Appendix D
Noise Analysis

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THE AVENUE SPECIFIC PLAN
NOISE ANALYSIS (REVISED)
CITY OF ONTARIO, CALIFORNIA

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THE AVENUE SPECIFIC PLAN
NOISE ANALYSIS (REVISED)
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1.0 EXECUTIVE SUMMARY

This noise study has been completed to determine the noise impacts associated with the development of the proposed The Avenue Specific Plan. Urban Crossroads, Inc. previously prepared a noise study for The Avenue Specific Plan (SPA) in August 2006. Due to the changes in the project's description (increase of intensity) and relocation of land uses, this new noise study has been prepared. The Avenue Specific Plan Amendment proposes an increase of 76,000 square feet of commercial space and 286 dwelling units in addition to the previous plan of 174,000 square feet of commercial space, 2,320 dwelling units and an elementary and middle school. The project site is generally located north of Edison Avenue, east of Carpenter Avenue, south of Schaefer Avenue, and west of Haven Avenue in the City of Ontario.

The purpose of this noise assessment is to evaluate the noise impacts for the project study area and to recommend noise mitigation measures to minimize potential project impacts.

1.1 Off-Site Noise Analysis

This section will specifically address potential impacts related to the increase in project intensity/trip generation and relocation of the commercial and residential in the easterly portions of the project. In other words, this off-site traffic noise analysis is evaluating the "project" as only the net change in additional project-related traffic. To assess the off-site transportation related noise level impacts associated with development of the proposed The Avenue project, traffic noise contours were developed for Existing conditions, Interim Year (2015) and Long Range (2030) Conditions. To be considered a significant noise impact, project traffic must create a noise level increase in the area adjacent to the roadway segment greater than 3 dBA and the resulting noise level must exceed the City of Ontario 65 dBA CNEL exterior noise standard. The previous noise study prepared for The Avenue on August 17, 2006 identified project–related noise impacts ranging from 0.0 to 1.0 dB CNEL. This analysis shows that the noise impacts related to the increase in project intensity of the project will create additional noise level increases of up to 0.4 dBA CNEL. An increase of less than 3.0 dBA CNEL is not considered significant in terms of the

significance criteria utilized in this study. Therefore, the proposed project's contributions to off-site roadway noise increases will not cause a significant impact to an existing or future sensitive noise receptor.

Cumulative increases in traffic noise levels along roadways in the vicinity were estimated by comparing the Year 2030 with project scenario to existing conditions. Noise levels are expected to increase to up to 10.6 dBA CNEL. Based on the previously mention standard of 3 dBA CNEL being considered a significant impact, there are multiple segments within the study area that will increase by more than 3 dBA CNEL, thus the cumulative noise impacts shall be considered potentially significant. Most uses along these study area roads are agricultural and industrial uses. A review of the study area shows that the noise sensitive areas that will be impacted by cumulative growth traffic noise are the existing single family homes adjacent to Archibald Avenue between Chino Avenue and Schaefer Avenue, Chino Avenue east of Archibald Avenue and the multi-family units adjacent to Archibald Avenue north of Chino Avenue and on Chino Avenue east of Archibald.

1.2 On-Site Noise Analysis

The on-site noise analysis indicates that vehicle noise from Schaefer Avenue, Edison Avenue, Archibald Avenue, Turner Avenue and Haven Avenue are the principal sources of community noise that will affect the project site. The analysis concludes that the unmitigated noise levels on many of the street segments for which residences are proposed will exceed the City of Ontario 65 dBA Leq limit for exterior areas. With proper noise mitigation measures, both the exterior and interior noise levels will meet the City of Ontario's 65 dBA Leq and 45 dBA Leq noise standards respectively.

The Ontario Airport is located approximately 4 miles north of the project site, and Chino Airport is located approximately 3 miles southwest of the project site. The project site is located outside both airports 60 dBA CNEL noise contours. Aircraft overflights may be occasionally heard but will not represent a significant noise impact.

Currently, the land on which the project is proposed is used mainly for agriculture. A large portion of the agriculture land use contains dairy farms. One potential noise source from these dairy farms is the machines that are used to mix the feed for the cattle. Measurements taken at fifty (50) feet from the machines for a fifteen (15) minute period show a noise level of 83.5 dBA Leq. The noise

levels will be 71.5 dBA and 65.0 dBA at 200 and 425 feet respectively. These machines are run approximately four times a day, twice in the morning and twice in the evening for fifteen (15) minutes at a time. It is expected that with the development of the New Model Colony that the dairy farms will be removed.

A final noise study should be prepared prior to obtaining building permits for the project. This report would address the detailed exterior and interior noise mitigation requirements based upon precise grading plans and actual building design specifications to meet the City of Ontario standards.

1.3 Construction Noise Analysis

Construction noise is of short-term duration and will not present any long-term impacts on the project site or surrounding area. The site is currently made up of mostly agriculture and sporadic single-family homes and is located in a relatively undeveloped area. The project site is surrounded mainly by other agricultural land-uses and other undeveloped land. Most existing residential areas are located approximately 200 feet north of the site across Schaefer Avenue. Using a drop-off rate of 6 dBA per doubling of distance, noise levels at 200 feet are estimated at 77 dBA. The City of Ontario does not include noise standards for construction-related noise impacts.

Construction noise is of short-term duration and will not present any long-term impacts on the project site or the surrounding area. The most effective method of controlling construction noise is by limiting the hours of construction to normal weekday working hours. To minimize the potential short-term noise impacts during construction activities for the proposed project, the following construction noise mitigation measures are recommended:

- During all project site excavation and grading on-site, 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 receptors nearest the project site during all project construction.

- The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours to be determined by City staff.

- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings.

2.0 INTRODUCTION

This noise study has been completed to determine the noise impacts associated with the development of the proposed The Avenue Specific Plan (proposed project). Urban Crossroads, Inc. previously prepared a noise study for The Avenue Specific Plan (SPA) in August 2006. Due to the changes in the project's description (increase of intensity) and relocation of land uses, this new noise study has been prepared. This study has been prepared to satisfy the City of Ontario noise standards.

2.1 Site Location

The project site is generally located north of Edison Avenue, east of Carpenter Avenue, south of Schaefer Avenue, and west of Haven Avenue in the City of Ontario. Exhibit 2-A illustrates the location of the project site within the study area. The project site currently consists of residential and agricultural land uses.

2.2 Existing On-Site and Surrounding Land Use

The project site is subject to noise from Edison Avenue, Hellman Avenue, Schaefer Avenue, Haven Avenue, and adjacent land uses. Adjacent land uses are currently residential and agricultural.

2.3 Proposed Project

The Avenue Specific Plan Amendment proposes an increase of 76,000 square feet of commercial space and 286 dwelling units in addition to the previous plan of 174,000 square feet of commercial space, 2,320 dwelling units and an elementary and middle school. The project site is presented on Exhibit 2-B. Baseline noise conditions were analyzed in 2005, the date the Notice of Project was published and circulated. Consistent with the applicants' phasing proposals, build out for the project was assumed to be 2015.

EXHIBIT 2-A

LOCATION MAP

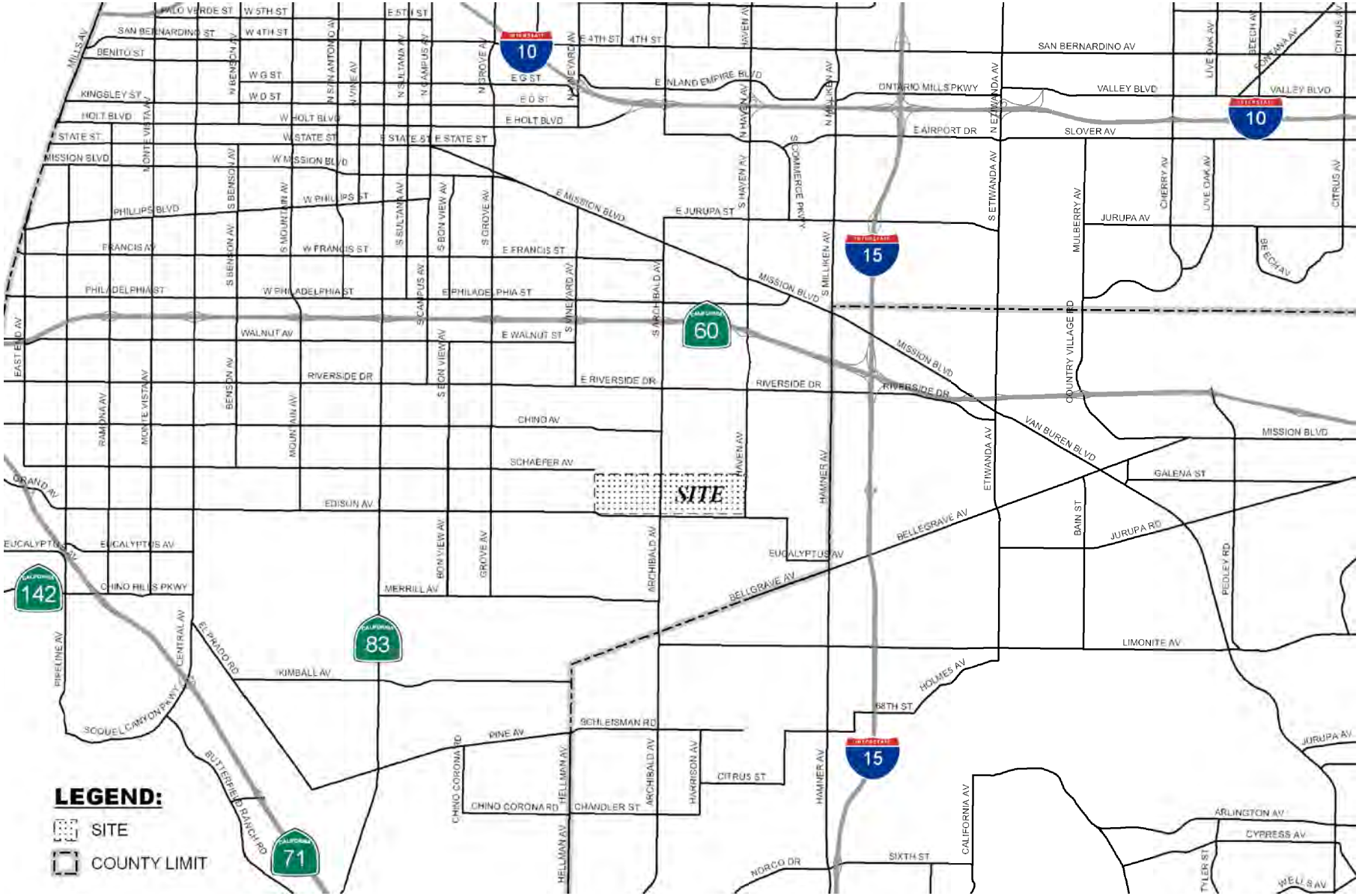
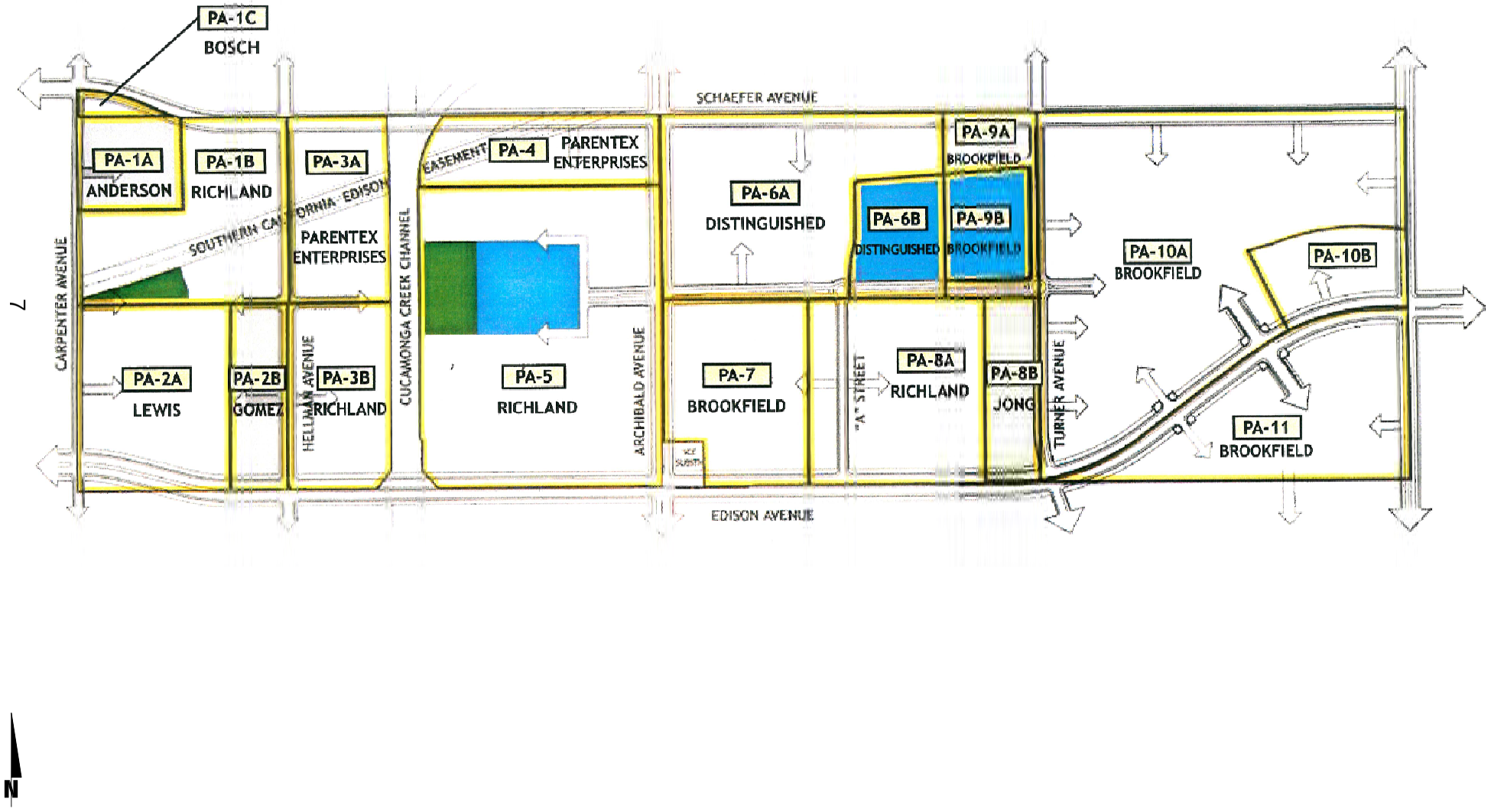


EXHIBIT 2-B

SITE PLAN



3.0 NOISE FUNDAMENTALS

The purpose of this section is to provide basic information about noise and present some of the terms used in this report.

3.1 Introduction

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 sources 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.

3.2 Noise Descriptors

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 (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The peak hour Leq is the noise metric used to collect short-term noise level measurement samples and to calculate the Community Noise Equivalent Level (CNEL). This descriptor is listed here for reference only; the City of Ontario relies on the CNEL to assess transportation related impacts on noise sensitive land uses.

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 Leq sound levels in the evening from 7 p.m. to 10 p.m., and the addition of 10 decibels to dBA Leq sound levels at night between 10 p.m. and 7 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 particular time, but rather represents the total sound exposure. As identified in the City of Ontario General Plan

Noise Element, the City relies on the CNEL noise level standard to assess transportation related impacts on noise sensitive land uses.

3.3 Traffic Noise Prediction

The level of traffic noise depends on three primary factors: (1) the volume of the traffic, (2) the speed of the traffic, and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks. A doubling of the traffic volume (assuming that the speed and truck mix do not change) results in a noise level increase of 3 dBA. The truck mix on a given roadway also has a significant effect on community noise levels. As the number of heavy trucks increases and becomes a larger percentage of the vehicle mix, adjacent noise levels increase. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires.

Because of the logarithmic nature of traffic noise levels, a doubling of the traffic noise (acoustic energy) results in a noise level increase of 3 dBA. Based on the Federal Highway Administration (FHWA) community noise assessment criteria, this change is considered "barely perceptible."

3.4 Noise Control

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

3.5 Ground Absorption

To account for the ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft site and hard site conditions. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. A drop-off rate of 4.5 dBA per doubling of distance is typically observed over soft ground with landscaping, as compared with a 3.0 dBA drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. Based on our experience, soft site

conditions better reflect the predicted noise levels. In addition, Caltrans' research has shown that the use of soft site conditions is more appropriate for the application of the FHWA traffic noise prediction model used in this analysis.

3.6 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the view of a road. Noise barriers do little good for homes on a hillside overlooking a road or for buildings which rise above the barrier. A noise barrier can achieve a 5 dBA noise level reduction when it is tall enough to break the line-of-sight.

4.0 NOISE STANDARDS

This section describes the different type of noise standards for each of the appropriate review agencies.

4.1 City of Ontario Noise Element

The Noise Element includes standards for land use compatibility for community noise exposure. Exhibit 4-A presents the General Plan land use and noise compatibility matrix. The County General Plan standards are derived from standards contained in the *General Plan Guidelines*, a publication of the California Office of Planning and Research. These standards are used by many California cities and counties.

The City of Ontario has identified two separate types of noise sources: (1) transportation, and (2) stationary. The City of Ontario has established guidelines for acceptable transportation and stationary community noise levels in the Noise Element of the General Plan taken from the *General Plan Guidelines* used by other cities and counties in California.

4.1.1 Transportation Noise Sources

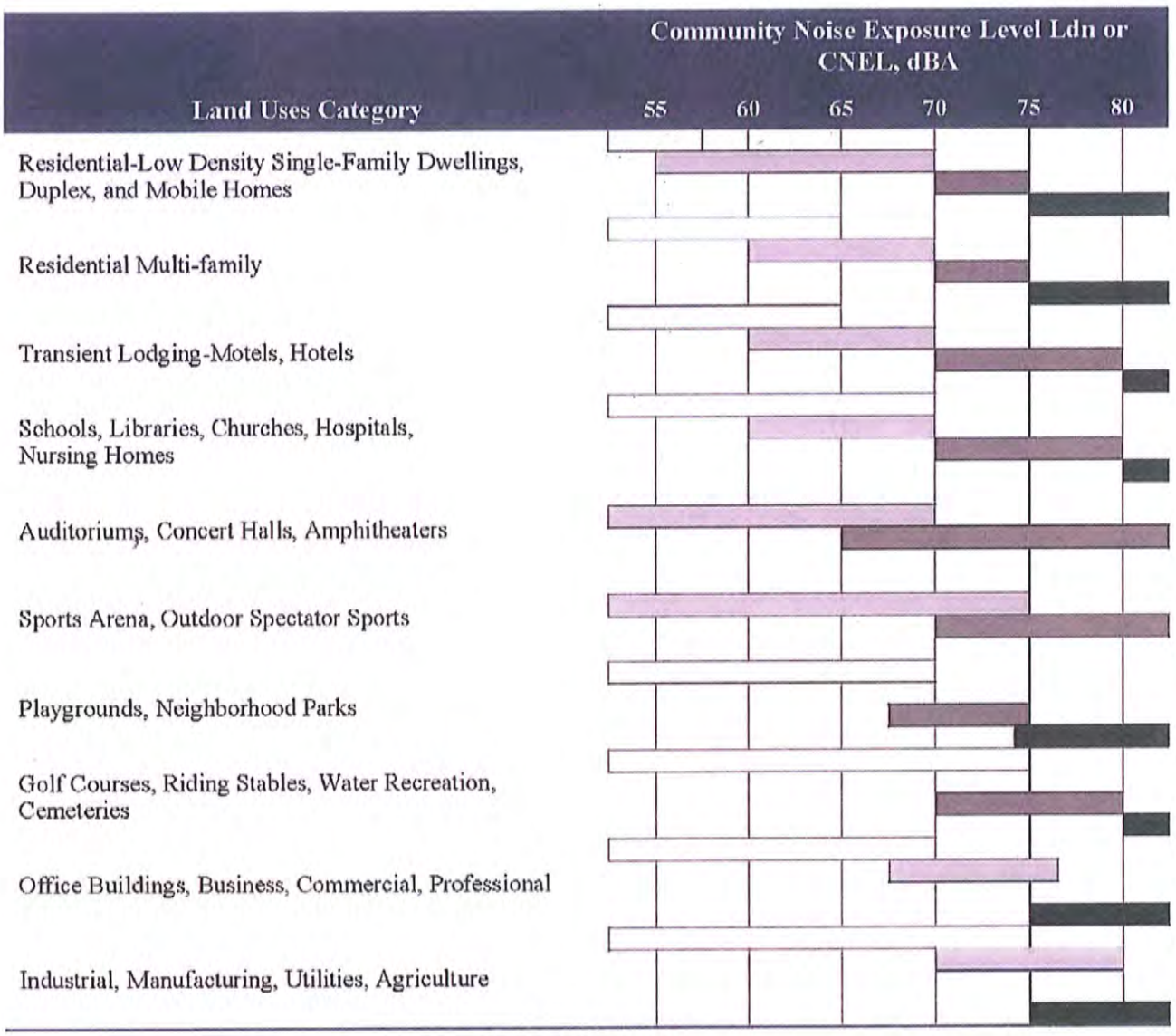
Table HA-2 of the Noise Element specifies the maximum noise levels allowable for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. For the purposes of this project, the noise impacts associated with traffic are controlled by the General Plan Noise Element. For noise sensitive uses including residential areas, hotels, motels, transient lodging, hospitals, parks, schools' classrooms the exterior noise levels should remain below 65 dBA CNEL and the interior noise levels should remain below 45 dBA CNEL. The City of Ontario General Plan Noise Element is included in Appendix "A."

4.1.2 Stationary Noise Sources

Section 9-1.3305 of the City's Code has set exterior noise limits to control stationary noise sources such as delivery trucks, trash collection, drive-thru speakerphones, and mechanical ventilation system noise impacts to various land use categories. For

EXHIBIT 4-A

LAND USE AND NOISE COMPATIBILITY MATRIX



Explanatory Notes

Normally Acceptable:
Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice. Outdoor environment will seem noisy.

Normally Unacceptable:
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.

Clearly Unacceptable:
New construction or development should generally not be undertaken. Construction cost to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

SOURCE: California Office of Noise Control

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residential areas, the maximum exterior noise level to a receiving land use cannot be exceeded as shown on Table 4-1.

For the purpose of this analysis, the noise impacts associated with the existing feed mixers and the proposed school and commercial uses are controlled by the City's Noise Ordinance. The City of Ontario Noise Ordinance is presented in Appendix "B".

4.2 Levels of Significance

In community noise assessment, changes in noise levels greater than 3 dBA are often identified as "barely perceptible," while changes of 5 dBA are "readily perceptible." In the range of 1 dBA to 3 dBA, people who are very sensitive to noise may perceive a slight change in noise level. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dBA. In a community situation, the noise exposure is extended over a long time period, and changes in noise levels occur over years rather than the immediate comparison made in a laboratory situation. The level at which changes in community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people.

For purposes of this study, roadway noise impacts would be considered significant if the project increases noise levels for a noise sensitive land use by 3 dBA CNEL and if: (1) the existing noise levels already exceed the 65 dBA CNEL residential standard, or (2) the project increases noise levels from below the 65 dBA CNEL standard to above 65 dBA CNEL.

The identified City noise levels of significance criteria generally subsume the CEQA thresholds of significance insofar as the City's identified performance criteria were adopted as a part of its update to the City's general plan and are the City's official planning policies by which an impact is deemed to be significant.

