65.7	63.8	58.5	58.1	65.7	65.9
Heavy Trucks:	69.8	68.3	59.8	61.3	69.3	69.4
Vehicle Noise:	73.5	71.8	67.4	65.0	73.0	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	80	172	370	797
CNEL:	84	180	388	836

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Baldwin Av.
Road Segment: s/o Rose Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,763	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,176	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.02%
Medium Trucks:	78.6%	5.7%	15.7%	2.84%
Heavy Trucks:	84.5%	3.0%	12.5%	2.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.47	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	77.72	-11.78	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-12.99	1.11	-1.20	-5.43	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:	69.9	67.9	66.0	60.9	69.2	69.7
Medium Trucks:	65.8	64.0	58.7	58.2	65.9	66.1
Heavy Trucks:	69.9	68.4	59.8	61.4	69.4	69.5
Vehicle Noise:	73.7	71.9	67.5	65.2	73.2	73.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	81	175	378	814
CNEL:	85	184	396	853

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Baldwin Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,175	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,518	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.25%
Medium Trucks:	78.6%	5.7%	15.7%	2.83%
Heavy Trucks:	84.5%	3.0%	12.5%	1.92%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.50	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-10.77	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-12.44	1.11	-1.20	-5.43	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:	68.7	66.7	64.8	59.8	68.0	68.5
Medium Trucks:	64.9	63.1	57.7	57.3	64.9	65.1
Heavy Trucks:	69.0	67.5	59.0	60.5	68.5	68.6
Vehicle Noise:	72.7	70.9	66.4	64.1	72.2	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	70	150	324	697
CNEL:	73	157	339	730

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Baldwin Av.
Road Segment: s/o Loftus Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,952	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,995	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.66%
Medium Trucks:	78.6%	5.7%	15.7%	2.77%
Heavy Trucks:	84.5%	3.0%	12.5%	1.56%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.83	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.55	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.04	1.11	-1.20	-5.43	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	66.0	64.1	59.1	67.3	67.8
Medium Trucks:	64.1	62.3	56.9	56.5	64.1	64.3
Heavy Trucks:	67.4	65.9	57.4	58.9	66.9	67.0
Vehicle Noise:	71.6	69.8	65.6	63.1	71.1	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	127	274	591
CNEL:	62	134	288	621

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Baldwin Av.
Road Segment: s/o Flair Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,029	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,303	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.72%
Medium Trucks:	78.6%	5.7%	15.7%	2.77%
Heavy Trucks:	84.5%	3.0%	12.5%	1.51%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.25	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.14	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-13.75	1.11	-1.20	-5.43	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:	68.4	66.5	64.6	59.5	67.7	68.3
Medium Trucks:	64.5	62.7	57.3	56.9	64.5	64.8
Heavy Trucks:	67.7	66.2	57.6	59.2	67.2	67.3
Vehicle Noise:	72.0	70.2	66.0	63.4	71.5	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	63	135	291	626
CNEL:	66	142	305	658

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Santa Anita Av.
Road Segment: s/o Valley Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,324	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,832	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.26%
Medium Trucks:	78.6%	5.7%	15.7%	2.69%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.61	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.92	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-16.02	1.11	-1.20	-5.43	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:	67.8	65.8	63.9	58.9	67.1	67.6
Medium Trucks:	63.7	61.9	56.6	56.1	63.8	64.0
Heavy Trucks:	65.5	63.9	55.4	56.9	64.9	65.1
Vehicle Noise:	70.7	68.9	65.1	62.2	70.3	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	241	520
CNEL:	55	118	254	548

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Santa Anita Av.
Road Segment: s/o Ramona Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	41,406	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	4,141	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	56	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	50.0	feet
Centerline Dist. to Observer:	50.0	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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.25%
Medium Trucks:	78.6%	5.7%	15.7%	2.70%
Heavy Trucks:	84.5%	3.0%	12.5%	1.05%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	5.26	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-10.26	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.36	1.11	-1.20	-5.43	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	65.6	60.5	68.7	69.3
Medium Trucks:	65.4	63.6	58.2	57.8	65.4	65.6
Heavy Trucks:	67.1	65.6	57.0	58.6	66.6	66.7
Vehicle Noise:	72.4	70.6	66.8	63.9	71.9	72.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	67	144	311	670
CNEL:	71	152	328	706

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,012	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,201	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.13%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.15%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	1.93	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-13.56	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-17.30	1.98	-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:	69.2	67.2	65.3	60.3	68.5	69.0
Medium Trucks:	64.9	63.1	57.8	57.3	65.0	65.2
Heavy Trucks:	66.5	65.0	56.4	57.9	66.0	66.1
Vehicle Noise:	72.0	70.2	66.5	63.5	71.5	71.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	55	119	257	553
CNEL:	58	126	271	584