TABLE 4-1

MAXIMUM EXTERIOR NOISE LEVELS[1]

	NOISE LEVEL (dBA)	
Receiving Land Use Category	10 PM to 7 AM.	7 AM TO 10 PM
Residential (except multi-family)	45	65
Multi-famiy residential and mobile home parks	50	65
Commercial (all C Zones, including AP)	60	65
Light Industrial (M1, M2)	70	70
Heavy Industrial (M3)	70	70

[1] Obtained from Table 33-1 of Section 9-1.3305 of the City of Ontario Code

5.0 EXISTING NOISE LEVEL MEASUREMENTS

To determine the existing noise level environment, noise measurements were taken at four (4) locations in the project study area. Exhibit 5-A provides the boundaries of the project study area and the noise measurement locations. The noise measurements were recorded by Urban Crossroads, Inc. between the hours of 3:40 p.m. and 5:15 p.m. on May 1, 2005. Appendix "C" includes a photo index and study area photos.

5.1 Measurement Procedure and Criteria

Noise measurements were taken using a Larson-Davis Model 824 Type 1 precision sound level meter, programmed in "fast" mode to record noise levels in "A" weighted form. The sound level meter and microphone were mounted on a tripod, five feet above the ground and equipped with a windscreen during all measurements. The sound level meter was calibrated before and after the monitoring using a Larson-Davis calibrator, Model CAL 150. All noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

5.2 Noise Measurement Locations

The project site currently is used for mainly agriculture and dairy farms and is located in a relatively undeveloped area. The project site is subject to noise from Archibald Avenue, Haven Avenue, Edison Avenue, and farming equipment on-site. Adjacent land uses include sparse single-family homes, agriculture, and vacant unused land.

Noise monitoring locations were selected by Urban Crossroads based on the impact potential. Site 1 is located approximately 50 feet from a feed mixing machine and tractor at one of the dairy farms within the current project site.

Site 2 is located approximately 100 feet from the centerline of Archibald Avenue. Site 3 is located approximately 100 feet from the centerline of Haven Avenue. Site 4 is located approximately 100 feet from the centerline of Edison Avenue. Noise measurements were not taken towards the western portion of the project site due to the fact that there are currently no

EXHIBIT 5-A

NOISE MONITORING LOCATIONS

LEGEND:

(1) = NOISE MONITORING LOCATION

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THE AVENUE SPECIFIC PLAN NOISE STUDY, Ontario, California - 02718: 06.dwg

traffic or other relevant existing noise sources in that area. Exhibit 5-A shows the noise monitoring locations.

5.3 Noise Measurement Results

The results of the noise level measurements are presented in Table 5-1. All noise measurements were monitored for a minimum time period of 10 minutes. The ambient noise measured within the project site exposed to traffic noise ranges from 55.9 to 62.0 dBA Leq. Except for areas near the farming equipment, levels within the project area are not exposed to significant ambient noise levels. The noise monitoring results printouts are included in Appendix "D" and the calculations to convert Leq to CNEL are included in Appendix "E".

TABLE 5-1

EXISTING (AMBIENT) NOISE LEVEL MEASUREMENTS[1]

OBSERVER LOCATION[2]	DESCRIPTION	TIME OF MEASUREMENT[3]	PRIMARY NOISE SOURCE	NOISE LEVELS (Leq dBA)	NOISE LEVELS (Leq CNEL)
1	Located 50 feet from the feed mixing equipment and tractor.	3:43 PM	Mixing Equipment	83.5	-
2	Located approximately 100 feet from the centerline of Archibald Avenue.	4:20 PM	Archibald Avenue	62.0	62.5
3	Located approximately 100 feet from the centerline of Haven Avenue.	4:44 PM	Haven Avenue	56.7	57.2
4	Located approximately 100 feet from the centerline of Edison Avenue.	5:03 PM	Edison Avenue	55.9	56.3

[1] Noise measurements taken by Urban Crossroads, Inc. on May 1, 2006.

[2] See Exhibit 5-A for the location of the monitoring sites, and Appendix "C" for Study Area Photos.

[3] All locations were monitored for a period of 10 minutes.

[4] Leq to CNEL conversions are included in Appendix "E".

6.0 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 projected roadway noise impacts from vehicular traffic were projected using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108 (the "FHWA Model"). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). 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. Based on CalTrans methodological approaches, and our professional judgment, soft-site conditions better reflect the projected noise levels. For this particular project, soft-site conditions are not assuming any type of vegetation or heavy landscaping, it is solely based on our best judgment and CalTrans recommendations.

6.2 Traffic Noise Prediction Model Inputs

Table 6-1 presents the FHWA Traffic Noise Prediction Model roadway parameters used in this analysis. Soft site conditions were used to develop the off-site noise contours and analyze noise impacts to the project site. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Based on our experience, soft site conditions better reflect the predicted noise levels. In addition, Caltrans' research has shown that the use of soft site conditions is more appropriate for the application of the FHWA traffic noise prediction model for the off-site analysis.

TABLE 6-1

OFF-SITE ROADWAY PARAMETERS

ROADWAY	SEGMENT	ROADWAY CLASSIFICATION[1]	VEHICLE SPEED (MPH)	SITE CONDITIONS
Archibald Avenue	Chino to Schaefer	Divided Arterial Parkway 1	50	Soft
Archibald Avenue	n/o Chino Ave.	Divided Arterial Parkway 1	50	Soft
Archibald Avenue	s/o Edison	Divided Arterial Parkway 1	50	Soft
Chino Avenue	e/o Archibald Ave.	Collector	40	Soft
Chino Avenue	e/o Haven Ave.	Collector	40	Soft
Chino Avenue	w/o Archibald Ave.	Collector	40	Soft
Chino Avenue	w/o Haven Ave.	Collector	40	Soft
Edison Avenue	Archibald to Haven	Divided Arterial Parkway 1A	50	Soft
Edison Avenue	e/o Hamner	Divided Arterial Parkway 1A	50	Soft
Edison Avenue	e/o Haven Ave.	Divided Arterial Parkway 1A	50	Soft
Edison Avenue	Haven to Mill Creek	Divided Arterial Parkway 1A	50	Soft
Edison Avenue	Helman to Archibald	Divided Arterial Parkway 1A	50	Soft
Edison Avenue	Mill Creek to Hamner	Divided Arterial Parkway 1A	50	Soft
Haven Avenue	Chino to Schaefer	Divided Arterial Parkway 2	45	Soft
Haven Avenue	n/o Chino Ave.	Divided Arterial Parkway 2	45	Soft
Haven Avenue	s/o Edison Ave.	Divided Arterial Parkway 2	45	Soft
Haven Avenue	Schaefer to Edison	Divided Arterial Parkway 2	45	Soft
Mill Creek Road	n/o Edison Ave.	Collector	40	Soft
Mill Creek Road	s/o Edison Ave.	Collector	40	Soft
Milliken Avenue	n/o Edison Ave.	Standard Arterial	45	Soft
Milliken Avenue	s/o Edison Ave.	Standard Arterial	45	Soft
Schaefer Avenue	Archibald to Turner	Standard Arterial	45	Soft
Schaefer Avenue	Helman to Archibald	Standard Arterial	45	Soft
Schaefer Avenue	Turner to Haven	Standard Arterial	45	Soft

[1] According to the New Model Colony Cross Streets presented on Exhibit 3-G of *The Avenue Specific Plan Traffic Impact Analysis*.

The average daily traffic volumes used for this study presented in Table 6-2 were obtained from The Avenue Specific Plan Traffic Impact Analysis Report prepared by Urban Crossroads, Inc. on August 27, 2008.

According to the City of Ontario General Plan Circulation Element, Chino Avenue is classified as a Collector Road. Merill Avenue and Riverside Drive are classified as a 4 lane divided standard arterial roads. Archibald Avenue, Edison Avenue, Euclid Avenue, Grove Avenue, Haven Avenue, and Vineyard Avenue are all considered divided arterial parkways. Grove Avenue and Haven Avenue have 4 lanes, Vineyard Avenue has 6 lanes, and Archibald Avenue, Edison Avenue, and Euclid Avenue have 8 lanes.

Table 6-3 presents the hourly traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix is based on the typical southern California required vehicle mix. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks and heavy trucks for input into the FHWA Model.

TABLE 6-2

AVERAGE DAILY TRAFFIC (1000's)[1]

ROADWAY	SEGMENT	AVERAGE DAILY TRAFFIC (IN 1000's)				
		EXISTING	YEAR 2015		YEAR 2030	
			NO PROJECT	WITH PROJECT	NO PROJECT	WITH PROJECT
Archibald Avenue	Chino to Schaefer	15.1	33.1	33.1	37.4	37.3
Archibald Avenue	n/o Chino Ave.	16.0	31.5	31.4	35.2	35.2
Archibald Avenue	s/o Edison	16.9	44.5	44.5	61.7	61.8
Chino Avenue	e/o Archibald Ave.	6.0	13.4	13.4	18.2	18.2
Chino Avenue	e/o Haven Ave.	-	13.5	13.7	18.5	18.7
Chino Avenue	w/o Archibald Ave.	4.6	11.6	11.6	16.9	16.9
Chino Avenue	w/o Haven Ave.	-	10.4	10.5	15.6	15.7
Edison Avenue	Archibald to Haven	6.4	29.8	30.0	45.2	45.4
Edison Avenue	e/o Hamner	-	55.8	56.2	63.9	64.3
Edison Avenue	e/o Haven Ave.	5.1	56.8	57.3	58.3	58.7
Edison Avenue	Haven to Mill Creek	-	45.9	46.3	51.1	51.5
Edison Avenue	Helman to Archibald	7.7	36.2	36.4	48.1	48.3
Edison Avenue	Hamner	-	56.8	57.3	58.3	58.7
Haven Avenue	Chino to Schaefer	-	28.2	30.9	29.4	32.1
Haven Avenue	n/o Chino Ave.	-	25.4	27.9	26.1	28.6
Haven Avenue	s/o Edison Ave.	-	-	-	24.8	24.9
Haven Avenue	Schaefer to Edison	-	29.9	29.7	33.5	33.6
Mill Creek Road	n/o Edison Ave.	-	10.5	10.5	13.7	13.6
Mill Creek Road	s/o Edison Ave.	-	9.9	9.9	14.5	14.6
Milliken Avenue	n/o Edison Ave.	10.5	28.2	28.2	42.8	42.9
Milliken Avenue	s/o Edison Ave.	10.9	29.8	29.8	39.8	39.8
Schaefer Avenue	Archibald to Turner	-	5.2	5.2	7.9	7.9
Schaefer Avenue	Helman to Archibald	-	7.9	8.0	10.7	10.9
Schaefer Avenue	Turner to Haven	-	3.8	4.2	6.4	6.9

[1] According to The Avenue Specific Plan Traffic Impact Analysis by Urban Crossroads, Inc. on August 27, 2008.

[2] - for nominal volumes or non existing segment.

TABLE 6-3

HOURLY TRAFFIC FLOW DISTRIBUTION[1]

MOTOR-VEHICLE TYPE	DAYTIME (7 AM TO 7 PM)	EVENING (7 PM TO 10 PM)	NIGHT (10 PM TO 7 AM)	TOTAL % TRAFFIC FLOW
Automobiles	77.5%	12.9%	9.6%	97.42%
Medium Trucks	84.8%	4.9%	10.3%	1.84%
Heavy Trucks	86.5%	2.7%	10.8%	0.74%

[1] Typical Southern California vehicle mix.

7.0 OFF-SITE NOISE ANALYSIS

The project site is subject to transportation and non-transportation related noise impacts. The existing conditions, potential impacts and mitigation measures related to off-site noise are presented below.

7.1 Existing Off-Site Noise Setting

The existing noise levels in the project area consist primarily of traffic noise from Edison Avenue, Archibald Avenue, and stationary noise from feed mixing machines on current dairy farms. Edison Avenue is located on the southern edge of the project site with a posted speed limit of 55 miles per hour. Archibald Avenue runs north and south and is located in the center of the project site with a posted speed limit of 55 miles per hour. Table 5-1 shows that the noise levels within 316 feet of Edison Avenue and 471 feet of Archibald Avenue currently exceed 65 dBA Leq.

7.2 Off-Site Transportation Related Noise Analysis

This section will specifically address potential impacts related to the increase in project intensity/trip generation and relocation of the commercial and residential in the easterly portions of the project. In other words, this off-site traffic noise analysis is evaluating the "project" as only the net change in additional project-related traffic. To assess the off-site transportation related noise level impacts associated with development of the proposed The Avenue project, traffic noise contours were developed for Existing conditions, Interim Year (2015) and Long Range (2030) Conditions described below:

- Existing: This scenario refers to the existing present-day noise conditions, without construction of the proposed project.

- Year (2015) Without Project: This scenario refers to the background noise conditions at future year 2015 with the currently proposed Specific Plan. This includes the completion of all known reasonable and foreseeable projects within the study area.

- Year (2015) With Project: This scenario refers to the background noise conditions at future year 2015 with the proposed net change in project-related traffic associated with the increase

in land use of 286 dwelling units and 76,000 square feet of commercial use to the currently proposed Specific Plan. This corresponds to the completion of the project buildout along with all known reasonable and foreseeable projects within the study area.

- Year (2030) Without Project: This scenario refers to the background noise conditions at the long range 2030 scenario with the currently proposed Specific Plan.

- Year (2030) With Project: This scenario refers to the background noise conditions at the long range 2030 with the proposed net change in project-related traffic associated with the increase in land use of 286 dwelling units and 76,000 square feet of commercial use to the currently proposed Specific Plan.

Noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway. Noise contour boundaries are generally used as a planning tool to assess the compatibility of a land use type in a given area impacted by noise and to assess the need for additional analysis. In addition, the noise contours do not take into account the effect of any existing noise barriers or topography that may affect ambient noise levels.

Tables 7-1 to 7-5 present the calculated distances from each study area roadway segment to the estimated noise contour boundaries for the 55, 60, 65 and 70 dBA CNEL noise levels. In addition, the reference CNEL dBA noise level measured at a distance of 100 feet provides the estimated noise levels on and adjacent to the project site. The reference noise level is used to provide a consistent uniform measure to estimate the project related noise impacts expressed in CNEL dBA at a constant distance for each roadway segment within the study area. This approach is consistent with the methodology used in the City of Ontario General Plan Noise Element.

Tables 7-2 and 7-3 present the Year 2015 without and with project noise contours and tables 7-4 and 7-5 present the Year 2030 without and with the proposed project land use increase noise contours. Tables 7-2 to 7-5 show a perceptible noise increase in traffic noise for project buildout conditions when compared with existing conditions. The noise level increases are created by the development of other projects, regional growth and the proposed project.

The off-site FHWA model off-site transportation related CNEL noise contour calculations are included in Appendix "F." Project contributions are discussed in the following sections.

TABLE 7-1

EXISTING CONDITIONS NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Archibald Avenue	Chino to Schaefer	65.2	RW	103	222	478
Archibald Avenue	n/o Chino Ave.	65.4	RW	107	231	497
Archibald Avenue	s/o Edison	65.8	RW	114	245	527
Chino Avenue	e/o Archibald Ave.	58.6	RW	RW	80	173
Chino Avenue	e/o Haven Ave.	-	-	-	-	-
Chino Avenue	w/o Archibald Ave.	57.4	RW	RW	67	145
Chino Avenue	w/o Haven Ave.	-	-	-	-	-
Edison Avenue	Archibald to Haven	61.6	RW	RW	128	276
Edison Avenue	e/o Hamner	-	-	-	-	-
Edison Avenue	e/o Haven Ave.	60.6	RW	RW	110	237
Edison Avenue	Haven to Mill Creek	-	-	-	-	-
Edison Avenue	Helman to Archibald	62.4	RW	RW	145	312
Edison Avenue	Mill Creek to Hamner	-	-	-	-	-
Haven Avenue	Chino to Schaefer	-	-	-	-	-
Haven Avenue	n/o Chino Ave.	-	-	-	-	-
Haven Avenue	s/o Edison Ave.	-	-	-	-	-
Haven Avenue	Schaefer to Edison	-	-	-	-	-
Mill Creek Road	n/o Edison Ave.	-	-	-	-	-
Mill Creek Road	s/o Edison Ave.	-	-	-	-	-
Milliken Avenue	n/o Edison Ave.	63.8	RW	83	178	384
Milliken Avenue	s/o Edison Ave.	63.9	RW	85	183	393
Schaefer Avenue	Archibald to Turner	-	-	-	-	-
Schaefer Avenue	Helman to Archibald	-	-	-	-	-

TABLE 7-2

2015 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Archibald Avenue	Chino to Schaefer	68.6	81	174	375	807
Archibald Avenue	n/o Chino Ave.	68.4	78	168	362	781
Archibald Avenue	s/o Edison	70.0	101	217	467	1,005
Chino Avenue	e/o Archibald Ave.	62.1	RW	64	137	295
Chino Avenue	e/o Haven Ave.	62.1	RW	64	138	297
Chino Avenue	w/o Archibald Ave.	61.4	RW	58	125	268
Chino Avenue	w/o Haven Ave.	61.0	RW	54	116	249
Edison Avenue	Archibald to Haven	68.3	RW	166	357	769
Edison Avenue	e/o Hamner	71.0	117	252	542	1,169
Edison Avenue	e/o Haven Ave.	71.1	118	255	549	1,183
Edison Avenue	Haven to Mill Creek	70.2	103	221	476	1,026
Edison Avenue	Helman to Archibald	69.1	88	189	407	876
Edison Avenue	Mill Creek to Hamner	71.1	118	255	549	1,183
Haven Avenue	Chino to Schaefer	66.6	RW	128	275	593
Haven Avenue	n/o Chino Ave.	66.1	RW	119	257	553
Haven Avenue	s/o Edison Ave.	-	-	-	-	-
Haven Avenue	Schaefer to Edison	66.9	RW	133	286	617
Mill Creek Road	n/o Edison Ave.	61.0	RW	54	117	251
Mill Creek Road	s/o Edison Ave.	60.7	RW	52	112	241
Milliken Avenue	n/o Edison Ave.	68.1	RW	160	344	742
Milliken Avenue	s/o Edison Ave.	68.3	77	166	357	769
Schaefer Avenue	Archibald to Turner	59.2	RW	RW	89	191
Schaefer Avenue	Helman to Archibald	61.0	RW	RW	117	252
Schaefer Avenue	Turner to Haven	57.9	RW	RW	72	155

TABLE 7-3

2015 WITH PROJECT CONDITIONS NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Archibald Avenue	Chino to Schaefer	68.6	81	174	375	807
Archibald Avenue	n/o Chino Ave.	68.4	78	168	362	779
Archibald Avenue	s/o Edison	70.0	101	217	467	1,005
Chino Avenue	e/o Archibald Ave.	62.1	RW	64	137	295
Chino Avenue	e/o Haven Ave.	62.2	RW	65	139	300
Chino Avenue	w/o Archibald Ave.	61.4	RW	58	125	268
Chino Avenue	w/o Haven Ave.	61.0	RW	54	117	251
Edison Avenue	Archibald to Haven	68.3	RW	166	359	773
Edison Avenue	e/o Hamner	71.0	117	253	545	1,174
Edison Avenue	e/o Haven Ave.	71.1	119	256	552	1,190
Edison Avenue	Haven to Mill Creek	70.2	103	222	479	1,032
Edison Avenue	Helman to Archibald	69.2	88	189	408	879
Edison Avenue	Mill Creek to Hamner	71.1	119	256	552	1,190
Haven Avenue	Chino to Schaefer	67.0	63	136	293	630
Haven Avenue	n/o Chino Ave.	66.6	RW	127	273	589
Haven Avenue	s/o Edison Ave.	-	-	-	-	-
Haven Avenue	Schaefer to Edison	66.8	RW	132	285	614
Mill Creek Road	n/o Edison Ave.	61.0	RW	54	117	251
Mill Creek Road	s/o Edison Ave.	60.7	RW	52	112	241
Milliken Avenue	n/o Edison Ave.	68.1	RW	160	344	742
Milliken Avenue	s/o Edison Ave.	68.3	77	166	357	769
Schaefer Avenue	Archibald to Turner	59.2	RW	RW	89	191
Schaefer Avenue	Helman to Archibald	61.1	RW	55	118	255
Schaefer Avenue	Turner to Haven	58.3	RW	RW	77	166

TABLE 7-4

2030 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Archibald Avenue	Chino to Shaefer	69.1	88	189	406	875
Archibald Avenue	n/o Chino Ave.	68.9	84	181	390	841
Archibald Avenue	s/o Edison Ave.	71.5	125	269	580	1,250
Chino Avenue	e/o Archibald Ave.	63.4	RW	78	168	362
Chino Avenue	e/o Haven Ave.	63.5	RW	79	170	366
Chino Avenue	w/o Archibald Ave.	63.1	RW	74	160	345
Chino Avenue	w/o Haven Ave.	62.7	RW	70	152	327
Edison Avenue	Archibald to Haven	70.1	102	219	471	1,016
Edison Avenue	e/o Hamner	71.6	128	276	594	1,279
Edison Avenue	e/o Haven Ave.	71.2	120	259	559	1,203
Edison Avenue	Haven to Mill Creek	70.6	110	237	512	1,102
Edison Avenue	Helman to Archibald	70.4	106	228	491	1,059
Edison Avenue	Mill Creek to Hamner	71.2	120	259	559	1,203
Haven Avenue	chaefer to Edison	67.3	67	143	309	665
Haven Avenue	Chino to Schaefer	66.8	RW	131	283	610
Haven Avenue	n/o Chino Ave.	66.3	RW	121	261	563
Haven Avenue	s/o Edison Ave.	66.0	RW	117	253	544
Mill Creek Road	n/o Edison Ave.	62.2	RW	65	139	300
Mill Creek Road	s/o Edison Ave.	62.4	RW	67	144	311
Milliken Avenue	n/o Edison Ave.	69.9	98	211	455	979
Milliken Avenue	s/o Edison Ave.	69.5	93	201	433	933
Schaefer Avenue	Archibald to Turner	61.0	RW	RW	117	252
Schaefer Avenue	Helman to Archibald	62.3	RW	67	143	309
Schaefer Avenue	Turner to Haven	60.1	RW	RW	102	219

TABLE 7-5

2030 WITH PROJECT CONDITIONS NOISE CONTOURS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)	DISTANCE TO CONTOUR (FEET)			
			70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
Archibald Avenue	Chino to Shaefer	69.1	87	188	406	874
Archibald Avenue	n/o Chino Ave.	68.9	84	181	390	841
Archibald Avenue	s/o Edison Ave.	71.5	125	270	581	1,251
Chino Avenue	e/o Archibald Ave.	63.4	RW	78	168	362
Chino Avenue	e/o Haven Ave.	63.5	RW	79	171	369
Chino Avenue	w/o Archibald Ave.	63.1	RW	74	160	345
Chino Avenue	w/o Haven Ave.	62.7	RW	71	152	328
Edison Avenue	Archibald to Haven	70.1	102	219	473	1,019
Edison Avenue	e/o Hamner	71.6	128	277	596	1,285
Edison Avenue	e/o Haven Ave.	71.2	121	260	561	1,209
Edison Avenue	Haven to Mill Creek	70.7	111	239	514	1,108
Edison Avenue	Helman to Archibald	70.4	106	229	493	1,062
Edison Avenue	Mill Creek to Hamner	71.2	121	260	561	1,209
Haven Avenue	chaefer to Edison	67.4	67	144	309	667
Haven Avenue	Chino to Schaefer	67.2	65	139	300	647
Haven Avenue	n/o Chino Ave.	66.7	RW	129	278	599
Haven Avenue	s/o Edison Ave.	66.1	RW	118	253	546
Mill Creek Road	n/o Edison Ave.	62.1	RW	64	138	298
Mill Creek Road	s/o Edison Ave.	62.4	RW	67	145	313
Milliken Avenue	n/o Edison Ave.	69.9	98	211	455	981
Milliken Avenue	s/o Edison Ave.	69.5	93	201	433	933
Schaefer Avenue	Archibald to Turner	61.0	RW	RW	117	252
Schaefer Avenue	Helman to Archibald	62.4	RW	67	145	313
Schaefer Avenue	Turner to Haven	60.4	RW	RW	107	231

7.2.1 Year 2015 Project Traffic Noise Level Contributions

Table 7-6 presents a comparison of Year 2015 with and without increase in project intensity noise levels shown in Tables 7-2 and 7-3. In this comparison, with the proposed increase in project intensity, the roadway noise impacts on all segments will increase from to up to 0.4 dBA CNEL when compared with the current specific plan land use plan.

7.2.2 Year 2030 Project Traffic Noise Level Contributions

Table 7-7 presents a comparison of Year 2030 with and without increase in project intensity noise levels shown in Tables 7-4 and 7-5. In this comparison, with the proposed increase in project intensity, the roadway noise impacts on all segments will increase from to up to 0.4 dBA CNEL when compared with the current specific plan land use plan.

7.3 Off-Site Transportation Related Noise Impacts

Section 4.3 discussed the significance criteria utilized in this study. To be considered a significant noise impact, project traffic must create a noise level increase in the area adjacent to the roadway segment greater than 3 dBA and the resulting noise level must exceed the City of Ontario 65 dBA CNEL exterior noise standard.

The previous noise study prepared for The Avenue on August 17, 2006 identified project –related noise impacts ranging from 0.0 to 1.0 dB CNEL. This analysis shows that the noise impacts related to the increase in project intensity of the project will create additional noise level increases of up to 0.4 dBA CNEL. An increase of less than 3.0 dBA CNEL is not considered significant in terms of the significance criteria utilized in this study. Therefore, the proposed project's contributions to off-site roadway noise increases will not cause a significant impact to an existing or future sensitive noise receptor.

In summary, the project will not generate a substantial permanent increase in ambient noise levels or expose persons to noise levels in excess of the standards established in the City of Ontario General Plan or noise ordinance.

TABLE 7-6

YEAR 2015 OFF-SITE PROJECT RELATED TRAFFIC NOISE IMPACTS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)		INCREASE	SIGNIFICANT IMPACT?[1]
		WITHOUT PROJECT	WITH PROJECT		
Archibald Avenue	Chino to Schaefer	68.6	68.6	0.0	NO
Archibald Avenue	n/o Chino Ave.	68.4	68.4	0.0	NO
Archibald Avenue	s/o Edison	70.0	70.0	0.0	NO
Chino Avenue	e/o Archibald Ave.	62.1	62.1	0.0	NO
Chino Avenue	e/o Haven Ave.	62.1	62.2	0.1	NO
Chino Avenue	w/o Archibald Ave.	61.4	61.4	0.0	NO
Chino Avenue	w/o Haven Ave.	61.0	61.0	0.0	NO
Edison Avenue	Archibald to Haven	68.3	68.3	0.0	NO
Edison Avenue	e/o Hamner	71.0	71.0	0.0	NO
Edison Avenue	e/o Haven Ave.	71.1	71.1	0.0	NO
Edison Avenue	Haven to Mill Creek	70.2	70.2	0.0	NO
Edison Avenue	Helman to Archibald	69.1	69.2	0.0	NO
Edison Avenue	Mill Creek to Hamner	71.1	71.1	0.0	NO
Haven Avenue	Chino to Schaefer	66.6	67.0	0.4	NO
Haven Avenue	n/o Chino Ave.	66.1	66.6	0.4	NO
Haven Avenue	s/o Edison Ave.	-	-	-	-
Haven Avenue	Schaefer to Edison	66.9	66.8	0.0	NO
Mill Creek Road	n/o Edison Ave.	61.0	61.0	0.0	NO
Mill Creek Road	s/o Edison Ave.	60.7	60.7	0.0	NO
Milliken Avenue	n/o Edison Ave.	68.1	68.1	0.0	NO
Milliken Avenue	s/o Edison Ave.	68.3	68.3	0.0	NO
Schaefer Avenue	Archibald to Turner	59.2	59.2	0.0	NO
Schaefer Avenue	Helman to Archibald	61.0	61.1	0.1	NO
Schaefer Avenue	Turner to Haven	57.9	58.3	0.4	NO

[1] - For nominal volumes or non existing segment.

TABLE 7-7

YEAR 2030 OFF-SITE PROJECT RELATED TRAFFIC NOISE IMPACTS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)		INCREASE	SIGNIFICANT IMPACT?[1]
		WITHOUT PROJECT	WITH PROJECT		
Archibald Avenue	Chino to Schaefer	69.1	69.1	0.0	NO
Archibald Avenue	n/o Chino Ave.	68.9	68.9	0.0	NO
Archibald Avenue	s/o Edison	71.5	71.5	0.0	NO
Chino Avenue	e/o Archibald Ave.	63.4	63.4	0.0	NO
Chino Avenue	e/o Haven Ave.	63.5	63.5	0.0	NO
Chino Avenue	w/o Archibald Ave.	63.1	63.1	0.0	NO
Chino Avenue	w/o Haven Ave.	62.7	62.7	0.0	NO
Edison Avenue	Archibald to Haven	70.1	70.1	0.0	NO
Edison Avenue	e/o Hamner	71.6	71.6	0.0	NO
Edison Avenue	e/o Haven Ave.	71.2	71.2	0.0	NO
Edison Avenue	Haven to Mill Creek	70.6	70.7	0.0	NO
Edison Avenue	Helman to Archibald	70.4	70.4	0.0	NO
Edison Avenue	Mill Creek to Hamner	71.2	71.2	0.0	NO
Haven Avenue	Chino to Schaefer	67.3	67.4	0.0	NO
Haven Avenue	n/o Chino Ave.	66.8	67.2	0.4	NO
Haven Avenue	s/o Edison Ave.	66.3	66.7	0.4	NO
Haven Avenue	Schaefer to Edison	66.0	66.1	0.0	NO
Mill Creek Road	n/o Edison Ave.	62.2	62.1	0.0	NO
Mill Creek Road	s/o Edison Ave.	62.4	62.4	0.0	NO
Milliken Avenue	n/o Edison Ave.	69.9	69.9	0.0	NO
Milliken Avenue	s/o Edison Ave.	69.5	69.5	0.0	NO
Schaefer Avenue	Archibald to Turner	61.0	61.0	0.0	NO
Schaefer Avenue	Helman to Archibald	62.3	62.4	0.1	NO
Schaefer Avenue	Turner to Haven	60.1	60.4	0.3	NO

7.4 Off-Site Cumulative Impacts Noise Analysis

Off-site cumulative noise impacts describes how much noise levels are projected to increase over existing conditions with the development of the proposed project and all other traffic growth projected for Year 2030.

Cumulative increases in traffic noise levels along roadways in the vicinity were estimated by comparing the Year 2030 with project scenario to existing conditions. Table 7-8 describes how much noise levels are projected to increase over existing conditions with the development of the proposed project and all other traffic growth projected for Year 2030. Noise levels are expected to increase to up to 10.6 dBA CNEL.

Based on the previously mention standard of 3 dBA CNEL being considered a significant impact, there are multiple segments within the study area that will increase by more than 3 dBA CNEL, thus the cumulative noise impacts shall be considered potentially significant. Most uses along these study area roads are agricultural and industrial uses. A review of the study area shows that the noise sensitive areas that will be impacted by cumulative growth traffic noise are the existing single family homes adjacent to Archibald Avenue between Chino Avenue and Schaefer Avenue, Chino Avenue east of Archibald Avenue and the multi-family units adjacent to Archibald Avenue north of Chino Avenue and on Chino Avenue east of Archibald.

TABLE 7-8

CUMULATIVE OFF-SITE TRAFFIC NOISE CONTRIBUTIONS

ROAD	SEGMENT	CNEL AT 100 FEET (dBA)		INCREASE	SIGNIFICANT IMPACT?[1]
		EXISTING	2030 WITH PROJECT		
Archibald Avenue	Chino to Schaefer	65.2	69.1	3.9	YES
Archibald Avenue	n/o Chino Ave.	65.4	68.9	3.4	YES
Archibald Avenue	s/o Edison	65.8	71.5	5.6	YES
Chino Avenue	e/o Archibald Ave.	58.6	63.4	4.8	YES
Chino Avenue	e/o Haven Ave.	-	63.5	-	-
Chino Avenue	w/o Archibald Ave.	57.4	63.1	5.7	YES
Chino Avenue	w/o Haven Ave.	-	62.7	-	-
Edison Avenue	Archibald to Haven	61.6	70.1	8.5	YES
Edison Avenue	e/o Hamner	-	71.6	-	-
Edison Avenue	e/o Haven Ave.	60.6	71.2	10.6	YES
Edison Avenue	Haven to Mill Creek	-	70.7	-	-
Edison Avenue	Helman to Archibald	62.4	70.4	8.0	YES
Edison Avenue	Mill Creek to Hamner	-	71.2	-	-
Haven Avenue	Chino to Schaefer	-	67.4	-	-
Haven Avenue	n/o Chino Ave.	-	67.2	-	-
Haven Avenue	s/o Edison Ave.	-	66.7	-	-
Haven Avenue	Schaefer to Edison	-	66.1	-	-
Mill Creek Road	n/o Edison Ave.	-	62.1	-	-
Mill Creek Road	s/o Edison Ave.	-	62.4	-	-
Milliken Avenue	n/o Edison Ave.	63.8	69.9	6.1	YES
Milliken Avenue	s/o Edison Ave.	63.9	69.5	5.6	YES
Schaefer Avenue	Archibald to Turner	-	61.0	-	-
Schaefer Avenue	Helman to Archibald	-	62.4	-	-
Schaefer Avenue	Turner to Haven	-	60.4	-	-

[1] A significant impact is considered both a level above 65 dBA and an increase of 3.0 dBA or greater.

[2] - For nominal volumes or non exsiting segment under existing conditions.

8.0 ON-SITE EXTERIOR NOISE ANALYSIS

The project site is subject to transportation related and non-transportation related noise impacts. The existing conditions, potential impacts, and mitigation measures related to on-site exterior noise is presented below.

8.1 Existing On-Site Exterior Noise Setting

The Ontario International Airport is located approximately 3.5 miles north of the site and the Chino Airport is located approximately 1.5 miles south of the site. Exhibit 8-A shows that the project site is located well outside the 60 dBA CNEL Ontario and Chino airports noise contours. While aircraft overflights will be heard, the noise impacts from these airports will not create significant noise impacts to the proposed project.

Currently, the primary source of noise impacts to project site is traffic noise from Archibald Avenue and Edison Avenue. Due to the distance, topography and low traffic volume/speed, traffic noise from other surrounding roads do not make a significant contribution to the existing noise environment.

8.2 On-Site Transportation Related Noise Impacts

For 2030 with project conditions the major noise impacts to the project site will be traffic noise on Shaefer Avenue, Edison Avenue, Archibald Avenue, Turner Avenue, and Haven Avenue. Using the FHWA traffic noise prediction model, the project's roadway road cross-sections and the parameters outlined in Tables 6-1, 6-2 and 6-3, calculations of the expected future noise impacts were completed. Due to the fact that the site plans and grading plans for the future developments within the project area do not exist yet, a centerline to noise barrier distance at the road right of way is assumed with a backyard observer located 10 feet from the noise barrier location.

Table 8-1 presents a summary of future with project noise levels for buildout traffic conditions. Based on the FHWA traffic noise prediction model, the future unmitigated exterior noise levels for the proposed residential areas adjacent to the major study area roadways will range from 63.7 to 72.8 dBA CNEL. With a 5.0 to 7.5-foot high noise barrier at the road right-of-way adjacent to

EXHIBIT 8-A

ONTARIO AND CHINO AIRPORTS 65 dBA CNEL NOISE CONTOURS

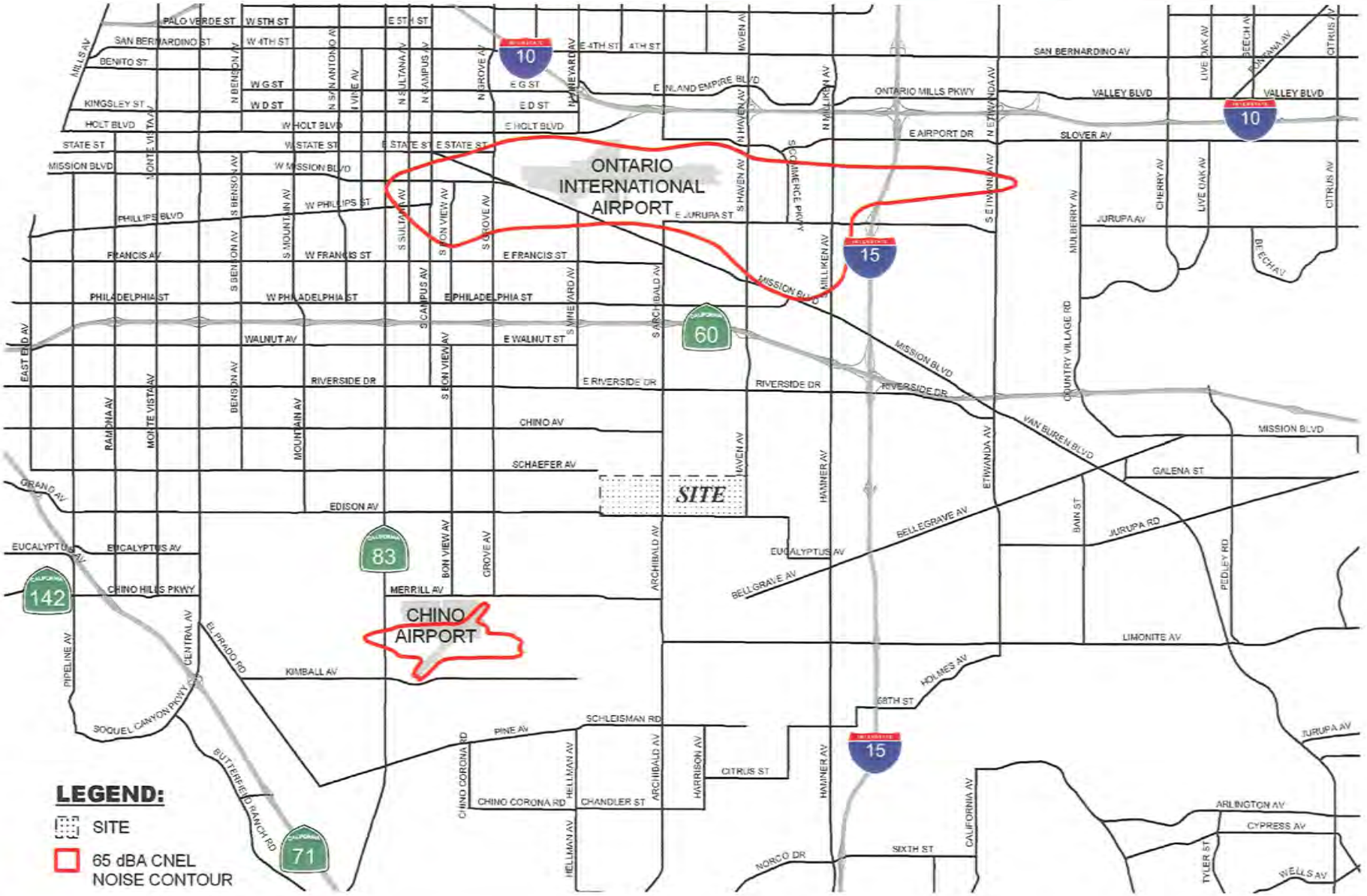


TABLE 8-1

FUTURE EXTERIOR NOISE LEVELS (dBA CNEL)[1]

ROADWAY	SEGMENT	UNMITIGATED	MITIGATED	BARRIER HEIGHT (IN FEET)[2]
Archibald Avenue	Shaefer to Avenue	71.1	65.0	6.0
Archibald Avenue	Avenue to Edison	70.9	64.9	6.0
Edison Avenue	Carpenter to Archibald	71.9	64.5	7.0
Edison Avenue	Archibald to Turner	71.7	64.2	7.0
Edison Avenue	Turner to Haven	72.8	64.6	7.5
Shaefer Avenue	Capenter to Archibald	65.7	61.5	5.0
Shaefer Avenue	Archibald to Turner	64.3	64.3	0.0
Shaefer Avenue	Turner to Haven	63.7	59.5	5.0
Turner Avenue	Shaefer to Avenue	65.8	61.6	5.0
Turner Avenue	Avenue to Edison	66.5	62.3	5.0
Haven Avenue	Shaefer to Edison	68.7	64.7	5.0
Haven Avenue	s/o Edison	67.4	63.4	5.0

[1] Calculated at uses immediately adjacent to the road right-of-way according to the Master Plan of Streets Cross-Sections.

[2] Barrier heights are estimates only assuming flat topography to mitigate a backyard observer to an exterior level below 65 dBA CNEL.

proposed project noise-sensitive areas, the exterior noise levels will range from 59.5 to 65.0 dBA CNEL. Tables 8-2 and 8-3 present a summary of future 1st floor and 2nd floor noise levels with the recommended noise barrier. The levels for the proposed project will range from 58.2 to 71.8 dBA CNEL at the façades assumed to be 20 feet from the noise barrier.

Once specific plans are completed for the on-site residential properties an analysis shall be completed for each residential area based on site and grading plans to address the proper mitigation to meet the City of Ontario exterior standard of 65 and interior standard of 45 dBA CNEL.

8.3 Non-Transportation Related Noise Impacts

It is anticipated that the primary source of non-transportation related noise will be from the proposed school and park sites. Both sources are located in the interior of the project site. Activities at the school and park sites such as playgrounds could impact the adjacent residential lots. The City of Ontario Ordinance limits the noise levels from non-transportation sources at residential uses to 45 dBA Leq from the hours of 10 p.m. to 7 a.m. and to 65 dBA Leq from the hours of 7 a.m. to 10 p.m as presented in Table 4-1. Typical noise impacts associated with schools are playground noise, parking lot activates, and intercom related noises. Activities at the parks such as ball games, skate parks and playgrounds could impact the adjacent residential lots. To minimize potential noise impacts to the proposed nearby homes, a noise barrier may be required for all residential areas bordering commercial, parks and school sites to reduce potential noise impacts.

Portions of the project site are currently developed with dairy farms that operate feed mixers. These machines typically operate for a period of fifteen minutes twice in the morning and twice in the afternoon and produce a constant noise level of 83.5 dBA Leq when measured at fifty (50) feet. It is expected that these dairy farms will be redeveloped as residential areas in the future and the noise impacts from these machines will cease. Assuming that the feed mixers will be taken away, no mitigation is necessary, however, if the feed mixers remain, an 8.0-foot noise barrier is recommended at all bordering residential areas to reduce potential impacts.

TABLE 8-2

FIRST FLOOR INTERIOR NOISE IMPACTS (dBA CNEL)

ROADWAY	SEGMENT	NOISE IMPACTS AT FAÇADE	INTERIOR NOISE LEVEL FOR WINDOWS		REQUIRED INTERIOR NOISE REDUCTION
			OPEN[1]	CLOSED[2]	
Archibald Avenue	Shaefer to Avenue	64.2	52.2	44.2	19.2
Archibald Avenue	Avenue to Edison	64.1	52.1	44.1	19.1
Edison Avenue	Carpenter to Archibald	64.1	52.1	44.1	19.1
Edison Avenue	Archibald to Turner	63.8	51.8	43.8	18.8
Edison Avenue	Turner to Haven	64.4	52.4	44.4	19.4
Shaefer Avenue	Capenter to Archibald	60.2	48.2	40.2	15.2
Shaefer Avenue	Archibald to Turner	63.2	51.2	43.2	18.2
Shaefer Avenue	Turner to Haven	58.2	46.2	38.2	13.2
Turner Avenue	Shaefer to Avenue	60.1	48.1	40.1	15.1
Turner Avenue	Avenue to Edison	60.8	48.8	40.8	15.8
Haven Avenue	Shaefer to Edison	63.6	51.6	43.6	18.6
Haven Avenue	s/o Edison	62.3	50.3	42.3	17.3

[1] A minimum of 12 dBA noise reduction is assumed with a windows open condition.

[1] A minimum of 20 dBA noise reduction is assumed with a windows closed condition.

TABLE 8-3

SECOND FLOOR INTERIOR NOISE IMPACTS (dBA CNEL)

ROADWAY	SEGMENT	NOISE IMPACTS AT FAÇADE	INTERIOR NOISE LEVEL FOR WINDOWS		REQUIRED INTERIOR NOISE REDUCTION
			OPEN[1]	CLOSED[2]	
Archibald Avenue	Shaefer to Avenue	70.1	58.1	50.1	25.1
Archibald Avenue	Avenue to Edison	70.0	58.0	50.0	25.0
Edison Avenue	Carpenter to Archibald	70.9	58.9	50.9	25.9
Edison Avenue	Archibald to Turner	70.7	58.7	50.7	25.7
Edison Avenue	Turner to Haven	71.8	59.8	51.8	26.8
Shaefer Avenue	Capenter to Archibald	64.5	52.5	44.5	19.5
Shaefer Avenue	Archibald to Turner	63.1	51.1	43.1	18.1
Shaefer Avenue	Turner to Haven	62.5	50.5	42.5	17.5
Turner Avenue	Shaefer to Avenue	64.5	52.5	44.5	19.5
Turner Avenue	Avenue to Edison	65.2	53.2	45.2	20.2
Haven Avenue	Shaefer to Edison	67.7	55.7	47.7	22.7
Haven Avenue	s/o Edison	66.4	54.4	46.4	21.4

[1] A minimum of 12 dBA noise reduction is assumed with a windows open condition.

[1] A minimum of 20 dBA noise reduction is assumed with a windows closed condition.

9.0 SHORT-TERM CONSTRUCTION NOISE IMPACTS

Construction noise represents a short-term impact on the ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. Grading activities typically represent one of the highest potential sources for noise impacts.

9.1 Existing Conditions

The site is currently mostly agriculture and includes scattered single-family homes and is located in a relatively undeveloped area. The project site is surrounded mainly by other agricultural land-uses and other undeveloped land and the nearest single family homes are located approximately 200 feet north of the site across Schaefer Avenue.