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Ellis Ln.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,686	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,569	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.16%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.13%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	2.60	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.90	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.69	1.98	-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:	69.9	67.9	66.0	60.9	69.1	69.7
Medium Trucks:	65.6	63.8	58.4	58.0	65.6	65.8
Heavy Trucks:	67.1	65.6	57.0	58.5	66.6	66.7
Vehicle Noise:	72.6	70.8	67.1	64.1	72.1	72.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	61	132	284	611
CNEL:	65	139	300	646

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,400	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,840	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.09%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.20%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.03	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.46	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.00	1.98	-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:	70.3	68.3	66.4	61.4	69.6	70.1
Medium Trucks:	66.0	64.2	58.9	58.4	66.1	66.3
Heavy Trucks:	67.8	66.2	57.7	59.2	67.3	67.4
Vehicle Noise:	73.2	71.3	67.6	64.6	72.6	73.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	66	142	307	661
CNEL:	70	150	324	697

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,371	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,037	vehicles
Vehicle Speed:	40	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.10%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.19%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	3.33	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-12.17	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-15.74	1.98	-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:	70.6	68.6	66.7	61.7	69.9	70.4
Medium Trucks:	66.3	64.5	59.1	58.7	66.3	66.6
Heavy Trucks:	68.0	66.5	58.0	59.5	67.5	67.6
Vehicle Noise:	73.4	71.6	67.9	64.9	72.9	73.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	69	149	320	690
CNEL:	73	157	338	728

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Arden Dr.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,730	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,673	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.07%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.21%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.35	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.14	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.64	1.98	-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:	68.4	66.4	64.5	59.5	67.7	68.2
Medium Trucks:	64.4	62.6	57.2	56.8	64.4	64.6
Heavy Trucks:	66.7	65.2	56.6	58.1	66.2	66.3
Vehicle Noise:	71.6	69.8	65.8	63.0	71.1	71.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	52	112	240	518
CNEL:	55	118	253	546

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Lower Azusa Rd.
Road Segment: w/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,804	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	2,580	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.07%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.22%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.20	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-12.29	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.77	1.98	-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:	68.2	66.3	64.4	59.3	67.5	68.1
Medium Trucks:	64.2	62.4	57.1	56.6	64.3	64.5
Heavy Trucks:	66.6	65.0	56.5	58.0	66.1	66.2
Vehicle Noise:	71.4	69.6	65.7	62.9	70.9	71.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	109	235	507
CNEL:	53	115	248	533

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Santa Anita Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,162	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	3,316	vehicles
Vehicle Speed:	35	mph
Near/Far Lane Distance:	50	feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.10%
Medium Trucks:	78.6%	5.7%	15.7%	2.71%
Heavy Trucks:	84.5%	3.0%	12.5%	1.18%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.29	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.20	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-14.82	1.98	-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	65.5	60.4	68.6	69.2
Medium Trucks:	65.3	63.5	58.2	57.7	65.3	65.6
Heavy Trucks:	67.5	66.0	57.5	59.0	67.0	67.1
Vehicle Noise:	72.5	70.7	66.7	63.9	72.0	72.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	59	128	276	595
CNEL:	63	135	291	627

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Lower Azusa Rd.
Road Segment: e/o Peck Rd.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,237 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,124 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	50 feet

Site Data

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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.09%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.19%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	36.551
Medium Trucks:	36.308
Heavy Trucks:	36.332

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.03	1.94	-1.20	-4.61	0.000	0.000
Medium Trucks:	75.75	-11.45	1.98	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.04	1.98	-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:	69.1	67.1	65.2	60.1	68.4	68.9
Medium Trucks:	65.1	63.2	57.9	57.5	65.1	65.3
Heavy Trucks:	67.3	65.8	57.2	58.7	66.8	66.9
Vehicle Noise:	72.2	70.4	66.5	63.7	71.7	72.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	57	123	266	573
CNEL:	60	130	280	603

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Valley Bl.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,808 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,181 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	56 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.18%
Medium Trucks:	78.6%	5.7%	15.7%	2.70%
Heavy Trucks:	84.5%	3.0%	12.5%	1.12%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.11	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.40	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.25	1.11	-1.20	-5.43	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:	68.3	66.3	64.4	59.4	67.6	68.1
Medium Trucks:	64.3	62.4	57.1	56.7	64.3	64.5
Heavy Trucks:	66.2	64.7	56.2	57.7	65.7	65.8
Vehicle Noise:	71.3	69.5	65.7	62.8	70.8	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	57	122	264	569
CNEL:	60	129	278	599

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Valley Bl.
Road Segment: e/o Baldwin Av.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,147 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,815 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	56 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	96.16%
Medium Trucks:	78.6%	5.7%	15.7%	2.72%
Heavy Trucks:	84.5%	3.0%	12.5%	1.13%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	41.725
Medium Trucks:	41.513
Heavy Trucks:	41.533