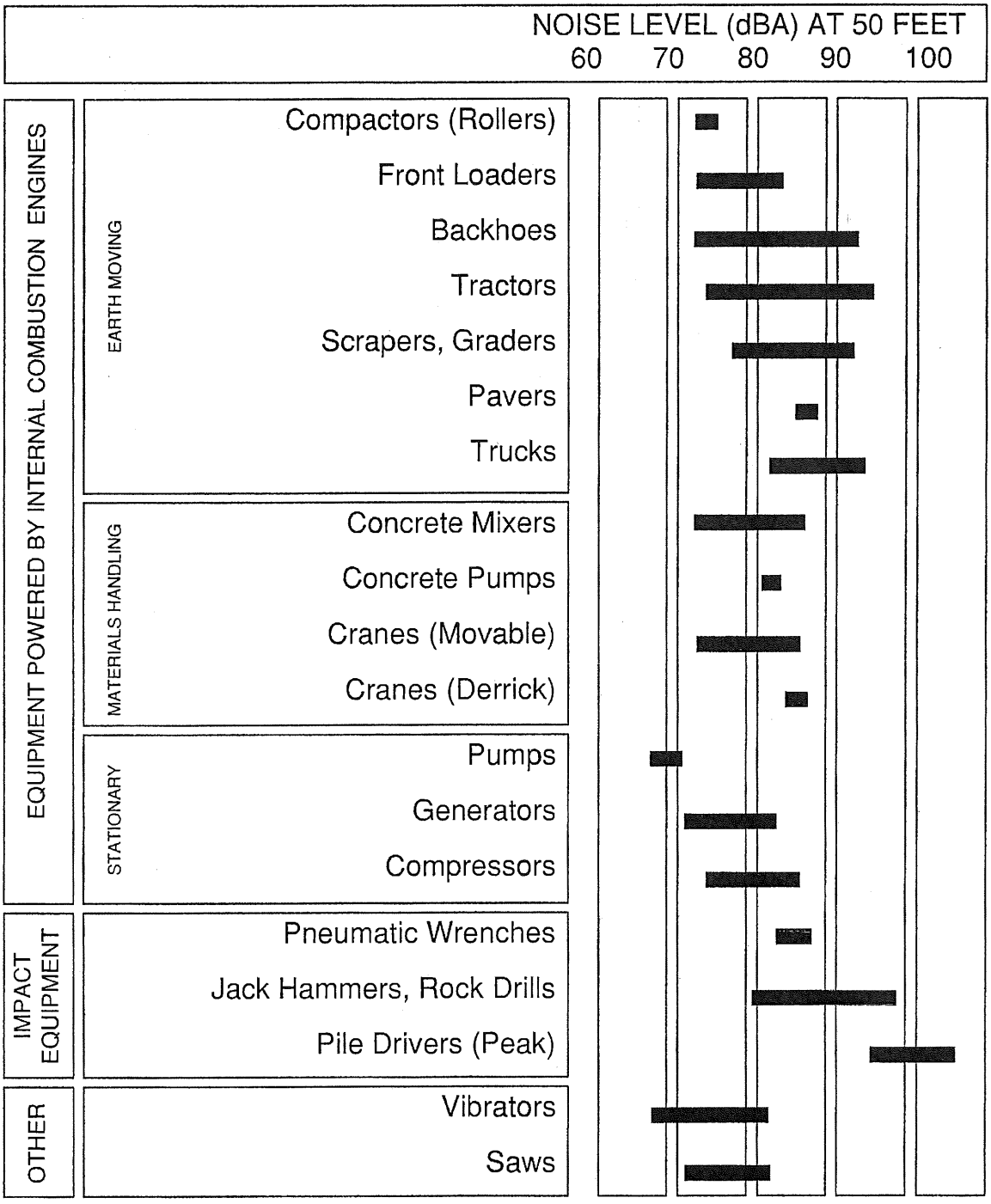
9.2 Threshold of Significance

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment. These data are shown on Exhibit 9-A. As shown, noise levels generated by heavy construction equipment can range from approximately 68 dBA to noise levels in excess of 100 dBA when measured at 50 feet. However, these noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 68 dBA measured at 50 feet from the noise source to the receptor would be reduced to 62 dBA at 100 feet from the source to the receptor, and would be further reduced to 56 dBA at 200 feet from the source to the receptor. Field measurements show that construction noise levels generated by commonly used grading equipment (i.e., loaders, graders and trucks) generate noise levels that typically do not exceed the middle of the ranges shown on Exhibit 9-A.

While the City of Ontario does not include noise standards during construction, this section evaluated the temporary noise impacts to the nearest residential areas during construction.

EXHIBIT 9-A

TYPICAL CONSTRUCTION NOISE LEVELS



NOTE: Based on limited available data samples.

SOURCE: United States Environmental Protection Agency, 1971, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," NTID 300-1.

9.3 Construction Impacts

Construction noise is of short-term duration and will not present any long-term impacts on the project site or the surrounding area. For the purposes of this analysis, an overall grading noise level of 89 dBA at 50 feet will be used as the worst-case maximum exterior noise level. Most existing residential areas are located approximately 200 feet north of the site across Schaefer Avenue. Using a drop-off rate of 6 dBA per doubling of distance, noise levels at 200 feet are estimated at 77 dBA. Construction noise is of short-term duration and will not present any long-term impacts on the project site or the surrounding area. The most effective method of controlling construction noise is by limiting the hours of construction to normal weekday working hours.

9.4 Mitigation Measures

The following mitigation measures would reduce potentially significant short-term construction impacts to a less than significant level.

- During all project site excavation and grading on-site, 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 receptors nearest the project site during all project construction.

- The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours to be determined by City staff.

- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings.

APPENDIX A

CITY OF ONTARIO NOISE STANDARDS

3.9 NOISE [1]

The Noise Section of the Hazards Element is a comprehensive program for including noise control in the planning process. It is a tool for local planners to use to achieve and maintain compatible land use with environmental noise levels. It also identifies noise sensitive land uses and noise sources, and defines areas of noise impact for the purpose of developing programs to insure that Ontario residents will be protected from excessive noise intrusion.

The Noise Section follows the recently revised State guidelines in the State Government Code Section 653021(g) and Section 46050.1 of the Health and Safety Code. It quantifies the community noise environment in terms of noise exposure contours for both near and long-term levels of growth and traffic activity. The information contained in this document provides the framework to achieve compatible land uses and provide baseline levels and noise source identification for local noise ordinance enforcement.

The Section is organized consistent with the State Noise Element Guidelines. Included in the General Plan is a glossary that defines a number of key terms used in noise assessments. The Noise Section is organized as follows:

- **Introduction** presents the noise issues in the City that are to be addressed within the Noise Section.
- **Findings** section summarizes the noise environment and the implementation programs to minimize noise and land use conflicts.
- **Inventory of Current and Forecast Conditions** describes the existing and future noise levels in the City.
- **Goals and Policies** defines the goals of the Noise Section, and presents the policies and programs to be implemented by the City to achieve the goals of the Noise Section.

[1]This Section prepared by Mestre Greve Associates. Refer to the Airport Environs Element for information related to airport noise.

Introduction

Within the City of Ontario are a number of transportation related noise sources including freeways, arterial roadways, aircraft and railroads. The freeways include the San Bernardino Freeway (I-10), the Ontario Freeway (I-15), and the Pomona Freeway (SR-60). Heavily traveled railroads exist within the City boundaries as does a major international airport. These are some of the major contributors of noise in Ontario. Cost-effective strategies to reduce their influence on the community noise environment are an essential part of the Noise Section.

Information relative to the existing and forecast noise environment within Ontario should be integrated into future land use planning decisions. The Hazards Element presents the noise environment in order that the City may include noise impact considerations in development programs.

Residential land uses and areas identified as noise sensitive must be protected from excessive noise from transportation and non-transportation noise sources. The impacts of non-transportation noises are most effectively controlled through the enforcement and application of the City's noise regulations.

Findings

Ontario International Airport is a significant source of noise within the City. Existing and forecast noise contour maps are included in the Airport Environs Element, Chapter 4.

The predominant noise sources in Ontario, as in most other communities, are mobile sources, including motor vehicles, aircraft and trains. Three freeways and a number of arterials expose the City to significant noise levels, particularly in those areas directly adjacent to these sources. The freeways in the City are I-10 (the San Bernardino Freeway), I-15 (the Ontario Freeway), and State Route 60 (the Pomona Freeway). Major surface streets in the City include: Benson Avenue, Mountain Avenue, San Antonio Avenue, Euclid Avenue, Campus Avenue, Grove Avenue. Vineyard Avenue, Archibald Avenue, Turner Avenue, Haven Avenue, Milliken Avenue, Etiwanda Avenue, 6th Street, 4th Street, G Street, Holt Boulevard, Mission Boulevard, Phillips Street, Airport Drive, Jurupa Street, Francis Street, Philadelphia Street, Walnut Street and Riverside Drive.

Ontario International Airport operations expose the city to significant aircraft noise levels. In addition, Union Pacific and Southern Pacific railroad lines bisect the city and are also significant sources of noise. A Santa Fe line runs parallel to and north of Eighth Street through Upland and Rancho Cucamonga. However, a portion of this line runs along the northernmost boundary of Ontario, thus constituting a signficant source of noise for the residential areas south of Eighth Street. To a lesser degree, the City is also exposed to noise emanating from sources such as industrial, commercial, construction and human activities.

Noise affects all types of land uses and activities, although some land uses are more sensitive to high noise levels than others. Land uses in Ontario identified as noise sensitive include residences of all type, hospitals, rest homes, convalescent hospitals, churches and schools. The most highly impacted areas in Ontario are the residences located near Ontario International Airport.

There are a number of homes also located adjacent to the freeways. However, the City of Ontario has for a number of years required that residential developments meet the 65 CNEL exterior noise level standard. Attention should be paid to the mitigation of any older developments presently exposed to noise considered excessive by the City of Ontario as well as the future areas and developments that will be exposed to excessive noise levels.

The noise environment for Ontario can be described using noise contours developed for the major noise sources within the City. The contour maps, for traffic and rail noise, developed for existing (1989) conditions and 20 year forecast conditions (2010), are reproduced in Figure HA-7 and HA-8 respectively. The 65 CNEL contour represents the level for which any new residential land uses will require mitigation in order to comply with local noise standards.

A local government has little direct control of transportation noise at the source. Since mobile sources are Ontario's primary noise contributors, the City's ability to regulate its noise environment is constrained. State and Federal agencies have the responsibility to control the noise from the source, such as vehicle noise emission levels. Where the City cannot prevent development of incompatible land uses in noise impacted areas, the most effective method available to the City to mitigate transportation noise and reduce the impact of the noise onto the community is through the construction of noise barriers and by site design review.

Mitigation through the design and construction of a noise barrier (wall, berm, or combination wall/berm) is the most common way of alleviating traffic noise impacts. The effect of a noise barrier is critically dependent on the geometry between the noise source and the receiver. A noise barrier effect occurs when the "line of sight" between the source and receiver is penetrated by the barrier. The greater the penetration, the greater the noise reduction.

Noise concerns should be incorporated into land use planning to reduce future noise and land use incompatibilities. This is achieved by establishing standards and criteria that specify acceptable limits of noise for various land uses throughout the City. These criteria are designed to integrate noise considerations into land use planning to prevent noise/land use conflicts. Figure HA-9 presents criteria used to assess the compatibility of proposed land uses with the noise environment. These criteria are the basis for the development of specific Noise Standards. These standards, shown in Table HA-2, present the City policies related to land uses and acceptable noise levels. These exhibits are the primary tools which allow the City to ensure integrated planning for compatibility between land uses and outdoor noise.

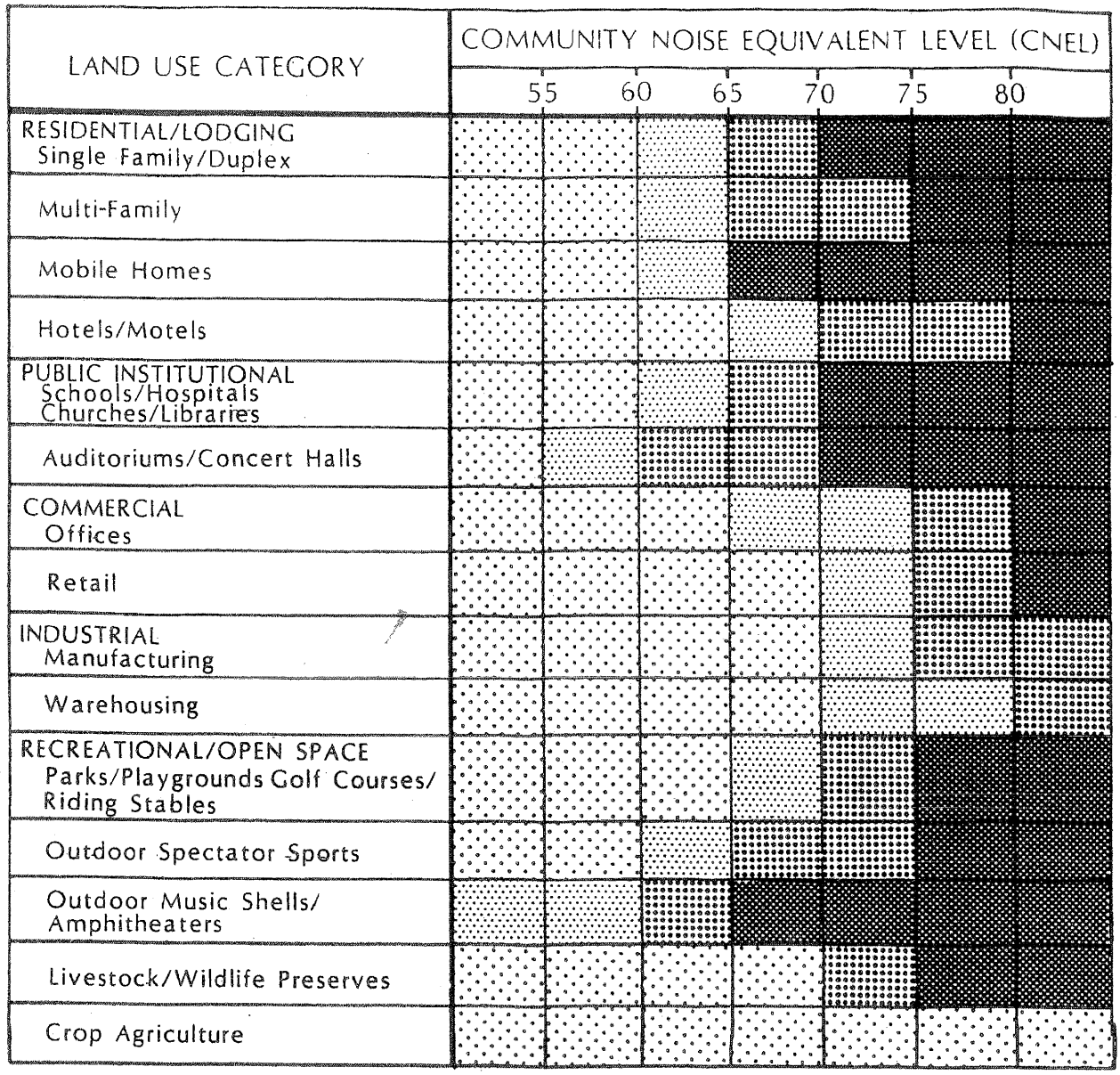
Inventory of Current and Forecast Conditions

This section contains a detailed description of the current and projected noise environment within the City.

Noise sensitive receptors include areas containing schools, hospitals, rest homes, long-term medical or mental care facilities, or any other land use areas deemed noise sensitive by the local jurisdiction.

Based upon the identification of the major noise sources and the location of sensitive receptors, a noise measurement survey was conducted. The function of the survey was threefold:

- To determine the existing noise levels at noise sensitive land uses;
- To provide empirical data for the correlation and validation of the computer modeled noise environment; and
- To obtain an accurate description of the ambient noise levels in various portions of the City.



City of Ontario

Figure HA-9
Land Use Compatibility Guidelines for Noise Impacts

LAND USE CATEGORIES		ENERGY AVERAGE CNEL	
CATEGORIES	USES	INTERIOR [1]	EXTERIOR [2]
RESIDENTIAL	Single Family, Duplex, Multiple Family	45 [3]	65
	Mobile Home	na	65 [4]
COMMERCIAL INDUSTRIAL INSTITUTIONAL	Hotel, Motel, Transient Lodging	45	65 [5]
	Commercial Retail, Bank Restaurant	55	na
	Office Building, Research and Development, Professional Offices, City Office Building	50	na
	Amphitheatre, Concert Hall Auditorium, Meeting Hall	45	na
	Gymnasium (Multipurpose)	50	na
	Sports Club	55	na
	Manufacturing, Warehousing, Wholesale, Utilities	65	na
	Movie Theatres	45	na
INSTITUTIONAL	Hospital, Schools' classroom	45	65
	Church, Library	45	na
OPEN SPACE	Parks	na	65

INTERPRETATION

1. Indoor environment excluding: Bathrooms, toilets, closets, corridors.
2. Outdoor environment limited to:
   - Private yard of single family
   - Multi-family private patio or balcony which is served by a means of exit from inside.
   - Mobile home Park
   - Hospital patio
   - Park's picnic area
   - School's playground
   - Hotel and motel recreation area
3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of UBC.
4. Exterior noise level should be such that interior noise level will not exceed 45 CNEL.
5. Except those areas affected by aircraft noise.

SOURCE: Mestre Greve Associates

Table HA-2
Interior and Exterior
Noise Standards

The Technical Appendix, found in the General Plan EIR, provides a complete description of a series of comprehensive noise measurements made throughout Ontario.

Noise contours were determined from the traffic levels for these sources. The contours are expressed in terms of the Community Noise Equivalent Level (CNEL). The existing conditions scenario was derived from 1989 traffic levels and environmental conditions. Future conditions are presented for the 20 year time period to 2010.

Sources of Noise: The most common sources of noise in urban areas are transportation related noise sources. These include automobiles, trucks, motorcycles and aircraft. Motor vehicle noise is of concern because it is characterized by a high number of individual events which often create a sustained noise level and by its proximity to areas sensitive to noise exposure. Helicopter and fixed wing aircraft operations, though infrequent in areas not adjacent to the airport, may generate high noise levels that can be disruptive to human activity. Stationary noise sources include industrial and commercial centers such as manufacturing plants, commercial office facilities and shopping centers. The most significant sources of noise in the City are three freeways, Ontario International Airport and the three railroad lines.

Noise Sensitive Receptors: The City of Ontario has a number of public and private educational facilities, hospitals, convalescent homes and other facilities that are considered noise-sensitive. The distribution of these sensitive uses varies. Some are located in quiet residential areas; others are adjacent to the freeway. The most prevalent noise sensitive use within the City is residential use.

Community Noise Measurement Survey: The determination of the major noise sources and the identification of noise sensitive receptors provide the basis of developing a community noise survey. The results of the survey and the methodology used in the measurements are summarized in the Technical Appendix of the General Plan EIR.

Community Noise Contours: The noise contours for surface transportation for the City of Ontario were presented in Figures HA-7 and HA-8 for 1989 and 2010 conditions respectively. The contours are based on the existing and future conditions of traffic volume and other sources of noise in the community. The noise contours for Ontario International Airport for existing and future conditions are presented in the Airport Environs Element. The

methodology used for computing the noise contours is presented in the Technical Appendix of the General Plan EIR.

Noise contours represent lines of equal noise exposure, just as the contour lines on a topographic map are lines of equal elevation. The contours shown on the maps are the 60 and 65 CNEL noise level. The noise contours presented should be used as a guide for land use planning. The 65 dB CNEL contour describes the area for which new noise sensitive developments will be permitted only if appropriate mitigation measures are included such that the standards contained in this Section are achieved.

The contours presented in this report are a graphic representation of the noise environment. These distances to contour values are also shown in table format in the Technical Appendix of the General Plan EIR. Topography and intervening buildings or barriers have a very complex effect on noise travel, and therefore, on noise contours.

Summary of Noise Exposure: The noise sources in the City of Ontario could be divided into two basic categories, transportation and non-transportation sources. In this section of the Noise Section the transportation sources are further reduced to four sub-categories: freeways, major and minor arterial roadways, aircraft, and railroad sources. Each of these transportation sources, as well as stationary sources and their impacts on the noise environment of Ontario are summarized in the following paragraphs.

- **Freeways:** The major noise sources in the City of Ontario are the three freeways within the City limits. Adjacent land uses include residential, commercial, and light industrial uses. Most of the residential uses have been built with a noise attenuating barrier.

- **Railroad:** The three railroad lines and many spur lines are also major noise sources. Their impact is less than the freeway generally because the adjacent uses tend to be more industrial and less residential than along the freeway route. The most significant impact of the railroad is typically high single event noise for night time freight operations that pass through the City.

- **Major and Minor Arterial Roadways:** Traffic on surface streets is a significant source of noise within the community. The major roadways in the City include: Benson Avenue, Mountain

Avenue, San Antonio Avenue, Euclid Avenue, Campus Avenue, Grove Avenue. Vineyard Avenue, Archibald Avenue, Turner Avenue, Haven Avenue, Milliken Avenue, Etiwanda Avenue, 6th Street, 4th Street, G Street, Holt Boulevard, Mission Boulevard, Phillips Street, Airport Drive, Jurupa Street, Francis Street, Philadelphia Street, Walnut Street and Riverside Drive.

- **Aircraft Operations:** Aircraft operations are a significant source of noise within the City of Ontario. The Ontario International Airport is located in approximately the center of the City. Operations from the airport overfly many portions of Ontario (see Airport Environs Element).

- **Stationary Sources:** There are stationary noise sources throughout the City of Ontario. These include industrial sources such as manufacturing plants, processing plants, power generators, and construction and earth moving/grading activities. Commercial noise sources include mechanical equipment on commercial structures, mechanical equipment such as air compressors at service stations, and automobile repair shops. Stationary source noise associated with residential areas are primarily due to air-conditioners and pool/spa mechanical equipment.

GOAL 8.0: Provide for the reduction of noise where the noise environment is unacceptable.

Policy 8.1: Ensure the employment of noise mitigation measures in the design of arterial road improvement projects, consistent with funding capability.

Policy 8.2: Require the use of walls and berms or other noise mitigation measures in the design of residential or other noise sensitive land uses that are adjacent to major roads or railroads and include mitigation measures in the design of roadway improvement projects within the City.

Policy 8.3: Reduce transportation noise through proper design and coordination of transportation routing. Provide for continued evaluation of truck movements and routes in the City to provide effective separation from residential or other noise sensitive land uses.

Policy 8.4: Encourage the enforcement of State Motor Vehicle noise standards for cars, trucks, and motorcycles through

coordination with the California Highway Patrol and Ontario Police Department.

Policy 8.5: Ensure that the Development Code, Circulation Component of the Infrastructure Element and Community Development Element of the General Plan fully integrate the policies adopted as part of this Noise Section. Coordinate all land use planning and design efforts in the environs of Ontario International Airport to be consistent with the noise levels for the airport. All noise sensitive land use inside the 65 CNEL contour should be designed to mitigate airport noise.

Policy 8.6: Monitor the progress and actively participate in the implementation of Ontario International Airport's Part 150 recommendations. This FAA sponsored program is designed to develop and implement noise control programs at the airport.

Policy 8.7: For helicopter facilities, enforce the utilization of flight paths of helicopters over the major arterials or other high noise zones and the avoidance of non-emergency low level flights over residential areas. Any proposed new facility, either public or private, must comply with accepted site selection criteria with respect to the noise environment--specifically, compliance with the Federal Aviation Guidelines for New Heliports (Ref: AC 150/5020-2). Maximum recommended cumulative sound levels (CNEL) due to the proposed operations of helicopters should not exceed the ambient noise level already present in the community at the site of the proposed heliport. The avoidance of low-flying helicopters over residential areas shall not include helicopters from the Air Support Unit of the Ontario Police Department.

GOAL 9.0: Provide sufficient information concerning the community noise levels so that noise can be objectively considered in land use planning. Protect and maintain those areas having acceptable noise environments.

Policy 9.1: Establish standards that specify acceptable limits of noise for various land uses throughout the City, including schools, hospitals, convalescent homes, and other noise sensitive areas. These criteria are designed to fully integrate noise considerations into land use planning to prevent new noise/land use conflicts. Figure HA-9 showed criteria used to assess the compatibility of proposed land uses with the noise environment. These criteria are the basis for the development of specific Noise Standards. These standards, presented in Table HA-2, define the City policies related

to land uses and acceptable noise levels. These tables are the primary tools which allow the City to ensure noise integrated planning for compatibility between land uses and outdoor noise.

Policy 9.2: Incorporate noise reduction features during site planning to mitigate anticipated noise impacts on affected noise sensitive land uses. Figures HA-7, HA-8 and the aircraft noise contours in the Airport Environs Element can be used to identify locations of potential conflict. New developments will be permitted only if appropriate mitigation measures (including site planning and architectural design) are included such that the standards contained in this Element are met in accordance with Table HA-2.