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.58	1.08	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-11.91	1.11	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-15.73	1.11	-1.20	-5.43	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:	67.8	65.8	63.9	58.8	67.0	67.6
Medium Trucks:	63.7	61.9	56.6	56.2	63.8	64.0
Heavy Trucks:	65.7	64.2	55.7	57.2	65.2	65.4
Vehicle Noise:	70.8	69.0	65.1	62.3	70.3	70.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	53	113	244	525
CNEL:	55	119	257	554

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: HY 2035 With Project
Road Name: Loftus Dr.
Road Segment: e/o Temple City Bl.
Project Name: GLC
Job Number: 11200

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,755 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,476 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	32.0 feet
Centerline Dist. to Observer:	32.0 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

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	76.2%	12.3%	11.5%	95.04%
Medium Trucks:	78.6%	5.7%	15.7%	2.87%
Heavy Trucks:	84.5%	3.0%	12.5%	2.10%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.004	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	30.806
Medium Trucks:	30.517
Heavy Trucks:	30.545

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.72	3.05	-1.20	-4.51	0.000	0.000
Medium Trucks:	75.75	-14.48	3.11	-1.20	-4.86	0.000	0.000
Heavy Trucks:	81.57	-15.84	3.11	-1.20	-5.72	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:	66.9	64.9	63.0	58.0	66.2	66.7
Medium Trucks:	63.2	61.3	56.0	55.6	63.2	63.4
Heavy Trucks:	67.6	66.1	57.6	59.1	67.1	67.2
Vehicle Noise:	71.1	69.3	64.7	62.5	70.6	70.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	35	75	162	349
CNEL:	36	79	169	365

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APPENDIX 9.1:

OPERATIONAL NOISE LEVEL CALCULATIONS

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STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R1**
Source: Unloading/Docking Activity
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	317.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	317.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	317.0	-20.5	-20.5	-20.5	-20.5	-20.5	-20.5
Shielding (Barrier Attenuation)	317.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		46.7	43.7	46.7	51.3	-20.5	59.5
60 Minute Hourly Adjustment		**46.7**	**43.7**	**46.7**	**51.3**	**-20.5**	**59.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R1**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	415.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	415.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	415.0	-38.4	-38.4	-38.4	-38.4	-38.4	-38.4
Shielding (Barrier Attenuation)	415.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.8	36.0	37.7	39.0	-38.4	39.8
39 Minute Hourly Adjustment		**36.9**	**34.1**	**35.8**	**37.1**	**-40.3**	**37.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R1**
Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	274.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	274.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	274.0	-21.6	-21.6	-21.6	-21.6	-21.6	-21.6
Shielding (Barrier Attenuation)	274.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		30.6	27.4	28.4	33.4	-21.6	50.3
60 Minute Hourly Adjustment		**30.6**	**27.4**	**28.4**	**33.4**	**-21.6**	**50.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R2**
Source: Unloading/Docking Activity
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	270.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	270.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	270.0	-19.1	-19.1	-19.1	-19.1	-19.1	-19.1
Shielding (Barrier Attenuation)	270.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		48.1	45.1	48.1	52.7	-19.1	60.9
60 Minute Hourly Adjustment		**48.1**	**45.1**	**48.1**	**52.7**	**-19.1**	**60.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R2**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	199.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	199.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	199.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0
Shielding (Barrier Attenuation)	199.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		45.2	42.4	44.1	45.4	-32.0	46.2
39 Minute Hourly Adjustment		**43.3**	**40.5**	**42.2**	**43.5**	**-33.9**	**44.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R2**
Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	116.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	116.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	116.0	-16.0	-16.0	-16.0	-16.0	-16.0	-16.0
Shielding (Barrier Attenuation)	116.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		36.2	33.0	34.0	39.0	-16.0	55.9
60 Minute Hourly Adjustment		**36.2**	**33.0**	**34.0**	**39.0**	**-16.0**	**55.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R3**
Source: Unloading/Docking Activity
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	612.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	612.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	612.0	-26.2	-26.2	-26.2	-26.2	-26.2	-26.2
Shielding (Barrier Attenuation)	612.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.0	38.0	41.0	45.6	-26.2	53.8
60 Minute Hourly Adjustment		**41.0**	**38.0**	**41.0**	**45.6**	**-26.2**	**53.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R3**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	449.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	449.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	449.0	-39.1	-39.1	-39.1	-39.1	-39.1	-39.1
Shielding (Barrier Attenuation)	449.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.1	35.3	37.0	38.3	-39.1	39.1
39 Minute Hourly Adjustment		**36.2**	**33.4**	**35.1**	**36.4**	**-41.0**	**37.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R3**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	132.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	132.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	132.0	-16.8	-16.8	-16.8	-16.8	-16.8	-16.8
Shielding (Barrier Attenuation)	132.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		35.4	32.2	33.2	38.2	-16.8	55.1
60 Minute Hourly Adjustment		**35.4**	**32.2**	**33.2**	**38.2**	**-16.8**	**55.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R4**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	394.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	394.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	394.0	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4
Shielding (Barrier Attenuation)	394.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		44.8	41.8	44.8	49.4	-22.4	57.6
60 Minute Hourly Adjustment		**44.8**	**41.8**	**44.8**	**49.4**	**-22.4**	**57.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R4**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	240.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	240.0 feet		*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet		*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet		*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	240.0	-33.6	-33.6	-33.6	-33.6	-33.6	-33.6
Shielding (Barrier Attenuation)	240.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		43.6	40.8	42.5	43.8	-33.6	44.6
39 Minute Hourly Adjustment		**41.7**	**38.9**	**40.6**	**41.9**	**-35.5**	**42.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R4**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	40.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	40.0 feet		*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet		*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet		*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	40.0	-9.0	-9.0	-9.0	-9.0	-9.0	-9.0
Shielding (Barrier Attenuation)	40.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		43.2	40.0	41.0	46.0	-9.0	62.9
60 Minute Hourly Adjustment		**43.2**	**40.0**	**41.0**	**46.0**	**-9.0**	**62.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R5**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	32.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	32.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	32.0	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
Shielding (Barrier Attenuation)	32.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		66.6	63.6	66.6	71.2	-0.6	79.4
60 Minute Hourly Adjustment		**66.6**	**63.6**	**66.6**	**71.2**	**-0.6**	**79.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R5**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	315.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	315.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	315.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0
Shielding (Barrier Attenuation)	315.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.2	38.4	40.1	41.4	-36.0	42.2
39 Minute Hourly Adjustment		**39.3**	**36.5**	**38.2**	**39.5**	**-37.9**	**40.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R5**
Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	166.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	166.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	166.0	-18.3	-18.3	-18.3	-18.3	-18.3	-18.3
Shielding (Barrier Attenuation)	166.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		33.9	30.7	31.7	36.7	-18.3	53.6
60 Minute Hourly Adjustment		**33.9**	**30.7**	**31.7**	**36.7**	**-18.3**	**53.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R6**
Source: Unloading/Docking Activity
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	787.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	787.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	787.0	-28.4	-28.4	-28.4	-28.4	-28.4	-28.4
Shielding (Barrier Attenuation)	787.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.8	35.8	38.8	43.4	-28.4	51.6
60 Minute Hourly Adjustment		**38.8**	**35.8**	**38.8**	**43.4**	**-28.4**	**51.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R6**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	900.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	900.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	900.0	-45.1	-45.1	-45.1	-45.1	-45.1	-45.1
Shielding (Barrier Attenuation)	900.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		32.1	29.3	31.0	32.3	-45.1	33.1
39 Minute Hourly Adjustment		**30.2**	**27.4**	**29.1**	**30.4**	**-47.0**	**31.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R6**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	798.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	798.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	798.0	-28.5	-28.5	-28.5	-28.5	-28.5	-28.5
Shielding (Barrier Attenuation)	798.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		23.7	20.5	21.5	26.5	-28.5	43.4
60 Minute Hourly Adjustment		**23.7**	**20.5**	**21.5**	**26.5**	**-28.5**	**43.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R7**
Source: Unloading/Docking Activity
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	851.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	851.0 feet		*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet		*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet		*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	851.0	-29.1	-29.1	-29.1	-29.1	-29.1	-29.1
Shielding (Barrier Attenuation)	851.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.1	35.1	38.1	42.7	-29.1	50.9
60 Minute Hourly Adjustment		**38.1**	**35.1**	**38.1**	**42.7**	**-29.1**	**50.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R7**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,369.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,369.0 feet		*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet		*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet		*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	1,369.0	-48.7	-48.7	-48.7	-48.7	-48.7	-48.7
Shielding (Barrier Attenuation)	1,369.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.5	25.7	27.4	28.7	-48.7	29.5
39 Minute Hourly Adjustment		**26.6**	**23.8**	**25.5**	**26.8**	**-50.6**	**27.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R7**
Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	953.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	953.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	953.0	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7
Shielding (Barrier Attenuation)	953.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		22.5	19.3	20.3	25.3	-29.7	42.2
60 Minute Hourly Adjustment		**22.5**	**19.3**	**20.3**	**25.3**	**-29.7**	**42.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R8**
Source: Unloading/Docking Activity
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,369.0	feet	***Barrier Height:***	**30.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	1,359.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	1,369.0	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2
Shielding (Barrier Attenuation)	10.0	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6
Raw (Distance + Barrier)		16.4	13.4	16.4	21.0	-50.8	29.2
60 Minute Hourly Adjustment		**16.4**	**13.4**	**16.4**	**21.0**	**-50.8**	**29.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R8**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,517.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	1,517.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	1,517.0	-49.6	-49.6	-49.6	-49.6	-49.6	-49.6
Shielding (Barrier Attenuation)	1,517.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		27.6	24.8	26.5	27.8	-49.6	28.6
39 Minute Hourly Adjustment		**25.7**	**22.9**	**24.6**	**25.9**	**-51.5**	**26.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R8**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	908.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	908.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	908.0	-29.4	-29.4	-29.4	-29.4	-29.4	-29.4
Shielding (Barrier Attenuation)	908.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		22.8	19.6	20.6	25.6	-29.4	42.5
60 Minute Hourly Adjustment		**22.8**	**19.6**	**20.6**	**25.6**	**-29.4**	**42.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R9**
Source: Unloading/Docking Activity
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	799.0	feet	***Barrier Height:***	**30.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	789.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	799.0	-28.5	-28.5	-28.5	-28.5	-28.5	-28.5
Shielding (Barrier Attenuation)	10.0	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6
Raw (Distance + Barrier)		21.1	18.1	21.1	25.7	-46.1	33.9
60 Minute Hourly Adjustment		**21.1**	**18.1**	**21.1**	**25.7**	**-46.1**	**33.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R9**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	697.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	697.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	697.0	-42.9	-42.9	-42.9	-42.9	-42.9	-42.9
Shielding (Barrier Attenuation)	697.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		34.3	31.5	33.2	34.5	-42.9	35.3
39 Minute Hourly Adjustment		**32.4**	**29.6**	**31.3**	**32.6**	**-44.8**	**33.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R9**
Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	254.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	254.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	254.0	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1
Shielding (Barrier Attenuation)	254.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		31.1	27.9	28.9	33.9	-21.1	50.8
60 Minute Hourly Adjustment		**31.1**	**27.9**	**28.9**	**33.9**	**-21.1**	**50.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R10**
Source: Unloading/Docking Activity
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	579.0 feet	***Barrier Height:***	**30.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	569.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	579.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7
Shielding (Barrier Attenuation)	10.0	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6