Policy 9.3: Establish standards for all types of noise not already governed by local ordinances or preempted by state or federal law.

Policy 9.4: Encourage acoustical design in new construction. Enforce the State of California Uniform Building Code provisions that specifies that the indoor noise levels for residential living spaces not exceed 45 dB CNEL due to the combined effect of all noise sources. The State requires implementation of this standard when the outdoor noise levels exceed 60 dB CNEL. The 60 dB CNEL contour can be used to determine when this standard needs to be addressed. The Uniform Building Code (specifically, the California Administrative Code, Title 24, Part 6, Division T25, Chapter 1, Subchapter 1, Article 4, Sections T25-28) requires that "Interior community noise levels (CNEL) with windows closed, attributable to exterior sources shall not exceed an annual CNEL of 45 dB in any habitable room." The code requires that this standard be applied to all new hotels, motels, apartment houses and dwellings other than detached single-family dwellings. The City also applies this standard to single family dwellings.

APPENDIX B

THE AVENUE ROADWAY SPECIFICATIONS

Sec. 9-1.3305. Noise.

The following provisions limit the unwanted and harmful emission of sound.

(a) Maximum permissible exterior sound levels by receiving land uses are:

(1) Noise standards for the various categories of land uses set forth in Table 33-1 shall, unless otherwise specified, apply to each property or portion of property in the community. Where two (2) or more dissimilar land uses occur on a single property, the more restrictive noise standard shall apply;

(2) In the event of a dispute over the identification of a receiving land use, interpretation is to be made by the Zoning Administrator;

(3) No person shall operate or cause to be operated any source of sound or noise at any location within the city, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level to exceed the levels indicated on Table 33-1.

Table 33-1 — Maximum Exterior Noise Levels		
	Noise Level (dBA)	
Receiving Land Use Category	10 p.m. to 7 a.m.	7 a.m. to 10 p.m.
Residential (except multi-family)	45	65
Multi-family residential and mobile home parks	50	65
Commercial (all C Zones, including AP)	60	65
Light Industrial (M1, M2)	70	70
Heavy Industrial (M3)	70	70

(b) Maximum permissible interior noise levels.

(1) No person shall operate or cause to operate any source of sound within a residential dwelling unit or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level, when measured inside a neighboring receiving dwelling unit, to exceed the environmental and/or nuisance interpretation of the applicable limits shown on Table 33-2;

(2) If the ambient noise level inside a receiving dwelling unit exceeds permissible limits, the allowable noise exposure standard in that category shall be the measured ambient noise for a cumulative period of five (5) minutes in any one (1) hour, ambient plus five (5) dBA for one (1) minute within any one (1) hour, and shall not exceed the ambient plus ten (10) dBA at any time.

Table 33-2 — Interior Noise Standards				
Land Use Type	Time Interval	Maximum Noise Level (dBA)		
Multi-family residential		Any time	1 min./1 hr.	5 min./1 hr.
	10 p.m. to 7 a.m.	35	40	35
	7 a.m. to 10 p.m.	45	50	45

(c) Methodology for calculating noise levels shall be as follows:

(1) Noise levels shall be measured by the equivalent sound level (Leq) for any hour;

(2) Nuisance noise shall be measured as a sound level not to be exceeded at any time;

(3) Sound levels by receiving land use shall be measured at the boundary or at any point within the boundary of the property affected;

(4) Fixed location public utility distribution or fixed transmission facilities, located on or adjacent to a property line, shall be subject to noise level limits of this section measured at or beyond six (6) feet from the boundary of the easement upon which the utility equipment is located;

(5) If the noise is continuous, the Leq for any hour will be represented by any lesser time period within that hour. Noise measurements of five (5) minutes or less will thus suffice to define the noise level;

(6) If the noise is intermittent, the Leq for any hour may be represented by a time period typical of the operating cycle. Measurement of intermittent noise is to be made of at least three (3) noisy/quiet periods. Alternatively, measurements may be taken at two (2) periods of at least fifteen (15) minutes each may be used;

(7) In the event the alleged noise event, as judged by the enforcement official, contains a steady, audible sound such as a whine, screech, or hum, or contains a repetitive, impulsive noise such as hammering or riveting, the standard may be reduced by five (5) dB at the discretion of the enforcement official;

(8) If the measured ambient noise level exceeds that permissible in Table 33-1, the allowable noise exposure standard shall be the ambient noise level. The ambient level shall be measured when the alleged noise violation source is not operating.

(d) The following is prohibited:

(1) No person shall unnecessarily make, continue, or cause to make or continue any noise disturbances;

(2) Sounding or permitting the sounding of any electrically operated or electronically amplified signal from any stationary bell, chime, siren, whistle, or similar device intended for non-emergency purposes, from any place, for more than one hundred twenty (120) seconds continually, in a one (1) hour period, or intermittent sounding over a five (5) minute period in one (1) hour;

(3) Creating or causing the creation of any sound within a noise-sensitive area, so as to exceed the maximum exterior noise levels set forth within Table 33-1.

(e) The following are exempt from these noise standards: warning devices necessary for the protection of public safety, including but not limited to, police, fire, ambulance sirens, train horns, which are exempted from the provisions of this ordinance.

(Amended by Ord. 2680, eff. March 4, 1999, as amended by Ord. 2777, eff. June 17, 2003)

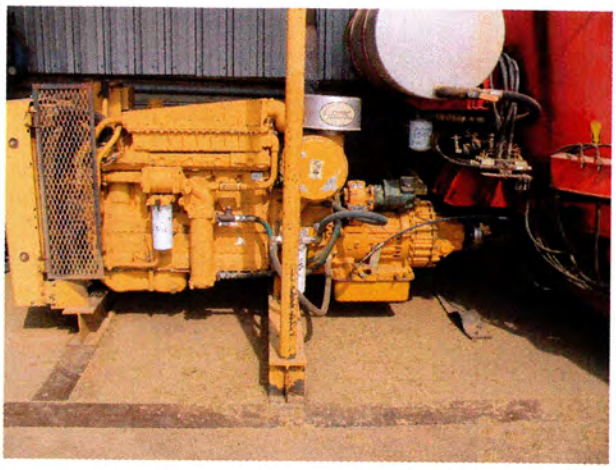
Sec. 9-1.3310. Vibration.

No vibration shall be detectable beyond the property line of the site from which the vibration is emanating. Within M Districts, vibration shall not exceed the standards set forth in Table 33-3.

Table 33-3 — Maximum Vibration in M Districts		
Frequency (Cycles Per Second)	Vibration Displacement (inches)	
	Steady State	Impact
Under 10	.0055	.0010
10-19	.0044	.0008
20-29	.0033	.0006
30-39	.0002	.0004
40+	.0001	.0002

APPENDIX C

STUDY AREA PHOTOS



Close-up photo of feed mixer equipment

Feed mixer equipment with tractor

Archibald Avenue measurement

Haven Avenue measurement location

Edison Avenue measurement location

APPENDIX D

NOISE MONITORING DATA PRINTOUTS

File Translated: U:\UcJobs_02600-03000_02700\02718\Measurements\01May15s_002.slmdl
Model/Serial Number: 824 / A2629
Firmware/Software Revs: 4.261 / 3.120
Name: Urban Crossroads, Inc.
Descr1: 41 Corporate Park, Suite 300
Descr2: Irvine, CA 92606
Setup/Setup Descr: slm&rta.ssa / SLM & Real-Time Analyzer
Location:
Note1:
Note2:

Overall Any Data
Start Time: 01-May-2006 15:46:09
Elapsed Time: 00:14:31.2

	A Weight		C Weight		Flat	
Leq:	83.5 dBA		89.8 dBC		90.0 dBF	
SEL:	112.9 dBA		119.2 dBC		119.4 dBF	
Peak:	100.3 dBA		105.6 dBC		105.8 dBF	
	01-May-2006 15:55:58	01-May-2006 15:56:38		01-May-2006 15:56:38		
Lmax (slow):	87.0 dBA		95.0 dBC		95.2 dBF	
	01-May-2006 15:55:58	01-May-2006 15:56:31		01-May-2006 15:56:31		
Lmin (slow):	69.9 dBA		78.6 dBC		79.4 dBF	
	01-May-2006 16:00:36	01-May-2006 15:46:09		01-May-2006 15:46:09		
Lmax (fast):	88.2 dBA		97.6 dBC		97.9 dBF	
	01-May-2006 15:55:58	01-May-2006 15:46:10		01-May-2006 15:46:10		
Lmin (fast):	69.5 dBA		77.9 dBC		78.8 dBF	
	01-May-2006 16:00:36	01-May-2006 16:00:32		01-May-2006 16:00:32		
Lmax (impulse):	88.4 dBA		97.9 dBC		98.2 dBF	
	01-May-2006 15:55:58	01-May-2006 15:46:10		01-May-2006 15:46:10		
Lmin (impulse):	69.7 dBA		78.3 dBC		79.2 dBF	
	01-May-2006 16:00:36	01-May-2006 16:00:36		01-May-2006 16:00:36		

Spectra

Date	Time	Run Time
01-May-2006	15:46:09	00:14:31.2

Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1	Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1
12.5	66.6		65.4		42.8		630	74.2		77.6		57.2	
16.0	67.5	71.4	66.4	71.5	45.3	49.8	800	73.1		74.1		57.0	
20.0	65.7		67.9		46.3		1000	71.7	77.8	72.8	78.4	59.9	63.8
25.0	63.3		67.1		48.1		1250	73.9		73.9		59.7	
31.5	66.4	71.9	73.9	78.4	51.1	58.1	1600	72.2		73.9		60.5	
40.0	69.6		75.9		56.6		2000	72.8	77.1	74.3	79.0	58.8	63.6
50.0	74.3		78.3		55.8		2500	71.8		74.6		56.3	
63.0	72.5	79.7	78.5	84.6	59.8	66.7	3150	69.6		73.6		53.6	
80.0	76.9		81.8		65.2		4000	68.4	73.1	76.1	81.8	51.6	56.6
100	86.9		92.5		63.2		5000	66.2		79.5		49.2	
125	72.3	87.3	77.8	92.8	63.7	66.8	6300	63.2		78.8		45.7	
160	74.2		78.4		55.3		8000	61.4	66.4	80.6	84.9	42.6	48.1
200	77.6		79.8		54.8		10000	59.6		80.8		39.6	
250	73.0	80.5	77.3	83.7	57.7	61.8	12500	56.6		79.5		36.1	
315	75.5		79.2		57.9		16000	53.8	59.2	78.9	83.3	32.5	38.1
400	78.0		79.7		57.3		20000	51.4		76.5		28.3	
500	74.5	80.7	75.7	82.7	54.7	61.3							

Ln Start Level: 15 dB

L1.00	0.0 dBA	L50.00	0.0 dBA	L95.00	0.0 dBA
L5.00	0.0 dBA	L90.00	0.0 dBA	L99.00	0.0 dBA

Detector: Fast
Weighting: A
SPL Exceedance Level 1: 85.0 dB Exceeded: 3 times
SPL Exceedance level 2: 120 dB Exceeded: 0 times
Peak-1 Exceedance Level: 105 dB Exceeded: 4 times
Peak-2 Exceedance Level: 100 dB Exceeded: 1 times
Hysteresis: 2
Overloaded: 0 time(s)
Paused: 0 times for 00:00:00.0

File Translated: U:\UcJobs_02600-03000_02700\02718\Measurements\01May15s_002.slmdl
Model/Serial Number: 824 / A2629

Current Any Data
Start Time: 01-May-2006 15:46:09
Elapsed Time: 00:14:31.2

	A Weight		C Weight		Flat	
Leq:	83.5 dBA		89.8 dBC		90.0 dBF	
SEL:	112.9 dBA		119.2 dBC		119.4 dBF	
Peak:	100.3 dBA		105.6 dBC		105.8 dBF	
	01-May-2006	15:55:58	01-May-2006	15:56:38	01-May-2006	15:56:38
Lmax (slow):	87.0 dBA		95.0 dBC		95.2 dBF	
	01-May-2006	15:55:58	01-May-2006	15:56:31	01-May-2006	15:56:31
Lmin (slow):	69.9 dBA		78.6 dBC		79.4 dBF	
	01-May-2006	16:00:36	01-May-2006	15:46:09	01-May-2006	15:46:09
Lmax (fast):	88.2 dBA		97.6 dBC		97.9 dBF	
	01-May-2006	15:55:58	01-May-2006	15:46:10	01-May-2006	15:46:10
Lmin (fast):	69.5 dBA		77.9 dBC		78.8 dBF	
	01-May-2006	16:00:36	01-May-2006	16:00:32	01-May-2006	16:00:32
Lmax (impulse):	88.4 dBA		97.9 dBC		98.2 dBF	
	01-May-2006	15:55:58	01-May-2006	15:46:10	01-May-2006	15:46:10
Lmin (impulse):	69.7 dBA		78.3 dBC		79.2 dBF	
	01-May-2006	16:00:36	01-May-2006	16:00:36	01-May-2006	16:00:36

Calibrated: 01-May-2006 15:44:18 Offset: -46.6 dB
Checked: 01-May-2006 15:44:18 Level: 114.0 dB
Calibrator not set Level: 114.0 dB
Cal Records Count: 0

Interval Records: Disabled Number Interval Records: 0
History Records: Disabled Number History Records: 0
Run/Stop Records: Number Run/Stop Records: 4

File Translated: U:\UcJobs_02600-03000_02700\02718\Measurements\01May16s_003.slmdl
Model/Serial Number: 824 / A2629
Firmware/Software Revs: 4.261 / 3.120
Name: Urban Crossroads, Inc.
Descr1: 41 Corporate Park, Suite 300
Descr2: Irvine, CA 92606
Setup/Setup Descr: slm&rta.ssa / SLM & Real-Time Analyzer
Location:
Note1:
Note2:

Overall Any Data
Start Time: 01-May-2006 16:23:52
Elapsed Time: 00:10:00.2

	A Weight		C Weight		Flat	
Leq:	62.0 dBA		73.8 dBC		75.6 dBF	
SEL:	89.8 dBA		101.6 dBC		103.4 dBF	
Peak:	91.9 dBA		94.0 dBC		96.1 dBF	
	01-May-2006	16:25:35	01-May-2006	16:31:13	01-May-2006	16:26:09
Lmax (slow):	74.6 dBA		83.5 dBC		84.3 dBF	
	01-May-2006	16:25:35	01-May-2006	16:24:27	01-May-2006	16:25:44
Lmin (slow):	50.1 dBA		62.9 dBC		64.9 dBF	
	01-May-2006	16:28:52	01-May-2006	16:27:35	01-May-2006	16:27:35
Lmax (fast):	77.8 dBA		85.9 dBC		88.0 dBF	
	01-May-2006	16:25:35	01-May-2006	16:31:13	01-May-2006	16:26:32
Lmin (fast):	48.5 dBA		61.2 dBC		63.5 dBF	
	01-May-2006	16:28:52	01-May-2006	16:27:34	01-May-2006	16:30:56
Lmax (impulse):	79.0 dBA		86.5 dBC		91.0 dBF	
	01-May-2006	16:25:35	01-May-2006	16:31:13	01-May-2006	16:26:32
Lmin (impulse):	50.9 dBA		64.1 dBC		66.4 dBF	
	01-May-2006	16:27:38	01-May-2006	16:26:53	01-May-2006	16:27:35

Spectra

Date	Time	Run Time
01-May-2006	16:23:52	00:10:00.2

Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1	Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1
12.5	67.9		66.9		42.7		630	53.4		71.1		32.8	
16.0	65.8	70.9	67.0	71.0	41.9	47.2	800	54.0		73.9		34.9	
20.0	63.6		64.2		42.6		1000	53.4	58.0	70.5	76.0	34.9	39.5
25.0	61.8		66.2		42.2		1250	51.9		66.4		34.3	
31.5	59.8	65.8	64.1	69.3	43.6	48.8	1600	50.1		61.6		33.4	
40.0	61.3		62.4		45.7		2000	47.9	53.1	56.8	63.4	31.1	37.3
50.0	61.3		65.5		46.5		2500	45.8		53.8		32.8	
63.0	65.0	70.9	70.9	77.4	46.8	51.6	3150	46.0		51.3		35.3	
80.0	68.9		75.9		47.2		4000	45.9	49.9	51.4	55.4	35.8	39.3
100	64.8		74.1		52.0		5000	42.9		48.7		31.4	
125	63.7	68.3	75.0	78.4	45.2	53.0	6300	37.6		46.6		26.5	
160	61.4		70.8		38.7		8000	35.0	40.0	44.6	49.6	22.2	28.6
200	57.7		69.6		35.3		10000	30.6		42.2		20.5	
250	56.3	60.9	64.9	73.0	34.2	38.8	12500	27.4		39.7		19.7	
315	53.6		68.9		32.0		16000	24.8	30.3	35.9	41.6	20.2	25.4
400	52.1		70.5		31.5		20000	23.2		30.8		21.8	
500	51.6	57.2	70.3	75.4	33.0	37.3							

Ln Start Level: 15 dB

L1.00	0.0 dBA	L50.00	0.0 dBA	L95.00	0.0 dBA
L5.00	0.0 dBA	L90.00	0.0 dBA	L99.00	0.0 dBA

Detector: Fast
Weighting: A
SPL Exceedance Level 1: 85.0 dB Exceeded: 0 times
SPL Exceedance level 2: 120 dB Exceeded: 0 times
Peak-1 Exceedance Level: 105 dB Exceeded: 0 times
Peak-2 Exceedance Level: 100 dB Exceeded: 0 times
Hysteresis: 2
Overloaded: 0 time(s)
Paused: 0 times for 00:00:00.0

File Translated: U:\UcJobs_02600-03000_02700\02718\Measurements\01May16s_003.slmdl
Model/Serial Number: 824 / A2629

Current Any Data
Start Time: 01-May-2006 16:23:52
Elapsed Time: 00:10:00.2

	A Weight		C Weight		Flat
Leq:	62.0 dBA		73.8 dBC		75.6 dBF
SEL:	89.8 dBA		101.6 dBC		103.4 dBF
Peak:	91.9 dBA		94.0 dBC		96.1 dBF
	01-May-2006 16:25:35	01-May-2006 16:31:13		01-May-2006 16:26:09	
Lmax (slow):	74.6 dBA		83.5 dBC		84.3 dBF
	01-May-2006 16:25:35	01-May-2006 16:24:27		01-May-2006 16:25:44	
Lmin (slow):	50.1 dBA		62.9 dBC		64.9 dBF
	01-May-2006 16:28:52	01-May-2006 16:27:35		01-May-2006 16:27:35	
Lmax (fast):	77.8 dBA		85.9 dBC		88.0 dBF
	01-May-2006 16:25:35	01-May-2006 16:31:13		01-May-2006 16:26:32	
Lmin (fast):	48.5 dBA		61.2 dBC		63.5 dBF
	01-May-2006 16:28:52	01-May-2006 16:27:34		01-May-2006 16:30:56	
Lmax (impulse):	79.0 dBA		86.5 dBC		91.0 dBF
	01-May-2006 16:25:35	01-May-2006 16:31:13		01-May-2006 16:26:32	
Lmin (impulse):	50.9 dBA		64.1 dBC		66.4 dBF
	01-May-2006 16:27:38	01-May-2006 16:26:53		01-May-2006 16:27:35	

Calibrated: 01-May-2006 15:44:18 Offset: -46.6 dB
Checked: 01-May-2006 15:44:18 Level: 114.0 dB
Calibrator not set Level: 114.0 dB
Cal Records Count: 0

Interval Records: Disabled Number Interval Records: 0
History Records: Disabled Number History Records: 0
Run/Stop Records: Number Run/Stop Records: 2

File Translated: U:\UcJobs_02600-03000_02700\02718\Measurements\01May16s_004.slmdl
Model/Serial Number: 824 / A2629
Firmware/Software Revs: 4.261 / 3.120
Name: Urban Crossroads, Inc.
Descr1: 41 Corporate Park, Suite 300
Descr2: Irvine, CA 92606
Setup/Setup Descr: slm&rta.ssa / SLM & Real-Time Analyzer
Location:
Note1:
Note2:

Overall Any Data
Start Time: 01-May-2006 16:47:31
Elapsed Time: 00:10:01.6

	A Weight		C Weight		Flat	
Leq:	56.7 dBA		73.3 dBC		77.7 dBF	
SEL:	84.5 dBA		101.1 dBC		105.5 dBF	
Peak:	91.9 dBA		97.4 dBC		98.3 dBF	
	01-May-2006 16:53:23	01-May-2006 16:53:03		01-May-2006 16:56:39		
Lmax (slow):	71.7 dBA		86.6 dBC		87.2 dBF	
	01-May-2006 16:50:07	01-May-2006 16:53:03		01-May-2006 16:53:03		
Lmin (slow):	45.5 dBA		65.2 dBC		68.7 dBF	
	01-May-2006 16:57:52	01-May-2006 16:55:55		01-May-2006 16:55:55		
Lmax (fast):	75.1 dBA		88.7 dBC		89.2 dBF	
	01-May-2006 16:50:06	01-May-2006 16:53:03		01-May-2006 16:56:39		
Lmin (fast):	44.4 dBA		62.5 dBC		64.6 dBF	
	01-May-2006 16:57:51	01-May-2006 16:55:55		01-May-2006 16:55:55		
Lmax (impulse):	76.1 dBA		89.6 dBC		92.8 dBF	
	01-May-2006 16:50:06	01-May-2006 16:53:03		01-May-2006 16:56:39		
Lmin (impulse):	45.6 dBA		66.7 dBC		70.2 dBF	
	01-May-2006 16:57:52	01-May-2006 16:55:55		01-May-2006 16:54:15		

Spectra

Date	Time	Run Time
01-May-2006	16:47:31	00:10:01.6

Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1	Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1
12.5	73.4		78.2		48.5		630	48.3		68.0		32.4	
16.0	71.8	76.8	78.8	82.3	52.1	55.2	800	48.3		66.7		32.7	
20.0	70.2		74.5		50.0		1000	47.4	52.1	65.6	69.8	31.6	36.5
25.0	68.5		72.0		46.8		1250	45.8		60.6		30.6	
31.5	65.8	71.2	67.1	74.0	46.0	52.1	1600	44.2		59.1		29.3	
40.0	63.6		66.0		48.8		2000	42.5	47.2	57.3	62.6	28.9	33.7
50.0	60.3		67.1		44.8		2500	39.5		56.6		28.5	
63.0	62.2	67.1	65.7	72.6	48.8	52.4	3150	38.0		54.3		29.0	
80.0	63.8		69.7		48.2		4000	36.8	41.4	54.3	58.6	28.3	32.7
100	59.1		71.9		45.1		5000	34.4		52.7		26.1	
125	60.4	63.5	64.3	73.2	43.6	48.1	6300	32.1		50.8		24.6	
160	55.4		64.3		39.7		8000	30.3	35.2	48.5	53.6	23.6	28.4
200	52.8		69.0		36.1		10000	27.7		45.6		22.5	
250	51.1	56.2	65.1	72.0	34.3	39.4	12500	25.1		43.0		21.1	
315	49.7		66.7		32.8		16000	23.2	28.6	38.4	44.6	20.9	26.1
400	49.5		71.1		31.2		20000	22.9		32.2		21.8	
500	48.6	53.6	72.7	75.8	32.4	36.8							

Ln Start Level: 15 dB

L1.00	0.0 dBA	L50.00	0.0 dBA	L95.00	0.0 dBA
L5.00	0.0 dBA	L90.00	0.0 dBA	L99.00	0.0 dBA