Raw (Distance + Barrier)		23.9	20.9	23.9	28.5	-43.3	36.7
60 Minute Hourly Adjustment		**23.9**	**20.9**	**23.9**	**28.5**	**-43.3**	**36.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R10**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	454.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	454.0 feet		*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet		*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet		*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	454.0	-39.2	-39.2	-39.2	-39.2	-39.2	-39.2
Shielding (Barrier Attenuation)	454.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.0	35.2	36.9	38.2	-39.2	39.0
39 Minute Hourly Adjustment		**36.1**	**33.3**	**35.0**	**36.3**	**-41.1**	**37.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R10**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	153.0 feet		***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	153.0 feet		*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet		*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet		*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet		*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	153.0	-17.8	-17.8	-17.8	-17.8	-17.8	-17.8
Shielding (Barrier Attenuation)	153.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		34.4	31.2	32.2	37.2	-17.8	54.1
60 Minute Hourly Adjustment		**34.4**	**31.2**	**32.2**	**37.2**	**-17.8**	**54.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R11**
Source: Unloading/Docking Activity
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	447.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	447.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	447.0	-23.5	-23.5	-23.5	-23.5	-23.5	-23.5
Shielding (Barrier Attenuation)	447.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		43.7	40.7	43.7	48.3	-23.5	56.5
60 Minute Hourly Adjustment		**43.7**	**40.7**	**43.7**	**48.3**	**-23.5**	**56.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R11**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	384.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	384.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	384.0	-37.7	-37.7	-37.7	-37.7	-37.7	-37.7
Shielding (Barrier Attenuation)	384.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		39.5	36.7	38.4	39.7	-37.7	40.5
39 Minute Hourly Adjustment		**37.6**	**34.8**	**36.5**	**37.8**	**-39.6**	**38.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R11**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	212.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	212.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	212.0	-19.9	-19.9	-19.9	-19.9	-19.9	-19.9
Shielding (Barrier Attenuation)	212.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		32.3	29.1	30.1	35.1	-19.9	52.0
60 Minute Hourly Adjustment		**32.3**	**29.1**	**30.1**	**35.1**	**-19.9**	**52.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R1**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	317.0	feet	***Barrier Height:***	**10.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	307.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	317.0	-20.5	-20.5	-20.5	-20.5	-20.5	-20.5
Shielding (Barrier Attenuation)	10.0	-6.9	-6.9	-6.9	-6.9	-6.9	-6.9
Raw (Distance + Barrier)		39.8	36.8	39.8	44.4	-27.4	52.6
60 Minute Hourly Adjustment		**39.8**	**36.8**	**39.8**	**44.4**	**-27.4**	**52.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R1**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	415.0	feet	***Barrier Height:***	**5.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	405.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	30.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	415.0	-38.4	-38.4	-38.4	-38.4	-38.4	-38.4
Shielding (Barrier Attenuation)	10.0	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3
Raw (Distance + Barrier)		33.5	30.7	32.4	33.7	-43.7	34.5
39 Minute Hourly Adjustment		**31.6**	**28.8**	**30.5**	**31.8**	**-45.6**	**32.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R1**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	274.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	274.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	274.0	-21.6	-21.6	-21.6	-21.6	-21.6	-21.6
Shielding (Barrier Attenuation)	274.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		30.6	27.4	28.4	33.4	-21.6	50.3
60 Minute Hourly Adjustment		**30.6**	**27.4**	**28.4**	**33.4**	**-21.6**	**50.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R2**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	270.0	feet	***Barrier Height:***	**10.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	260.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	270.0	-19.1	-19.1	-19.1	-19.1	-19.1	-19.1
Shielding (Barrier Attenuation)	10.0	-6.9	-6.9	-6.9	-6.9	-6.9	-6.9
Raw (Distance + Barrier)		41.2	38.2	41.2	45.8	-26.0	54.0
60 Minute Hourly Adjustment		**41.2**	**38.2**	**41.2**	**45.8**	**-26.0**	**54.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R2**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	199.0	feet	***Barrier Height:***	**5.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	189.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	30.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	199.0	-32.0	-32.0	-32.0	-32.0	-32.0	-32.0
Shielding (Barrier Attenuation)	10.0	-6.2	-6.2	-6.2	-6.2	-6.2	-6.2
Raw (Distance + Barrier)		39.0	36.2	37.9	39.2	-38.2	40.0
39 Minute Hourly Adjustment		**37.1**	**34.3**	**36.0**	**37.3**	**-40.1**	**38.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R2**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	116.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	116.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	116.0	-16.0	-16.0	-16.0	-16.0	-16.0	-16.0
Shielding (Barrier Attenuation)	116.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		36.2	33.0	34.0	39.0	-16.0	55.9
60 Minute Hourly Adjustment		**36.2**	**33.0**	**34.0**	**39.0**	**-16.0**	**55.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R3**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	612.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	612.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	612.0	-26.2	-26.2	-26.2	-26.2	-26.2	-26.2
Shielding (Barrier Attenuation)	612.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		41.0	38.0	41.0	45.6	-26.2	53.8
60 Minute Hourly Adjustment		**41.0**	**38.0**	**41.0**	**45.6**	**-26.2**	**53.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R3**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	449.0 feet	***Barrier Height:***	**5.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	439.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	30.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	449.0	-39.1	-39.1	-39.1	-39.1	-39.1	-39.1
Shielding (Barrier Attenuation)	10.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2
Raw (Distance + Barrier)		32.9	30.1	31.8	33.1	-44.3	33.9
39 Minute Hourly Adjustment		**31.0**	**28.2**	**29.9**	**31.2**	**-46.2**	**32.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R3**
Source: Parking Lot Vehicle Movements
Condition: Operational Mitigated

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	132.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	132.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	132.0	-16.8	-16.8	-16.8	-16.8	-16.8	-16.8
Shielding (Barrier Attenuation)	132.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		35.4	32.2	33.2	38.2	-16.8	55.1
60 Minute Hourly Adjustment		**35.4**	**32.2**	**33.2**	**38.2**	**-16.8**	**55.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R4**
Source: Unloading/Docking Activity
Condition: Operational Mitigated

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	394.0 feet	***Barrier Height:***	**8.0 feet**
Noise Distance to Barrier:	384.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	10.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	394.0	-22.4	-22.4	-22.4	-22.4	-22.4	-22.4
Shielding (Barrier Attenuation)	384.0	-8.1	-8.1	-8.1	-8.1	-8.1	-8.1
Raw (Distance + Barrier)		36.7	33.7	36.7	41.3	-30.5	49.5
60 Minute Hourly Adjustment		**36.7**	**33.7**	**36.7**	**41.3**	**-30.5**	**49.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R4**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	240.0 feet	***Barrier Height:***	**5.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	230.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	30.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	240.0	-33.6	-33.6	-33.6	-33.6	-33.6	-33.6
Shielding (Barrier Attenuation)	10.0	-5.8	-5.8	-5.8	-5.8	-5.8	-5.8
Raw (Distance + Barrier)		37.8	35.0	36.7	38.0	-39.4	38.8
39 Minute Hourly Adjustment		**35.9**	**33.1**	**34.8**	**36.1**	**-41.3**	**36.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R4**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	40.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	40.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet	20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance	

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	40.0	-9.0	-9.0	-9.0	-9.0	-9.0	-9.0
Shielding (Barrier Attenuation)	40.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		43.2	40.0	41.0	46.0	-9.0	62.9
60 Minute Hourly Adjustment		**43.2**	**40.0**	**41.0**	**46.0**	**-9.0**	**62.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R5**
Source: Unloading/Docking Activity
Condition: Operational Mitigated

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	32.0 feet	***Barrier Height:***	**14.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	22.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	32.0	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
Shielding (Barrier Attenuation)	10.0	-13.8	-13.8	-13.8	-13.8	-13.8	-13.8
Raw (Distance + Barrier)		52.8	49.8	52.8	57.4	-14.4	65.6
60 Minute Hourly Adjustment		**52.8**	**49.8**	**52.8**	**57.4**	**-14.4**	**65.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R5**
Source: Roof-Top Air Conditioning Unit
Condition: Operational Mitigated