Detector: Fast
Weighting: A
SPL Exceedance Level 1: 85.0 dB Exceeded: 0 times
SPL Exceedance level 2: 120 dB Exceeded: 0 times
Peak-1 Exceedance Level: 105 dB Exceeded: 0 times
Peak-2 Exceedance Level: 100 dB Exceeded: 0 times
Hysteresis: 2
Overloaded: 0 time(s)
Paused: 1 times for 00:00:36.0

File Translated: U:\UcJobs_02600-03000_02700\02718\Measurements\01May16s_004.slmdl
Model/Serial Number: 824 / A2629

Current Any Data
Start Time: 01-May-2006 16:47:31
Elapsed Time: 00:10:01.6

	A Weight		C Weight		Flat
Leq:	56.7 dBA		73.3 dBC		77.7 dBF
SEL:	84.5 dBA		101.1 dBC		105.5 dBF
Peak:	91.9 dBA		97.4 dBC		98.3 dBF
	01-May-2006 16:53:23	01-May-2006 16:53:03		01-May-2006 16:56:39	
Lmax (slow):	71.7 dBA		86.6 dBC		87.2 dBF
	01-May-2006 16:50:07	01-May-2006 16:53:03		01-May-2006 16:53:03	
Lmin (slow):	45.5 dBA		65.2 dBC		68.7 dBF
	01-May-2006 16:57:52	01-May-2006 16:55:55		01-May-2006 16:55:55	
Lmax (fast):	75.1 dBA		88.7 dBC		89.2 dBF
	01-May-2006 16:50:06	01-May-2006 16:53:03		01-May-2006 16:56:39	
Lmin (fast):	44.4 dBA		62.5 dBC		64.6 dBF
	01-May-2006 16:57:51	01-May-2006 16:55:55		01-May-2006 16:55:55	
Lmax (impulse):	76.1 dBA		89.6 dBC		92.8 dBF
	01-May-2006 16:50:06	01-May-2006 16:53:03		01-May-2006 16:56:39	
Lmin (impulse):	45.6 dBA		66.7 dBC		70.2 dBF
	01-May-2006 16:57:52	01-May-2006 16:55:55		01-May-2006 16:54:15	

Calibrated: 01-May-2006 15:44:18 Offset: -46.6 dB
Checked: 01-May-2006 15:44:18 Level: 114.0 dB
Calibrator not set Level: 114.0 dB
Cal Records Count: 0

Interval Records: Disabled Number Interval Records: 0
History Records: Disabled Number History Records: 0
Run/Stop Records: Number Run/Stop Records: 4

File Translated: U:\UcJobs_02600-03000_02700\02718\Measurements\01May17s_005.slmdl
Model/Serial Number: 824 / A2629
Firmware/Software Revs: 4.261 / 3.120
Name: Urban Crossroads, Inc.
Descr1: 41 Corporate Park, Suite 300
Descr2: Irvine, CA 92606
Setup/Setup Descr: slm&rta.ssa / SLM & Real-Time Analyzer
Location:
Note1:
Note2:

Overall Any Data
Start Time: 01-May-2006 17:06:54
Elapsed Time: 00:10:04.5

	A Weight		C Weight		Flat	
Leq:	55.9 dBA		71.7 dBC		75.1 dBF	
SEL:	83.8 dBA		99.5 dBC		102.9 dBF	
Peak:	91.3 dBA		99.7 dBC		100.8 dBF	
	01-May-2006	17:12:22	01-May-2006	17:12:21	01-May-2006	17:12:21
Lmax (slow):	71.6 dBA		85.7 dBC		86.3 dBF	
	01-May-2006	17:12:22	01-May-2006	17:09:08	01-May-2006	17:09:08
Lmin (slow):	46.5 dBA		64.8 dBC		67.4 dBF	
	01-May-2006	17:13:46	01-May-2006	17:08:45	01-May-2006	17:08:55
Lmax (fast):	75.9 dBA		88.0 dBC		88.5 dBF	
	01-May-2006	17:12:22	01-May-2006	17:09:07	01-May-2006	17:09:07
Lmin (fast):	45.5 dBA		63.1 dBC		64.9 dBF	
	01-May-2006	17:13:43	01-May-2006	17:09:31	01-May-2006	17:09:31
Lmax (impulse):	78.2 dBA		90.4 dBC		91.0 dBF	
	01-May-2006	17:12:22	01-May-2006	17:12:21	01-May-2006	17:13:46
Lmin (impulse):	46.5 dBA		65.9 dBC		68.1 dBF	
	01-May-2006	17:11:44	01-May-2006	17:09:28	01-May-2006	17:08:55

Spectra

Date	Time	Run Time
01-May-2006	17:06:54	00:10:04.5

Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1	Hz	Leq1/3	Leq1/1	Max1/3	Max1/1	Min1/3	Min1/1
12.5	69.3		74.7		46.7		630	45.9		65.5		32.7	
16.0	67.7	72.7	76.5	79.9	47.4	52.2	800	47.5		66.7		33.5	
20.0	66.2		73.7		48.0		1000	47.0	51.7	66.4	71.0	33.9	38.4
25.0	64.7		74.7		44.5		1250	46.3		65.6		33.4	
31.5	63.3	68.3	73.3	79.4	46.5	51.1	1600	45.2		65.8		31.2	
40.0	62.2		75.7		47.5		2000	43.2	48.2	65.6	69.9	29.7	34.6
50.0	60.8		76.2		48.3		2500	40.6		63.6		27.9	
63.0	65.9	68.6	80.7	83.0	51.6	54.6	3150	38.8		60.9		28.2	
80.0	63.4		76.2		48.7		4000	36.9	41.8	58.0	63.5	26.8	31.4
100	57.6		74.5		46.3		5000	34.3		55.5		23.8	
125	58.3	62.0	79.5	81.6	46.7	50.2	6300	31.7		52.3		21.7	
160	55.2		74.3		41.9		8000	29.1	34.4	49.1	54.6	20.3	25.4
200	51.8		71.4		38.0		10000	26.5		45.6		19.7	
250	49.2	54.4	67.6	73.7	33.5	39.9	12500	24.0		40.9		19.4	
315	46.1		65.6		30.8		16000	22.6	27.9	34.5	42.0	20.4	25.4
400	44.8		67.0		31.2		20000	22.8		27.7		21.8	
500	45.3	50.1	64.3	70.5	32.4	36.9							

Ln Start Level: 15 dB

L1.00	0.0 dBA	L50.00	0.0 dBA	L95.00	0.0 dBA
L5.00	0.0 dBA	L90.00	0.0 dBA	L99.00	0.0 dBA

Detector: Fast
Weighting: A
SPL Exceedance Level 1: 85.0 dB Exceeded: 0 times
SPL Exceedance level 2: 120 dB Exceeded: 0 times
Peak-1 Exceedance Level: 105 dB Exceeded: 0 times
Peak-2 Exceedance Level: 100 dB Exceeded: 0 times
Hysteresis: 2
Overloaded: 0 time(s)
Paused: 0 times for 00:00:00.0

File Translated: U:\UcJobs_02600-03000_02700\02718\Measurements\01May17s_005.slmdl
Model/Serial Number: 824 / A2629

Current Any Data
Start Time: 01-May-2006 17:06:54
Elapsed Time: 00:10:04.5

	A Weight		C Weight		Flat
Leq:	55.9 dBA		71.7 dBC		75.1 dBF
SEL:	83.8 dBA		99.5 dBC		102.9 dBF
Peak:	91.3 dBA		99.7 dBC		100.8 dBF
	01-May-2006 17:12:22	01-May-2006 17:12:21		01-May-2006 17:12:21	
Lmax (slow):	71.6 dBA		85.7 dBC		86.3 dBF
	01-May-2006 17:12:22	01-May-2006 17:09:08		01-May-2006 17:09:08	
Lmin (slow):	46.5 dBA		64.8 dBC		67.4 dBF
	01-May-2006 17:13:46	01-May-2006 17:08:45		01-May-2006 17:08:55	
Lmax (fast):	75.9 dBA		88.0 dBC		88.5 dBF
	01-May-2006 17:12:22	01-May-2006 17:09:07		01-May-2006 17:09:07	
Lmin (fast):	45.5 dBA		63.1 dBC		64.9 dBF
	01-May-2006 17:13:43	01-May-2006 17:09:31		01-May-2006 17:09:31	
Lmax (impulse):	78.2 dBA		90.4 dBC		91.0 dBF
	01-May-2006 17:12:22	01-May-2006 17:12:21		01-May-2006 17:13:46	
Lmin (impulse):	46.5 dBA		65.9 dBC		68.1 dBF
	01-May-2006 17:11:44	01-May-2006 17:09:28		01-May-2006 17:08:55	

Calibrated: 01-May-2006 15:44:18 Offset: -46.6 dB
Checked: 01-May-2006 15:44:18 Level: 114.0 dB
Calibrator not set Level: 114.0 dB
Cal Records Count: 0

Interval Records: Disabled Number Interval Records: 0
History Records: Disabled Number History Records: 0
Run/Stop Records: Number Run/Stop Records: 2

APPENDIX E

Leq TO CNEL CALCULATIONS

MEASURED Leq TO CNEL CONVERSION

Noise Measurement location: 2 *Project :* The Avenue
Measurement Time: 1600 *Job Number:* 2718
Measurement Level (dBA Leq): 62.0 *Analyst:* J.Stephens

Hour Beginning	***Adjusted Hourly Leq***	***CNEL Penalty***	***Adjusted Hourly Leq***
0000	48.6	10.0	58.6
0100	46.5	10.0	56.5
0200	47.0	10.0	57.0
0300	46.9	10.0	56.9
0400	50.9	10.0	60.9
0500	55.1	10.0	65.1
0600	58.8	10.0	68.8
0700	59.8	0.0	59.8
0800	61.3	0.0	61.3
0900	61.9	0.0	61.9
1000	61.9	0.0	61.9
1100	62.0	0.0	62.0
1200	62.0	0.0	62.0
1300	61.9	0.0	61.9
1400	62.0	0.0	62.0
1500	62.2	0.0	62.2
1600	62.0 *	0.0	62.0
1700	62.1	0.0	62.1
1800	61.2	0.0	61.2
1900	60.4	5.0	65.4
2000	58.9	5.0	63.9
2100	55.8	5.0	60.8
2200	53.8	10.0	63.8
2300	50.6	10.0	60.6

Resulting CNEL (dBA) : ***62.5***

MEASURED Leq TO CNEL CONVERSION

Noise Measurement location: 3 *Project :* The Avenue
Measurement Time: 1600 *Job Number:* 2718
Measurement Level (dBA Leq): 56.7 *Analyst:* J.Stephens

Hour Beginning	***Adjusted Hourly Leq***	***CNEL Penalty***	***Adjusted Hourly Leq***
0000	43.3	10.0	53.3
0100	41.2	10.0	51.2
0200	41.7	10.0	51.7
0300	41.6	10.0	51.6
0400	45.6	10.0	55.6
0500	49.8	10.0	59.8
0600	53.5	10.0	63.5
0700	54.5	0.0	54.5
0800	56.0	0.0	56.0
0900	56.6	0.0	56.6
1000	56.6	0.0	56.6
1100	56.7	0.0	56.7
1200	56.7	0.0	56.7
1300	56.6	0.0	56.6
1400	56.7	0.0	56.7
1500	56.9	0.0	56.9
1600	56.7 *	0.0	56.7
1700	56.8	0.0	56.8
1800	55.9	0.0	55.9
1900	55.1	5.0	60.1
2000	53.6	5.0	58.6
2100	50.5	5.0	55.5
2200	48.5	10.0	58.5
2300	45.3	10.0	55.3

Resulting CNEL (dBA) : ***57.2***

MEASURED Leq TO CNEL CONVERSION

Noise Measurement location: 4 *Project :* The Avenue
Measurement Time: 1700 *Job Number:* 2718
Measurement Level (dBA Leq): 55.9 *Analyst:* J.Stephens

Hour Beginning	***Adjusted Hourly Leq***	***CNEL Penalty***	***Adjusted Hourly Leq***
0000	42.4	10.0	52.4
0100	40.3	10.0	50.3
0200	40.8	10.0	50.8
0300	40.7	10.0	50.7
0400	44.7	10.0	54.7
0500	48.9	10.0	58.9
0600	52.5	10.0	62.5
0700	53.6	0.0	53.6
0800	55.1	0.0	55.1
0900	55.7	0.0	55.7
1000	55.7	0.0	55.7
1100	55.8	0.0	55.8
1200	55.8	0.0	55.8
1300	55.7	0.0	55.7
1400	55.8	0.0	55.8
1500	56.0	0.0	56.0
1600	55.8	0.0	55.8
1700	55.9 *	0.0	55.9
1800	55.0	0.0	55.0
1900	54.2	5.0	59.2
2000	52.7	5.0	57.7
2100	49.6	5.0	54.6
2200	47.6	10.0	57.6
2300	44.4	10.0	54.4

Resulting CNEL (dBA) : ***56.3***

APPENDIX F

OFF-SITE FHWA TRAFFIC NOISE MODEL PRINTOUTS

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Chino Avenue
Road Segment: w/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	460 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-4.81	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-22.05	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-26.01	-4.51	-1.20	*-5.16*	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:	56.0	54.1	52.3	46.3	54.9	55.5
Medium Trucks:	50.0	48.4	42.1	40.5	49.0	49.2
Heavy Trucks:	51.3	49.9	40.8	42.1	50.4	50.5
Vehicle Noise:	58.0	56.3	53.0	48.4	57.0	57.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	14	29	63	135
CNEL:	14	31	67	145

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Chino Avenue
Road Segment: e/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	600 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-3.66	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-20.90	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-24.85	-4.51	-1.20	*-5.16*	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:	57.1	55.2	53.5	47.4	56.0	56.6
Medium Trucks:	51.1	49.6	43.2	41.7	50.2	50.4
Heavy Trucks:	52.4	51.0	42.0	43.2	51.6	51.7
Vehicle Noise:	59.1	57.4	54.1	49.6	58.1	58.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	16	35	75	161
CNEL:	17	37	80	173

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Edison Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	770 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-3.54	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-20.78	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-24.74	-4.17	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.3	59.4	57.6	51.6	60.2	60.8
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.3	53.8	44.8	46.1	54.4	54.5
Vehicle Noise:	63.0	61.2	58.2	53.4	61.9	62.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	29	63	135	290
CNEL:	31	67	145	312

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Edison Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	510 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-5.33	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-22.57	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-26.53	-4.17	-1.20	*-5.16*	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:	59.5	57.6	55.8	49.8	58.4	59.0
Medium Trucks:	53.1	51.6	45.2	43.6	52.1	52.3
Heavy Trucks:	53.5	52.1	43.0	44.3	52.6	52.8
Vehicle Noise:	61.2	59.4	56.4	51.6	60.2	60.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	22	48	102	221
CNEL:	24	51	110	237

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Archibald Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,600 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-0.37	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-17.61	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-21.56	-4.31	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.3	62.4	60.7	54.6	63.2	63.8
Medium Trucks:	57.9	56.4	50.0	48.5	56.9	57.2
Heavy Trucks:	58.3	56.9	47.8	49.1	57.4	57.6
Vehicle Noise:	66.0	64.3	61.2	56.4	65.0	65.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	46	100	215	463
CNEL:	50	107	231	497

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Archibald Avenue
Road Segment: Chino to Schaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,510 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-0.62	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-17.86	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-21.81	-4.31	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.1	62.2	60.4	54.3	63.0	63.6
Medium Trucks:	57.6	56.1	49.8	48.2	56.7	56.9
Heavy Trucks:	58.1	56.6	47.6	48.8	57.2	57.3
Vehicle Noise:	65.8	64.0	61.0	56.2	64.7	65.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	45	96	207	445
CNEL:	48	103	222	478

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Archibald Avenue
Road Segment: s/o Edison

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,690 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-0.13	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-17.37	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-21.32	-4.17	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.7	62.8	61.0	55.0	63.6	64.2
Medium Trucks:	58.3	56.8	50.4	48.8	57.3	57.5
Heavy Trucks:	58.7	57.3	48.2	49.5	57.8	58.0
Vehicle Noise:	66.4	64.6	61.6	56.8	65.4	65.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	49	106	228	491
CNEL:	53	114	245	527

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Haven Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-41.95	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-59.19	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-63.15	-4.48	-1.20	*-5.16*	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:	20.8	18.9	17.2	11.1	19.7	20.3
Medium Trucks:	14.6	13.1	6.7	5.2	13.6	13.9
Heavy Trucks:	15.4	14.0	5.0	6.2	14.6	14.7
Vehicle Noise:	22.7	20.9	17.8	13.1	21.6	22.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	1
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Haven Avenue
Road Segment: Chino to Schaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-41.95	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-59.19	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-63.15	-4.48	-1.20	*-5.16*	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:	20.8	18.9	17.2	11.1	19.7	20.3
Medium Trucks:	14.6	13.1	6.7	5.2	13.6	13.9
Heavy Trucks:	15.4	14.0	5.0	6.2	14.6	14.7
Vehicle Noise:	22.7	20.9	17.8	13.1	21.6	22.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	1
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Haven Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-41.95	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-59.19	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-63.15	-4.48	-1.20	*-5.16*	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:	20.8	18.9	17.2	11.1	19.7	20.3
Medium Trucks:	14.6	13.1	6.7	5.2	13.6	13.9
Heavy Trucks:	15.4	14.0	5.0	6.2	14.6	14.7
Vehicle Noise:	22.7	20.9	17.8	13.1	21.6	22.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	1
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Schaefer Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-41.95	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-59.19	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-63.15	-4.51	-1.20	*-5.16*	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:	20.8	18.9	17.1	11.1	19.7	20.3
Medium Trucks:	14.5	13.0	6.7	5.1	13.6	13.8
Heavy Trucks:	15.4	14.0	4.9	6.2	14.5	14.7
Vehicle Noise:	22.6	20.9	17.7	13.1	21.6	22.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	1
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Schaefer Avenue
Road Segment: Archibald to Turner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-41.95	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-59.19	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-63.15	-4.51	-1.20	*-5.16*	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:	20.8	18.9	17.1	11.1	19.7	20.3
Medium Trucks:	14.5	13.0	6.7	5.1	13.6	13.8
Heavy Trucks:	15.4	14.0	4.9	6.2	14.5	14.7
Vehicle Noise:	22.6	20.9	17.7	13.1	21.6	22.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	1
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Schaefer Avenue
Road Segment: Turner to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-41.95	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-59.19	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-63.15	-4.51	-1.20	*-5.16*	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:	20.8	18.9	17.1	11.1	19.7	20.3
Medium Trucks:	14.5	13.0	6.7	5.1	13.6	13.8
Heavy Trucks:	15.4	14.0	4.9	6.2	14.5	14.7
Vehicle Noise:	22.6	20.9	17.7	13.1	21.6	22.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	1
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Chino Avenue
Road Segment: w/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-41.44	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-58.68	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-62.63	-4.51	-1.20	*-5.16*	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:	19.4	17.5	15.7	9.6	18.3	18.9
Medium Trucks:	13.3	11.8	5.5	3.9	12.4	12.6
Heavy Trucks:	14.6	13.2	4.2	5.4	13.8	13.9
Vehicle Noise:	21.4	19.6	16.4	11.8	20.3	20.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	0
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Chino Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-41.44	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-58.68	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-62.63	-4.51	-1.20	*-5.16*	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:	19.4	17.5	15.7	9.6	18.3	18.9
Medium Trucks:	13.3	11.8	5.5	3.9	12.4	12.6
Heavy Trucks:	14.6	13.2	4.2	5.4	13.8	13.9
Vehicle Noise:	21.4	19.6	16.4	11.8	20.3	20.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	0
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Mill Creek Road
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-41.44	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-58.68	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-62.63	-4.51	-1.20	*-5.16*	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:	19.4	17.5	15.7	9.6	18.3	18.9
Medium Trucks:	13.3	11.8	5.5	3.9	12.4	12.6
Heavy Trucks:	14.6	13.2	4.2	5.4	13.8	13.9
Vehicle Noise:	21.4	19.6	16.4	11.8	20.3	20.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	0
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Mill Creek Road
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-41.44	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-58.68	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-62.63	-4.51	-1.20	*-5.16*	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:	19.4	17.5	15.7	9.6	18.3	18.9
Medium Trucks:	13.3	11.8	5.5	3.9	12.4	12.6
Heavy Trucks:	14.6	13.2	4.2	5.4	13.8	13.9
Vehicle Noise:	21.4	19.6	16.4	11.8	20.3	20.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	0
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Milliken Avenue
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,050 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-2.20	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-19.44	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-23.39	-4.17	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.6	60.7	59.0	52.9	61.5	62.1
Medium Trucks:	56.2	54.7	48.3	46.8	55.2	55.5
Heavy Trucks:	56.6	55.2	46.2	47.4	55.8	55.9
Vehicle Noise:	64.3	62.6	59.5	54.7	63.3	63.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	36	77	166	357
CNEL:	38	83	178	384

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Milliken Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,090 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-2.03	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-19.27	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-23.23	-4.17	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.8	60.9	59.1	53.1	61.7	62.3
Medium Trucks:	56.4	54.9	48.5	46.9	55.4	55.6
Heavy Trucks:	56.8	55.4	46.3	47.6	55.9	56.1
Vehicle Noise:	64.5	62.7	59.7	54.9	63.5	63.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	37	79	170	366
CNEL:	39	85	183	393

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Edison Avenue
Road Segment: Archibald to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	640 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-4.35	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-21.59	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-25.54	-4.17	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.5	58.6	56.8	50.8	59.4	60.0
Medium Trucks:	54.0	52.5	46.2	44.6	53.1	53.3
Heavy Trucks:	54.5	53.0	44.0	45.3	53.6	53.7
Vehicle Noise:	62.2	60.4	57.4	52.6	61.1	61.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	26	55	119	257
CNEL:	28	59	128	276

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Haven Avenue
Road Segment: Schaefer to Edison

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-41.95	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-59.19	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-63.15	-4.48	-1.20	*-5.16*	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:	20.8	18.9	17.2	11.1	19.7	20.3
Medium Trucks:	14.6	13.1	6.7	5.2	13.6	13.9
Heavy Trucks:	15.4	14.0	5.0	6.2	14.6	14.7
Vehicle Noise:	22.7	20.9	17.8	13.1	21.6	22.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	1
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Edison Avenue
Road Segment: Haven to Mill Creek

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-32.41	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-49.65	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-53.60	-4.17	-1.20	*-5.16*	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:	32.4	30.5	28.8	22.7	31.3	31.9
Medium Trucks:	26.0	24.5	18.1	16.6	25.0	25.3
Heavy Trucks:	26.4	25.0	15.9	17.2	25.6	25.7
Vehicle Noise:	34.1	32.4	29.3	24.5	33.1	33.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	1	2	3
CNEL:	0	1	2	4

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Edison Avenue
Road Segment: Mill Creek to Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-32.41	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-49.65	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-53.60	-4.17	-1.20	*-5.16*	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:	32.4	30.5	28.8	22.7	31.3	31.9
Medium Trucks:	26.0	24.5	18.1	16.6	25.0	25.3
Heavy Trucks:	26.4	25.0	15.9	17.2	25.6	25.7
Vehicle Noise:	34.1	32.4	29.3	24.5	33.1	33.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	1	2	3
CNEL:	0	1	2	4

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing
Road Name: Edison Avenue
Road Segment: e/o Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	-32.41	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-49.65	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-53.60	-4.17	-1.20	*-5.16*	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:	32.4	30.5	28.8	22.7	31.3	31.9
Medium Trucks:	26.0	24.5	18.1	16.6	25.0	25.3
Heavy Trucks:	26.4	25.0	15.9	17.2	25.6	25.7
Vehicle Noise:	34.1	32.4	29.3	24.5	33.1	33.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	1	2	3
CNEL:	0	1	2	4