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	315.0 feet	***Barrier Height:***	**5.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	305.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	30.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	315.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0
Shielding (Barrier Attenuation)	10.0	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5
Raw (Distance + Barrier)		35.7	32.9	34.6	35.9	-41.5	36.7
39 Minute Hourly Adjustment		**33.8**	**31.0**	**32.7**	**34.0**	**-43.4**	**34.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R5**
Source: Parking Lot Vehicle Movements
Condition: Operational Mitigated

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	166.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	166.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	166.0	-18.3	-18.3	-18.3	-18.3	-18.3	-18.3
Shielding (Barrier Attenuation)	166.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		33.9	30.7	31.7	36.7	-18.3	53.6
60 Minute Hourly Adjustment		**33.9**	**30.7**	**31.7**	**36.7**	**-18.3**	**53.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location: **R6**
Source: Unloading/Docking Activity
Condition: Operational Mitigated

Project Name: GLC
Job Number: 11200
Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	787.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	787.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	787.0	-28.4	-28.4	-28.4	-28.4	-28.4	-28.4
Shielding (Barrier Attenuation)	787.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.8	35.8	38.8	43.4	-28.4	51.6
60 Minute Hourly Adjustment		**38.8**	**35.8**	**38.8**	**43.4**	**-28.4**	**51.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R6**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	900.0	feet	***Barrier Height:***	**5.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	890.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	30.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	900.0	-45.1	-45.1	-45.1	-45.1	-45.1	-45.1
Shielding (Barrier Attenuation)	10.0	-5.1	-5.1	-5.1	-5.1	-5.1	-5.1
Raw (Distance + Barrier)		27.0	24.2	25.9	27.2	-50.2	28.0
39 Minute Hourly Adjustment		**25.1**	**22.3**	**24.0**	**25.3**	**-52.1**	**26.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R6**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	798.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	798.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	798.0	-28.5	-28.5	-28.5	-28.5	-28.5	-28.5
Shielding (Barrier Attenuation)	798.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		23.7	20.5	21.5	26.5	-28.5	43.4
60 Minute Hourly Adjustment		**23.7**	**20.5**	**21.5**	**26.5**	**-28.5**	**43.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R7**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	851.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	851.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	851.0	-29.1	-29.1	-29.1	-29.1	-29.1	-29.1
Shielding (Barrier Attenuation)	851.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.1	35.1	38.1	42.7	-29.1	50.9
60 Minute Hourly Adjustment		**38.1**	**35.1**	**38.1**	**42.7**	**-29.1**	**50.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R7**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,369.0	feet	***Barrier Height:***	**5.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	1,359.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	30.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	1,369.0	-48.7	-48.7	-48.7	-48.7	-48.7	-48.7
Shielding (Barrier Attenuation)	10.0	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9
Raw (Distance + Barrier)		23.6	20.8	22.5	23.8	-53.6	24.6
39 Minute Hourly Adjustment		**21.7**	**18.9**	**20.6**	**21.9**	**-55.5**	**22.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R7**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	953.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	953.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	953.0	-29.7	-29.7	-29.7	-29.7	-29.7	-29.7
Shielding (Barrier Attenuation)	953.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		22.5	19.3	20.3	25.3	-29.7	42.2
60 Minute Hourly Adjustment		**22.5**	**19.3**	**20.3**	**25.3**	**-29.7**	**42.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R8**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,369.0	feet	***Barrier Height:***	**30.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	1,359.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	1,369.0	-33.2	-33.2	-33.2	-33.2	-33.2	-33.2
Shielding (Barrier Attenuation)	10.0	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6
Raw (Distance + Barrier)		16.4	13.4	16.4	21.0	-50.8	29.2
60 Minute Hourly Adjustment		**16.4**	**13.4**	**16.4**	**21.0**	**-50.8**	**29.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R8**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	1,517.0	feet	***Barrier Height:***	**5.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	1,507.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	30.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	1,517.0	-49.6	-49.6	-49.6	-49.6	-49.6	-49.6
Shielding (Barrier Attenuation)	10.0	-4.9	-4.9	-4.9	-4.9	-4.9	-4.9
Raw (Distance + Barrier)		22.7	19.9	21.6	22.9	-54.5	23.7
39 Minute Hourly Adjustment		**20.8**	**18.0**	**19.7**	**21.0**	**-56.4**	**21.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R8**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	908.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	908.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	908.0	-29.4	-29.4	-29.4	-29.4	-29.4	-29.4
Shielding (Barrier Attenuation)	908.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		22.8	19.6	20.6	25.6	-29.4	42.5
60 Minute Hourly Adjustment		**22.8**	**19.6**	**20.6**	**25.6**	**-29.4**	**42.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R9**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	799.0	feet	***Barrier Height:***	**30.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	789.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	799.0	-28.5	-28.5	-28.5	-28.5	-28.5	-28.5
Shielding (Barrier Attenuation)	10.0	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6
Raw (Distance + Barrier)		21.1	18.1	21.1	25.7	-46.1	33.9
60 Minute Hourly Adjustment		**21.1**	**18.1**	**21.1**	**25.7**	**-46.1**	**33.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R9**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	697.0	feet	***Barrier Height:***	**5.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	687.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	30.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	697.0	-42.9	-42.9	-42.9	-42.9	-42.9	-42.9
Shielding (Barrier Attenuation)	10.0	-5.1	-5.1	-5.1	-5.1	-5.1	-5.1
Raw (Distance + Barrier)		29.2	26.4	28.1	29.4	-48.0	30.2
39 Minute Hourly Adjustment		**27.3**	**24.5**	**26.2**	**27.5**	**-49.9**	**28.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R9**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	254.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	254.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	254.0	-21.1	-21.1	-21.1	-21.1	-21.1	-21.1
Shielding (Barrier Attenuation)	254.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		31.1	27.9	28.9	33.9	-21.1	50.8
60 Minute Hourly Adjustment		**31.1**	**27.9**	**28.9**	**33.9**	**-21.1**	**50.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R10**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	579.0	feet	***Barrier Height:***	**30.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	569.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	579.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7
Shielding (Barrier Attenuation)	10.0	-17.6	-17.6	-17.6	-17.6	-17.6	-17.6
Raw (Distance + Barrier)		23.9	20.9	23.9	28.5	-43.3	36.7
60 Minute Hourly Adjustment		**23.9**	**20.9**	**23.9**	**28.5**	**-43.3**	**36.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R10**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	454.0 feet	***Barrier Height:***	**5.0 feet**
Noise Distance to Barrier:	10.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	444.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	30.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	454.0	-39.2	-39.2	-39.2	-39.2	-39.2	-39.2
Shielding (Barrier Attenuation)	10.0	-5.2	-5.2	-5.2	-5.2	-5.2	-5.2
Raw (Distance + Barrier)		32.8	30.0	31.7	33.0	-44.4	33.8
39 Minute Hourly Adjustment		**30.9**	**28.1**	**29.8**	**31.1**	**-46.3**	**31.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R10**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	153.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	153.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	153.0	-17.8	-17.8	-17.8	-17.8	-17.8	-17.8
Shielding (Barrier Attenuation)	153.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		34.4	31.2	32.2	37.2	-17.8	54.1
60 Minute Hourly Adjustment		**34.4**	**31.2**	**32.2**	**37.2**	**-17.8**	**54.1**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R11**	*Project Name:*	GLC
Source:	Unloading/Docking Activity	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	447.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	447.0	feet	*Noise Source Height:*	8.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	0.0	80.0
Distance Attenuation	447.0	-23.5	-23.5	-23.5	-23.5	-23.5	-23.5
Shielding (Barrier Attenuation)	447.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		43.7	40.7	43.7	48.3	-23.5	56.5
60 Minute Hourly Adjustment		**43.7**	**40.7**	**43.7**	**48.3**	**-23.5**	**56.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R11**	*Project Name:*	GLC
Source:	Roof-Top Air Conditioning Unit	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	384.0	feet	***Barrier Height:***	**5.0**	**feet**
Noise Distance to Barrier:	10.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	374.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	30.0	feet	*Drop Off Coefficient:*	20.0	
Barrier Elevation:	30.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	0.0	78.2
Distance Attenuation	384.0	-37.7	-37.7	-37.7	-37.7	-37.7	-37.7
Shielding (Barrier Attenuation)	10.0	-5.3	-5.3	-5.3	-5.3	-5.3	-5.3
Raw (Distance + Barrier)		34.2	31.4	33.1	34.4	-43.0	35.2
39 Minute Hourly Adjustment		**32.3**	**29.5**	**31.2**	**32.5**	**-44.9**	**33.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

12/11/2017

Observer Location:	**R11**	*Project Name:*	GLC
Source:	Parking Lot Vehicle Movements	*Job Number:*	11200
Condition:	Operational Mitigated	*Analyst:*	A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer	212.0	feet	***Barrier Height:***	**0.0**	**feet**
Noise Distance to Barrier:	212.0	feet	*Noise Source Height:*	5.0	feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0	feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0	
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0	
Barrier Elevation:	0.0	feet			

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	0.0	71.9
Distance Attenuation	212.0	-19.9	-19.9	-19.9	-19.9	-19.9	-19.9
Shielding (Barrier Attenuation)	212.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		32.3	29.1	30.1	35.1	-19.9	52.0
60 Minute Hourly Adjustment		**32.3**	**29.1**	**30.1**	**35.1**	**-19.9**	**52.0**