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Chino Avenue
Road Segment: w/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,160 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.79	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-18.03	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-21.99	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.0	58.1	56.3	50.3	58.9	59.5
Medium Trucks:	54.0	52.5	46.1	44.6	53.0	53.2
Heavy Trucks:	55.3	53.9	44.8	46.1	54.4	54.6
Vehicle Noise:	62.0	60.3	57.0	52.4	61.0	61.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	25	54	116	251
CNEL:	27	58	125	268

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Chino Avenue
Road Segment: e/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,340 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.17	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-17.41	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-21.36	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.6	58.7	57.0	50.9	59.5	60.1
Medium Trucks:	54.6	53.1	46.7	45.2	53.6	53.9
Heavy Trucks:	55.9	54.5	45.5	46.7	55.1	55.2
Vehicle Noise:	62.6	60.9	57.6	53.1	61.6	62.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	59	128	276
CNEL:	30	64	137	295

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Edison Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,620 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.18	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.06	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.02	-4.17	-1.20	*-5.16*	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	64.3	58.3	66.9	67.5
Medium Trucks:	61.6	60.1	53.7	52.2	60.6	60.9
Heavy Trucks:	62.0	60.6	51.5	52.8	61.1	61.3
Vehicle Noise:	69.7	67.9	64.9	60.1	68.7	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	82	176	378	815
CNEL:	88	189	407	876

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Edison Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	56,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,680 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.13	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.10	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.06	-4.17	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.0	68.1	66.3	60.2	68.9	69.5
Medium Trucks:	63.5	62.0	55.7	54.1	62.6	62.8
Heavy Trucks:	63.9	62.5	53.5	54.7	63.1	63.2
Vehicle Noise:	71.7	69.9	66.9	62.1	70.6	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	110	237	511	1,101
CNEL:	118	255	549	1,183

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Archibald Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,150 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.57	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.66	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.62	-4.31	-1.20	*-5.16*	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:	67.3	65.4	63.6	57.5	66.2	66.8
Medium Trucks:	60.8	59.3	53.0	51.4	59.9	60.1
Heavy Trucks:	61.2	59.8	50.8	52.0	60.4	60.5
Vehicle Noise:	69.0	67.2	64.2	59.4	67.9	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	73	157	337	727
CNEL:	78	168	362	781

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Archibald Avenue
Road Segment: Chino to Schaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,310 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.79	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.45	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.40	-4.31	-1.20	*-5.16*	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	63.8	57.8	66.4	67.0
Medium Trucks:	61.0	59.5	53.2	51.6	60.1	60.3
Heavy Trucks:	61.5	60.0	51.0	52.3	60.6	60.7
Vehicle Noise:	69.2	67.4	64.4	59.6	68.1	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	75	162	349	751
CNEL:	81	174	375	807

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Archibald Avenue
Road Segment: s/o Edison

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,450 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.08	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.16	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.12	-4.17	-1.20	*-5.16*	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	65.2	59.2	67.8	68.4
Medium Trucks:	62.5	61.0	54.6	53.1	61.5	61.7
Heavy Trucks:	62.9	61.5	52.4	53.7	62.0	62.2
Vehicle Noise:	70.6	68.8	65.8	61.0	69.6	70.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	94	202	434	936
CNEL:	101	217	467	1,005

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Haven Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	25,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,540 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.10	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-15.14	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-19.10	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.9	63.0	61.2	55.2	63.8	64.4
Medium Trucks:	58.6	57.1	50.8	49.2	57.7	57.9
Heavy Trucks:	59.5	58.1	49.0	50.3	58.6	58.8
Vehicle Noise:	66.7	65.0	61.8	57.1	65.7	66.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	52	111	239	516
CNEL:	55	119	257	553

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Haven Avenue
Road Segment: Chino to Schaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,820 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.55	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-14.69	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.64	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.3	63.4	61.7	55.6	64.2	64.8
Medium Trucks:	59.1	57.6	51.2	49.7	58.1	58.4
Heavy Trucks:	59.9	58.5	49.5	50.7	59.1	59.2
Vehicle Noise:	67.2	65.4	62.3	57.6	66.1	66.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	55	119	257	553
CNEL:	59	128	275	593

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Haven Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-41.95	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-59.19	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-63.15	-4.48	-1.20	*-5.16*	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:	20.8	18.9	17.2	11.1	19.7	20.3
Medium Trucks:	14.6	13.1	6.7	5.2	13.6	13.9
Heavy Trucks:	15.4	14.0	5.0	6.2	14.6	14.7
Vehicle Noise:	22.7	20.9	17.8	13.1	21.6	22.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	1
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Schaefer Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.97	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-20.21	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-24.17	-4.51	-1.20	*-5.16*	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:	59.8	57.9	56.1	50.0	58.7	59.3
Medium Trucks:	53.5	52.0	45.7	44.1	52.6	52.8
Heavy Trucks:	54.4	52.9	43.9	45.2	53.5	53.6
Vehicle Noise:	61.6	59.9	56.7	52.0	60.6	61.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	51	109	235
CNEL:	25	54	117	252

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Schaefer Avenue
Road Segment: Archibald to Turner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	520 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.79	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-22.03	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-25.99	-4.51	-1.20	*-5.16*	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:	57.9	56.1	54.3	48.2	56.9	57.5
Medium Trucks:	51.7	50.2	43.8	42.3	50.8	51.0
Heavy Trucks:	52.6	51.1	42.1	43.3	51.7	51.8
Vehicle Noise:	59.8	58.0	54.9	50.2	58.8	59.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	38	83	178
CNEL:	19	41	89	191

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Schaefer Avenue
Road Segment: Turner to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	380 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-6.15	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-23.39	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-27.35	-4.51	-1.20	*-5.16*	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:	56.6	54.7	52.9	46.9	55.5	56.1
Medium Trucks:	50.3	48.8	42.5	40.9	49.4	49.6
Heavy Trucks:	51.2	49.8	40.7	42.0	50.3	50.5
Vehicle Noise:	58.4	56.7	53.5	48.9	57.4	57.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	14	31	67	144
CNEL:	15	33	72	155

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Chino Avenue
Road Segment: w/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,040 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.27	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-18.51	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-22.46	-4.51	-1.20	*-5.16*	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:	59.5	57.6	55.9	49.8	58.4	59.0
Medium Trucks:	53.5	52.0	45.6	44.1	52.5	52.8
Heavy Trucks:	54.8	53.4	44.4	45.6	54.0	54.1
Vehicle Noise:	61.5	59.8	56.5	52.0	60.5	61.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	23	50	108	233
CNEL:	25	54	116	249

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Chino Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,350 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.14	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-17.37	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-21.33	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	58.8	57.0	50.9	59.6	60.2
Medium Trucks:	54.6	53.1	46.8	45.2	53.7	53.9
Heavy Trucks:	55.9	54.5	45.5	46.7	55.1	55.2
Vehicle Noise:	62.7	60.9	57.7	53.1	61.6	62.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	60	129	277
CNEL:	30	64	138	297

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Mill Creek Road
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,050 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.23	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-18.47	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-22.42	-4.51	-1.20	*-5.16*	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:	59.6	57.7	55.9	49.8	58.5	59.1
Medium Trucks:	53.5	52.0	45.7	44.1	52.6	52.8
Heavy Trucks:	54.9	53.4	44.4	45.6	54.0	54.1
Vehicle Noise:	61.6	59.8	56.6	52.0	60.6	61.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	23	51	109	234
CNEL:	25	54	117	251

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Mill Creek Road
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	990 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.48	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-18.72	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-22.68	-4.51	-1.20	*-5.16*	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:	59.3	57.4	55.6	49.6	58.2	58.8
Medium Trucks:	53.3	51.8	45.4	43.9	52.3	52.6
Heavy Trucks:	54.6	53.2	44.1	45.4	53.7	53.9
Vehicle Noise:	61.3	59.6	56.3	51.8	60.3	60.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	23	49	105	225
CNEL:	24	52	112	241

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Milliken Avenue
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,820 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.09	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-15.14	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-19.10	-4.17	-1.20	*-5.16*	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	65.0	63.3	57.2	65.8	66.4
Medium Trucks:	60.5	59.0	52.6	51.1	59.5	59.8
Heavy Trucks:	60.9	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.6	66.9	63.8	59.0	67.6	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	69	149	320	690
CNEL:	74	160	344	742

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Milliken Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,980 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.33	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.90	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.86	-4.17	-1.20	*-5.16*	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:	67.2	65.3	63.5	57.4	66.1	66.7
Medium Trucks:	60.7	59.2	52.9	51.3	59.8	60.0
Heavy Trucks:	61.1	59.7	50.7	51.9	60.3	60.4
Vehicle Noise:	68.9	67.1	64.1	59.3	67.8	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	72	154	332	716
CNEL:	77	166	357	769

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Edison Avenue
Road Segment: Archibald to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,980 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.33	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.90	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.86	-4.17	-1.20	*-5.16*	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:	67.2	65.3	63.5	57.4	66.1	66.7
Medium Trucks:	60.7	59.2	52.9	51.3	59.8	60.0
Heavy Trucks:	61.1	59.7	50.7	51.9	60.3	60.4
Vehicle Noise:	68.9	67.1	64.1	59.3	67.8	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	72	154	332	716
CNEL:	77	166	357	769

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Haven Avenue
Road Segment: Schaefer to Edison

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,990 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.81	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-14.43	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.39	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.6	63.7	61.9	55.9	64.5	65.1
Medium Trucks:	59.3	57.8	51.5	49.9	58.4	58.6
Heavy Trucks:	60.2	58.8	49.7	51.0	59.3	59.5
Vehicle Noise:	67.4	65.7	62.5	57.9	66.4	66.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	57	124	267	575
CNEL:	62	133	286	617

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Edison Avenue
Road Segment: Haven to Mill Creek

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,590 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.21	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.03	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.98	-4.17	-1.20	*-5.16*	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	65.4	59.3	67.9	68.5
Medium Trucks:	62.6	61.1	54.7	53.2	61.6	61.9
Heavy Trucks:	63.0	61.6	52.6	53.8	62.2	62.3
Vehicle Noise:	70.7	69.0	65.9	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	96	206	443	955
CNEL:	103	221	476	1,026

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Edison Avenue
Road Segment: Mill Creek to Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	56,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,680 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.13	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.10	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.06	-4.17	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.0	68.1	66.3	60.2	68.9	69.5
Medium Trucks:	63.5	62.0	55.7	54.1	62.6	62.8
Heavy Trucks:	63.9	62.5	53.5	54.7	63.1	63.2
Vehicle Noise:	71.7	69.9	66.9	62.1	70.6	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	110	237	511	1,101
CNEL:	118	255	549	1,183

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 Without Project
Road Name: Edison Avenue
Road Segment: e/o Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	55,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,580 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.06	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.18	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.14	-4.17	-1.20	*-5.16*	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	66.2	60.2	68.8	69.4
Medium Trucks:	63.5	61.9	55.6	54.0	62.5	62.7
Heavy Trucks:	63.9	62.5	53.4	54.7	63.0	63.1
Vehicle Noise:	71.6	69.8	66.8	62.0	70.5	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	109	234	505	1,088
CNEL:	117	252	542	1,169

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Chino Avenue
Road Segment: w/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,160 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.79	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-18.03	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-21.99	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.0	58.1	56.3	50.3	58.9	59.5
Medium Trucks:	54.0	52.5	46.1	44.6	53.0	53.2
Heavy Trucks:	55.3	53.9	44.8	46.1	54.4	54.6
Vehicle Noise:	62.0	60.3	57.0	52.4	61.0	61.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	25	54	116	251
CNEL:	27	58	125	268

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Chino Avenue
Road Segment: e/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,340 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.17	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-17.41	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-21.36	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.6	58.7	57.0	50.9	59.5	60.1
Medium Trucks:	54.6	53.1	46.7	45.2	53.6	53.9
Heavy Trucks:	55.9	54.5	45.5	46.7	55.1	55.2
Vehicle Noise:	62.6	60.9	57.6	53.1	61.6	62.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	59	128	276
CNEL:	30	64	137	295

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Edison Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	36,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,640 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.20	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.04	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.99	-4.17	-1.20	*-5.16*	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	64.4	58.3	66.9	67.5
Medium Trucks:	61.6	60.1	53.7	52.2	60.6	60.9
Heavy Trucks:	62.0	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	69.7	68.0	64.9	60.1	68.7	69.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	82	176	380	818
CNEL:	88	189	408	879

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Edison Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	57,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,730 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.17	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.07	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.02	-4.17	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.0	68.1	66.3	60.3	68.9	69.5
Medium Trucks:	63.6	62.1	55.7	54.2	62.6	62.8
Heavy Trucks:	64.0	62.6	53.5	54.8	63.1	63.3
Vehicle Noise:	71.7	69.9	66.9	62.1	70.7	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	111	239	514	1,107
CNEL:	119	256	552	1,190

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Archibald Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,140 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.56	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.68	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.63	-4.31	-1.20	*-5.16*	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:	67.2	65.3	63.6	57.5	66.1	66.8
Medium Trucks:	60.8	59.3	52.9	51.4	59.9	60.1
Heavy Trucks:	61.2	59.8	50.8	52.0	60.4	60.5
Vehicle Noise:	68.9	67.2	64.1	59.4	67.9	68.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	73	156	337	725
CNEL:	78	168	362	779

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Archibald Avenue
Road Segment: Chino to Schaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,310 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.79	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.45	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.40	-4.31	-1.20	*-5.16*	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	63.8	57.8	66.4	67.0
Medium Trucks:	61.0	59.5	53.2	51.6	60.1	60.3
Heavy Trucks:	61.5	60.0	51.0	52.3	60.6	60.7
Vehicle Noise:	69.2	67.4	64.4	59.6	68.1	68.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	75	162	349	751
CNEL:	81	174	375	807

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Archibald Avenue
Road Segment: s/o Edison

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	44,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,450 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.08	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.16	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.12	-4.17	-1.20	*-5.16*	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	65.2	59.2	67.8	68.4
Medium Trucks:	62.5	61.0	54.6	53.1	61.5	61.7
Heavy Trucks:	62.9	61.5	52.4	53.7	62.0	62.2
Vehicle Noise:	70.6	68.8	65.8	61.0	69.6	70.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	94	202	434	936
CNEL:	101	217	467	1,005

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Haven Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	27,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.51	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-14.73	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.69	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.3	63.4	61.6	55.6	64.2	64.8
Medium Trucks:	59.0	57.5	51.2	49.6	58.1	58.3
Heavy Trucks:	59.9	58.5	49.4	50.7	59.0	59.2
Vehicle Noise:	67.1	65.4	62.2	57.6	66.1	66.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	55	118	255	549
CNEL:	59	127	273	589

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Haven Avenue
Road Segment: Chino to Schaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,090 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.95	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-14.29	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.25	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.7	63.8	62.1	56.0	64.6	65.2
Medium Trucks:	59.5	58.0	51.6	50.1	58.5	58.8
Heavy Trucks:	60.3	58.9	49.9	51.1	59.5	59.6
Vehicle Noise:	67.6	65.8	62.7	58.0	66.5	67.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	59	127	273	588
CNEL:	63	136	293	630

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Haven Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	0 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-41.95	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-59.19	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-63.15	-4.48	-1.20	*-5.16*	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:	20.8	18.9	17.2	11.1	19.7	20.3
Medium Trucks:	14.6	13.1	6.7	5.2	13.6	13.9
Heavy Trucks:	15.4	14.0	5.0	6.2	14.6	14.7
Vehicle Noise:	22.7	20.9	17.8	13.1	21.6	22.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	0	0	0	1
CNEL:	0	0	0	1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Schaefer Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	8,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	800 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.92	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-20.16	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-24.11	-4.51	-1.20	*-5.16*	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:	59.8	57.9	56.2	50.1	58.7	59.3
Medium Trucks:	53.6	52.1	45.7	44.2	52.6	52.9
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	61.7	59.9	56.8	52.1	60.6	61.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	51	110	237
CNEL:	25	55	118	255

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Schaefer Avenue
Road Segment: Archibald to Turner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	520 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-4.79	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-22.03	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-25.99	-4.51	-1.20	*-5.16*	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:	57.9	56.1	54.3	48.2	56.9	57.5
Medium Trucks:	51.7	50.2	43.8	42.3	50.8	51.0
Heavy Trucks:	52.6	51.1	42.1	43.3	51.7	51.8
Vehicle Noise:	59.8	58.0	54.9	50.2	58.8	59.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	18	38	83	178
CNEL:	19	41	89	191

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Schaefer Avenue
Road Segment: Turner to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	420 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-5.72	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-22.96	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-26.91	-4.51	-1.20	*-5.16*	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:	57.0	55.1	53.4	47.3	55.9	56.5
Medium Trucks:	50.8	49.3	42.9	41.4	49.8	50.1
Heavy Trucks:	51.6	50.2	41.2	42.4	50.8	50.9
Vehicle Noise:	58.9	57.1	54.0	49.3	57.8	58.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	15	33	72	154
CNEL:	17	36	77	166

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Chino Avenue
Road Segment: w/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,050 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.23	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-18.47	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-22.42	-4.51	-1.20	*-5.16*	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:	59.6	57.7	55.9	49.8	58.5	59.1
Medium Trucks:	53.5	52.0	45.7	44.1	52.6	52.8
Heavy Trucks:	54.9	53.4	44.4	45.6	54.0	54.1
Vehicle Noise:	61.6	59.8	56.6	52.0	60.6	61.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	23	51	109	234
CNEL:	25	54	117	251

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Chino Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,370 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.07	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-17.31	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-21.27	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	58.8	57.1	51.0	59.6	60.2
Medium Trucks:	54.7	53.2	46.8	45.3	53.7	54.0
Heavy Trucks:	56.0	54.6	45.6	46.8	55.2	55.3
Vehicle Noise:	62.7	61.0	57.7	53.2	61.7	62.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	60	130	280
CNEL:	30	65	139	300

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Mill Creek Road
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,050 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.23	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-18.47	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-22.42	-4.51	-1.20	*-5.16*	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:	59.6	57.7	55.9	49.8	58.5	59.1
Medium Trucks:	53.5	52.0	45.7	44.1	52.6	52.8
Heavy Trucks:	54.9	53.4	44.4	45.6	54.0	54.1
Vehicle Noise:	61.6	59.8	56.6	52.0	60.6	61.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	23	51	109	234
CNEL:	25	54	117	251

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Mill Creek Road
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	9,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	990 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-1.48	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-18.72	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-22.68	-4.51	-1.20	*-5.16*	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:	59.3	57.4	55.6	49.6	58.2	58.8
Medium Trucks:	53.3	51.8	45.4	43.9	52.3	52.6
Heavy Trucks:	54.6	53.2	44.1	45.4	53.7	53.9
Vehicle Noise:	61.3	59.6	56.3	51.8	60.3	60.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	23	49	105	225
CNEL:	24	52	112	241

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Milliken Avenue
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,820 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.09	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-15.14	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-19.10	-4.17	-1.20	*-5.16*	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	65.0	63.3	57.2	65.8	66.4
Medium Trucks:	60.5	59.0	52.6	51.1	59.5	59.8
Heavy Trucks:	60.9	59.5	50.5	51.7	60.1	60.2
Vehicle Noise:	68.6	66.9	63.8	59.0	67.6	68.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	69	149	320	690
CNEL:	74	160	344	742

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Milliken Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,980 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.33	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.90	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.86	-4.17	-1.20	*-5.16*	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:	67.2	65.3	63.5	57.4	66.1	66.7
Medium Trucks:	60.7	59.2	52.9	51.3	59.8	60.0
Heavy Trucks:	61.1	59.7	50.7	51.9	60.3	60.4
Vehicle Noise:	68.9	67.1	64.1	59.3	67.8	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	72	154	332	716
CNEL:	77	166	357	769

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Edison Avenue
Road Segment: Archibald to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,000 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	2.36	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.88	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.83	-4.17	-1.20	*-5.16*	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:	67.2	65.3	63.5	57.5	66.1	66.7
Medium Trucks:	60.8	59.2	52.9	51.3	59.8	60.0
Heavy Trucks:	61.2	59.8	50.7	52.0	60.3	60.5
Vehicle Noise:	68.9	67.1	64.1	59.3	67.9	68.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	72	155	334	719
CNEL:	77	166	359	773

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Haven Avenue
Road Segment: Schaefer to Edison

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,970 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.78	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-14.46	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.42	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.6	63.7	61.9	55.8	64.5	65.1
Medium Trucks:	59.3	57.8	51.4	49.9	58.4	58.6
Heavy Trucks:	60.2	58.7	49.7	51.0	59.3	59.4
Vehicle Noise:	67.4	65.7	62.5	57.8	66.4	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	57	123	266	572
CNEL:	61	132	285	614

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Edison Avenue
Road Segment: Haven to Mill Creek

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	46,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,630 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.25	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.99	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.95	-4.17	-1.20	*-5.16*	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	65.4	59.4	68.0	68.6
Medium Trucks:	62.6	61.1	54.8	53.2	61.7	61.9
Heavy Trucks:	63.1	61.6	52.6	53.9	62.2	62.3
Vehicle Noise:	70.8	69.0	66.0	61.2	69.7	70.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	96	207	446	961
CNEL:	103	222	479	1,032

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Edison Avenue
Road Segment: Mill Creek to Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	57,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,730 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.17	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.07	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.02	-4.17	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.0	68.1	66.3	60.3	68.9	69.5
Medium Trucks:	63.6	62.1	55.7	54.2	62.6	62.8
Heavy Trucks:	64.0	62.6	53.5	54.8	63.1	63.3
Vehicle Noise:	71.7	69.9	66.9	62.1	70.7	71.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	111	239	514	1,107
CNEL:	119	256	552	1,190

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: 2015 With Project
Road Name: Edison Avenue
Road Segment: e/o Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	56,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,620 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.09	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.15	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.11	-4.17	-1.20	*-5.16*	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	66.3	60.2	68.8	69.4
Medium Trucks:	63.5	62.0	55.6	54.1	62.5	62.8
Heavy Trucks:	63.9	62.5	53.4	54.7	63.0	63.2
Vehicle Noise:	71.6	69.9	66.8	62.0	70.6	71.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	109	235	507	1,093
CNEL:	117	253	545	1,174

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Chino Avenue
Road Segment: w/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,690 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.84	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-16.40	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-20.35	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.6	59.7	58.0	51.9	60.5	61.1
Medium Trucks:	55.6	54.1	47.7	46.2	54.6	54.9
Heavy Trucks:	56.9	55.5	46.5	47.7	56.1	56.2
Vehicle Noise:	63.6	61.9	58.6	54.1	62.6	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	69	149	322
CNEL:	34	74	160	345

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Chino Avenue
Road Segment: e/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,820 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	1.16	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-16.08	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-20.03	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.0	60.1	58.3	52.2	60.9	61.5
Medium Trucks:	55.9	54.4	48.1	46.5	55.0	55.2
Heavy Trucks:	57.2	55.8	46.8	48.0	56.4	56.5
Vehicle Noise:	64.0	62.2	59.0	54.4	62.9	63.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	34	73	157	338
CNEL:	36	78	168	362

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Edison Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	48,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,810 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.41	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.83	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.78	-4.17	-1.20	*-5.16*	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	65.6	59.5	68.1	68.7
Medium Trucks:	62.8	61.3	54.9	53.4	61.9	62.1
Heavy Trucks:	63.2	61.8	52.8	54.0	62.4	62.5
Vehicle Noise:	70.9	69.2	66.1	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	99	212	457	985
CNEL:	106	228	491	1,059

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Edison Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,830 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.25	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-11.99	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.95	-4.17	-1.20	*-5.16*	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:	70.1	68.2	66.4	60.4	69.0	69.6
Medium Trucks:	63.6	62.1	55.8	54.2	62.7	62.9
Heavy Trucks:	64.1	62.6	53.6	54.9	63.2	63.3
Vehicle Noise:	71.8	70.0	67.0	62.2	70.7	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	112	241	520	1,120
CNEL:	120	259	559	1,203

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Archibald Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,520 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.06	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.18	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.14	-4.31	-1.20	*-5.16*	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	64.1	58.0	66.6	67.2
Medium Trucks:	61.3	59.8	53.4	51.9	60.4	60.6
Heavy Trucks:	61.7	60.3	51.3	52.5	60.9	61.0
Vehicle Noise:	69.4	67.7	64.6	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	169	363	783
CNEL:	84	181	390	841

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Archibald Avenue
Road Segment: Chino to Shaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,740 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.32	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.92	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.87	-4.31	-1.20	*-5.16*	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	64.3	58.3	66.9	67.5
Medium Trucks:	61.6	60.1	53.7	52.2	60.6	60.8
Heavy Trucks:	62.0	60.6	51.5	52.8	61.1	61.3
Vehicle Noise:	69.7	67.9	64.9	60.1	68.7	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	81	176	378	815
CNEL:	88	189	406	875

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Archibald Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	61,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,170 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.49	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-11.74	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.70	-4.17	-1.20	*-5.16*	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	68.4	66.7	60.6	69.2	69.8
Medium Trucks:	63.9	62.4	56.0	54.5	62.9	63.2
Heavy Trucks:	64.3	62.9	53.9	55.1	63.5	63.6
Vehicle Noise:	72.0	70.3	67.2	62.4	71.0	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	116	251	540	1,163
CNEL:	125	269	580	1,250

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Haven Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,610 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.22	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-15.02	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.98	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.0	63.1	61.3	55.3	63.9	64.5
Medium Trucks:	58.8	57.2	50.9	49.3	57.8	58.0
Heavy Trucks:	59.6	58.2	49.1	50.4	58.7	58.9
Vehicle Noise:	66.8	65.1	61.9	57.3	65.8	66.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	53	113	244	525
CNEL:	56	121	261	563

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Haven Avenue
Road Segment: Chino to Schaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	29,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,940 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.73	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-14.51	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.46	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.5	63.6	61.8	55.8	64.4	65.0
Medium Trucks:	59.3	57.8	51.4	49.9	58.3	58.5
Heavy Trucks:	60.1	58.7	49.7	50.9	59.3	59.4
Vehicle Noise:	67.3	65.6	62.5	57.8	66.3	66.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	57	122	264	568
CNEL:	61	131	283	610

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Haven Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,480 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	1.99	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-15.24	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-19.20	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.8	62.9	61.1	55.1	63.7	64.3
Medium Trucks:	58.5	57.0	50.7	49.1	57.6	57.8
Heavy Trucks:	59.4	58.0	48.9	50.2	58.5	58.7
Vehicle Noise:	66.6	64.9	61.7	57.0	65.6	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	51	109	236	508
CNEL:	54	117	253	544

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Schaefer Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,070 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.66	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-18.90	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-22.85	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.1	59.2	57.4	51.4	60.0	60.6
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.7	54.3	45.2	46.5	54.8	55.0
Vehicle Noise:	62.9	61.2	58.0	53.3	61.9	62.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	29	62	134	288
CNEL:	31	67	143	309

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Schaefer Avenue
Road Segment: Archibald to Turner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.97	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-20.21	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-24.17	-4.51	-1.20	*-5.16*	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:	59.8	57.9	56.1	50.0	58.7	59.3
Medium Trucks:	53.5	52.0	45.7	44.1	52.6	52.8
Heavy Trucks:	54.4	52.9	43.9	45.2	53.5	53.6
Vehicle Noise:	61.6	59.9	56.7	52.0	60.6	61.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	51	109	235
CNEL:	25	54	117	252

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Schaefer Avenue
Road Segment: Turner to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	640 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.89	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-21.13	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-25.08	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.9	57.0	55.2	49.1	57.8	58.4
Medium Trucks:	52.6	51.1	44.7	43.2	51.7	51.9
Heavy Trucks:	53.5	52.0	43.0	44.2	52.6	52.7
Vehicle Noise:	60.7	58.9	55.8	51.1	59.7	60.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	20	44	95	204
CNEL:	22	47	102	219

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Chino Avenue
Road Segment: w/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,560 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.49	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-16.75	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-20.70	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.3	59.4	57.6	51.6	60.2	60.8
Medium Trucks:	55.3	53.7	47.4	45.8	54.3	54.5
Heavy Trucks:	56.6	55.2	46.1	47.4	55.7	55.9
Vehicle Noise:	63.3	61.6	58.3	53.7	62.3	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	31	66	142	305
CNEL:	33	70	152	327

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Chino Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,850 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	1.23	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-16.01	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-19.96	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.0	60.1	58.4	52.3	60.9	61.5
Medium Trucks:	56.0	54.5	48.1	46.6	55.0	55.3
Heavy Trucks:	57.3	55.9	46.9	48.1	56.5	56.6
Vehicle Noise:	64.0	62.3	59.0	54.5	63.0	63.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	34	74	159	342
CNEL:	37	79	170	366

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Mill Creek Road
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,370 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.07	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-17.31	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-21.27	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	58.8	57.1	51.0	59.6	60.2
Medium Trucks:	54.7	53.2	46.8	45.3	53.7	54.0
Heavy Trucks:	56.0	54.6	45.6	46.8	55.2	55.3
Vehicle Noise:	62.7	61.0	57.7	53.2	61.7	62.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	60	130	280
CNEL:	30	65	139	300

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Mill Creek Road
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,450 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.17	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-17.06	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-21.02	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.0	59.1	57.3	51.2	59.9	60.5
Medium Trucks:	54.9	53.4	47.1	45.5	54.0	54.2
Heavy Trucks:	56.3	54.8	45.8	47.1	55.4	55.5
Vehicle Noise:	63.0	61.2	58.0	53.4	62.0	62.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	29	63	135	291
CNEL:	31	67	144	311

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Milliken Avenue
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	42,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,280 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.91	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.33	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.29	-4.17	-1.20	*-5.16*	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	66.8	65.1	59.0	67.6	68.2
Medium Trucks:	62.3	60.8	54.4	52.9	61.3	61.6
Heavy Trucks:	62.7	61.3	52.3	53.5	61.9	62.0
Vehicle Noise:	70.4	68.7	65.6	60.8	69.4	69.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	91	196	423	912
CNEL:	98	211	455	979

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Milliken Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,980 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.59	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.65	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.60	-4.17	-1.20	*-5.16*	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	64.8	58.7	67.3	67.9
Medium Trucks:	62.0	60.5	54.1	52.6	61.0	61.3
Heavy Trucks:	62.4	61.0	51.9	53.2	61.6	61.7
Vehicle Noise:	70.1	68.4	65.3	60.5	69.1	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	87	187	403	868
CNEL:	93	201	433	933

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Edison Avenue
Road Segment: Archibald to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,520 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.14	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.10	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.05	-4.17	-1.20	*-5.16*	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	65.3	59.3	67.9	68.5
Medium Trucks:	62.5	61.0	54.7	53.1	61.6	61.8
Heavy Trucks:	63.0	61.5	52.5	53.7	62.1	62.2
Vehicle Noise:	70.7	68.9	65.9	61.1	69.6	70.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	95	204	439	945
CNEL:	102	219	471	1,016

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Haven Avenue
Road Segment: chaefer to Edison

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,350 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.30	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-13.94	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-17.89	-4.48	-1.20	*-5.16*	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:	66.1	64.2	62.4	56.4	65.0	65.6
Medium Trucks:	59.8	58.3	52.0	50.4	58.9	59.1
Heavy Trucks:	60.7	59.3	50.2	51.5	59.8	60.0
Vehicle Noise:	67.9	66.2	63.0	58.3	66.9	67.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	62	134	288	620
CNEL:	67	143	309	665

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Edison Avenue
Road Segment: Haven to Mill Creek

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	51,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,110 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.68	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.56	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.52	-4.17	-1.20	*-5.16*	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	65.8	59.8	68.4	69.0
Medium Trucks:	63.1	61.6	55.2	53.7	62.1	62.3
Heavy Trucks:	63.5	62.1	53.0	54.3	62.6	62.8
Vehicle Noise:	71.2	69.4	66.4	61.6	70.2	70.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	103	221	476	1,026
CNEL:	110	237	512	1,102

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Edison Avenue
Road Segment: Mill Creek to Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,830 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.25	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-11.99	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.95	-4.17	-1.20	*-5.16*	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:	70.1	68.2	66.4	60.4	69.0	69.6
Medium Trucks:	63.6	62.1	55.8	54.2	62.7	62.9
Heavy Trucks:	64.1	62.6	53.6	54.9	63.2	63.3
Vehicle Noise:	71.8	70.0	67.0	62.2	70.7	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	112	241	520	1,120
CNEL:	120	259	559	1,203

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout Without Project
Road Name: Edison Avenue
Road Segment: e/o Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	63,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,390 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.65	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-11.59	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.55	-4.17	-1.20	*-5.16*	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	66.8	60.8	69.4	70.0
Medium Trucks:	64.0	62.5	56.2	54.6	63.1	63.3
Heavy Trucks:	64.5	63.0	54.0	55.3	63.6	63.7
Vehicle Noise:	72.2	70.4	67.4	62.6	71.1	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	119	257	553	1,191
CNEL:	128	276	594	1,279

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Chino Avenue
Road Segment: w/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	16,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,690 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.84	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-16.40	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-20.35	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.6	59.7	58.0	51.9	60.5	61.1
Medium Trucks:	55.6	54.1	47.7	46.2	54.6	54.9
Heavy Trucks:	56.9	55.5	46.5	47.7	56.1	56.2
Vehicle Noise:	63.6	61.9	58.6	54.1	62.6	63.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	32	69	149	322
CNEL:	34	74	160	345

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Chino Avenue
Road Segment: e/o Archibald Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,820 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	1.16	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-16.08	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-20.03	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.0	60.1	58.3	52.2	60.9	61.5
Medium Trucks:	55.9	54.4	48.1	46.5	55.0	55.2
Heavy Trucks:	57.2	55.8	46.8	48.0	56.4	56.5
Vehicle Noise:	64.0	62.2	59.0	54.4	62.9	63.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	34	73	157	338
CNEL:	36	78	168	362

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Edison Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	48,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,830 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.43	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.81	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.76	-4.17	-1.20	*-5.16*	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	65.6	59.5	68.2	68.8
Medium Trucks:	62.8	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	63.2	61.8	52.8	54.0	62.4	62.5
Vehicle Noise:	71.0	69.2	66.2	61.4	69.9	70.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	99	213	459	988
CNEL:	106	229	493	1,062

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Edison Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,870 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.28	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-11.96	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.92	-4.17	-1.20	*-5.16*	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:	70.1	68.2	66.4	60.4	69.0	69.6
Medium Trucks:	63.7	62.2	55.8	54.3	62.7	62.9
Heavy Trucks:	64.1	62.7	53.6	54.9	63.2	63.4
Vehicle Noise:	71.8	70.0	67.0	62.2	70.8	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	113	242	522	1,125
CNEL:	121	260	561	1,209

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Archibald Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	35,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,520 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.06	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-14.18	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-18.14	-4.31	-1.20	*-5.16*	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	64.1	58.0	66.6	67.2
Medium Trucks:	61.3	59.8	53.4	51.9	60.4	60.6
Heavy Trucks:	61.7	60.3	51.3	52.5	60.9	61.0
Vehicle Noise:	69.4	67.7	64.6	59.9	68.4	68.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	78	169	363	783
CNEL:	84	181	390	841

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Archibald Avenue
Road Segment: Chino to Shaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	37,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,730 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	60 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	95.525
Medium Trucks:	95.432
Heavy Trucks:	95.441

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.31	-4.32	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.93	-4.31	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.89	-4.31	-1.20	*-5.16*	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	64.3	58.3	66.9	67.5
Medium Trucks:	61.6	60.0	53.7	52.1	60.6	60.8
Heavy Trucks:	62.0	60.6	51.5	52.8	61.1	61.3
Vehicle Noise:	69.7	67.9	64.9	60.1	68.7	69.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	81	175	378	813
CNEL:	87	188	406	874

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Archibald Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	61,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,180 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.50	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-11.74	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.69	-4.17	-1.20	*-5.16*	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	68.4	66.7	60.6	69.2	69.8
Medium Trucks:	63.9	62.4	56.0	54.5	62.9	63.2
Heavy Trucks:	64.3	62.9	53.9	55.1	63.5	63.6
Vehicle Noise:	72.0	70.3	67.2	62.4	71.0	71.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	116	251	541	1,164
CNEL:	125	270	581	1,251

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Haven Avenue
Road Segment: n/o Chino Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,860 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.61	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-14.63	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.58	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.4	63.5	61.7	55.7	64.3	64.9
Medium Trucks:	59.1	57.6	51.3	49.7	58.2	58.4
Heavy Trucks:	60.0	58.6	49.5	50.8	59.1	59.3
Vehicle Noise:	67.2	65.5	62.3	57.7	66.2	66.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	56	120	259	558
CNEL:	60	129	278	599

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Haven Avenue
Road Segment: Chino to Schaefer

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	32,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,210 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.11	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-14.12	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-18.08	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.9	64.0	62.2	56.2	64.8	65.4
Medium Trucks:	59.7	58.1	51.8	50.2	58.7	58.9
Heavy Trucks:	60.5	59.1	50.0	51.3	59.6	59.8
Vehicle Noise:	67.7	66.0	62.8	58.2	66.7	67.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	60	130	280	603
CNEL:	65	139	300	647

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Haven Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,490 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	2.01	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-15.23	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-19.18	-4.48	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.8	62.9	61.1	55.1	63.7	64.3
Medium Trucks:	58.5	57.0	50.7	49.1	57.6	57.8
Heavy Trucks:	59.4	58.0	48.9	50.2	58.5	58.7
Vehicle Noise:	66.6	64.9	61.7	57.1	65.6	66.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	51	110	236	509
CNEL:	55	118	253	546

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Schaefer Avenue
Road Segment: Helman to Archibald

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,090 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-1.58	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-18.82	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-22.77	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.2	59.3	57.5	51.4	60.1	60.7
Medium Trucks:	54.9	53.4	47.1	45.5	54.0	54.2
Heavy Trucks:	55.8	54.3	45.3	46.6	54.9	55.0
Vehicle Noise:	63.0	61.3	58.1	53.4	62.0	62.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	29	63	135	292
CNEL:	31	67	145	313

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Schaefer Avenue
Road Segment: Archibald to Turner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-2.97	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-20.21	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-24.17	-4.51	-1.20	*-5.16*	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:	59.8	57.9	56.1	50.0	58.7	59.3
Medium Trucks:	53.5	52.0	45.7	44.1	52.6	52.8
Heavy Trucks:	54.4	52.9	43.9	45.2	53.5	53.6
Vehicle Noise:	61.6	59.9	56.7	52.0	60.6	61.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	24	51	109	235
CNEL:	25	54	117	252

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Schaefer Avenue
Road Segment: Turner to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	690 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	-3.56	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-20.80	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-24.76	-4.51	-1.20	*-5.16*	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:	59.2	57.3	55.5	49.5	58.1	58.7
Medium Trucks:	52.9	51.4	45.1	43.5	52.0	52.2
Heavy Trucks:	53.8	52.4	43.3	44.6	52.9	53.1
Vehicle Noise:	61.0	59.3	56.1	51.4	60.0	60.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	21	46	100	215
CNEL:	23	50	107	231

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Chino Avenue
Road Segment: w/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,570 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.52	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-16.72	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-20.67	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.3	59.4	57.6	51.6	60.2	60.8
Medium Trucks:	55.3	53.8	47.4	45.9	54.3	54.6
Heavy Trucks:	56.6	55.2	46.1	47.4	55.8	55.9
Vehicle Noise:	63.3	61.6	58.3	53.8	62.3	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	31	66	142	307
CNEL:	33	71	152	328

Monday, September 15, 2008

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Chino Avenue
Road Segment: e/o Haven Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,870 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	1.28	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-15.96	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-19.92	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.1	60.2	58.4	52.4	61.0	61.6
Medium Trucks:	56.0	54.5	48.2	46.6	55.1	55.3
Heavy Trucks:	57.4	55.9	46.9	48.2	56.5	56.6
Vehicle Noise:	64.1	62.3	59.1	54.5	63.1	63.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	34	74	160	344
CNEL:	37	79	171	369

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Mill Creek Road
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	13,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,360 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	-0.10	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-17.34	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-21.30	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.7	58.8	57.0	51.0	59.6	60.2
Medium Trucks:	54.7	53.2	46.8	45.2	53.7	53.9
Heavy Trucks:	56.0	54.6	45.5	46.8	55.1	55.3
Vehicle Noise:	62.7	61.0	57.7	53.1	61.7	62.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	28	60	129	279
CNEL:	30	64	138	298

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Mill Creek Road
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,460 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	98.494
Medium Trucks:	98.404
Heavy Trucks:	98.413

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	66.51	0.20	-4.52	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	77.72	-17.03	-4.51	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	82.99	-20.99	-4.51	-1.20	*-5.16*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.0	59.1	57.3	51.3	59.9	60.5
Medium Trucks:	55.0	53.5	47.1	45.6	54.0	54.2
Heavy Trucks:	56.3	54.9	45.8	47.1	55.4	55.6
Vehicle Noise:	63.0	61.3	58.0	53.4	62.0	62.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	29	63	136	292
CNEL:	31	67	145	313

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Milliken Avenue
Road Segment: n/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	42,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,290 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.92	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.32	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.28	-4.17	-1.20	*-5.16*	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	66.8	65.1	59.0	67.6	68.3
Medium Trucks:	62.3	60.8	54.4	52.9	61.4	61.6
Heavy Trucks:	62.7	61.3	52.3	53.5	61.9	62.0
Vehicle Noise:	70.4	68.7	65.6	60.9	69.4	69.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	91	197	424	913
CNEL:	98	211	455	981

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Milliken Avenue
Road Segment: s/o Edison Ave.

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,980 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	3.59	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.65	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.60	-4.17	-1.20	*-5.16*	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	64.8	58.7	67.3	67.9
Medium Trucks:	62.0	60.5	54.1	52.6	61.0	61.3
Heavy Trucks:	62.4	61.0	51.9	53.2	61.6	61.7
Vehicle Noise:	70.1	68.4	65.3	60.5	69.1	69.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	87	187	403	868
CNEL:	93	201	433	933

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Edison Avenue
Road Segment: Archibald to Haven

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,540 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.16	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-13.08	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-17.03	-4.17	-1.20	*-5.16*	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	65.3	59.3	67.9	68.5
Medium Trucks:	62.6	61.0	54.7	53.1	61.6	61.8
Heavy Trucks:	63.0	61.6	52.5	53.8	62.1	62.2
Vehicle Noise:	70.7	68.9	65.9	61.1	69.7	70.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	95	204	440	948
CNEL:	102	219	473	1,019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Haven Avenue
Road Segment: chaefer to Edison

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,360 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	42 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	97.898
Medium Trucks:	97.807
Heavy Trucks:	97.816

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	68.46	3.31	-4.48	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	79.45	-13.93	-4.47	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	84.25	-17.88	-4.48	-1.20	*-5.16*	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:	66.1	64.2	62.4	56.4	65.0	65.6
Medium Trucks:	59.8	58.3	52.0	50.4	58.9	59.1
Heavy Trucks:	60.7	59.3	50.2	51.5	59.8	60.0
Vehicle Noise:	67.9	66.2	63.0	58.4	66.9	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	62	134	288	621
CNEL:	67	144	309	667

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Edison Avenue
Road Segment: Haven to Mill Creek

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	51,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,150 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	4.71	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-12.53	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-16.48	-4.17	-1.20	*-5.16*	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	65.9	59.8	68.4	69.0
Medium Trucks:	63.1	61.6	55.2	53.7	62.1	62.4
Heavy Trucks:	63.5	62.1	53.1	54.3	62.7	62.8
Vehicle Noise:	71.2	69.5	66.4	61.7	70.2	70.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	103	222	479	1,031
CNEL:	111	239	514	1,108

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Edison Avenue
Road Segment: Mill Creek to Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,870 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.28	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-11.96	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.92	-4.17	-1.20	*-5.16*	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:	70.1	68.2	66.4	60.4	69.0	69.6
Medium Trucks:	63.7	62.2	55.8	54.3	62.7	62.9
Heavy Trucks:	64.1	62.7	53.6	54.9	63.2	63.4
Vehicle Noise:	71.8	70.0	67.0	62.2	70.8	71.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	113	242	522	1,125
CNEL:	121	260	561	1,209

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: G.P. Buildout With Project
Road Name: Edison Avenue
Road Segment: e/o Hamner

Project Name: The Avenue EIR
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	64,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	6,430 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	72 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	100.0 feet
Centerline Dist. to Observer:	100.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	93.429
Medium Trucks:	93.334
Heavy Trucks:	93.344

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	70.20	5.67	-4.18	-1.20	*-4.77*	0.000	0.000
Medium Trucks:	81.00	-11.56	-4.17	-1.20	*-4.88*	0.000	0.000
Heavy Trucks:	85.38	-15.52	-4.17	-1.20	*-5.16*	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	66.8	60.8	69.4	70.0
Medium Trucks:	64.1	62.6	56.2	54.7	63.1	63.3
Heavy Trucks:	64.5	63.1	54.0	55.3	63.6	63.8
Vehicle Noise:	72.2	70.4	67.4	62.6	71.2	71.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	120	258	555	1,196
CNEL:	128	277	596	1,285

APPENDIX G

ON-SITE FHWA TRAFFIC NOISE MODEL PRINTOUTS

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Archibald Av.- Schaefer to Avenu
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,940 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	81 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	85.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	74.898
Medium Trucks:	74.780
Heavy Trucks:	74.792

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	3.55	-2.74	-1.20	*-1.01*	0.000	0.000
Medium Trucks:	78.79	-13.69	-2.73	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	83.02	-17.65	-2.73	-1.20	*-1.52*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.8	67.1	61.0	69.6	70.2
Medium Trucks:	61.2	59.7	53.3	51.8	60.2	60.5
Heavy Trucks:	61.4	60.0	51.0	52.2	60.6	60.7
Vehicle Noise:	71.6	69.8	67.3	62.0	70.6	71.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.8	67.1	61.0	69.6	70.2
Medium Trucks:	61.2	59.7	53.3	51.8	60.2	60.5
Heavy Trucks:	61.4	60.0	51.0	52.2	60.6	60.7
Vehicle Noise:	71.6	69.8	67.3	62.0	70.6	71.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Archibald Av.- Avenue to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,810 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	81 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	85.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	74.898
Medium Trucks:	74.780
Heavy Trucks:	74.792

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	3.40	-2.74	-1.20	*-1.01*	0.000	0.000
Medium Trucks:	78.79	-13.84	-2.73	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	83.02	-17.79	-2.73	-1.20	*-1.52*	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	68.7	66.9	60.9	69.5	70.1
Medium Trucks:	61.0	59.5	53.2	51.6	60.1	60.3
Heavy Trucks:	61.3	59.9	50.8	52.1	60.4	60.6
Vehicle Noise:	71.5	69.7	67.2	61.8	70.4	70.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.6	68.7	66.9	60.9	69.5	70.1
Medium Trucks:	61.0	59.5	53.2	51.6	60.1	60.3
Heavy Trucks:	61.3	59.9	50.8	52.1	60.4	60.6
Vehicle Noise:	71.5	69.7	67.2	61.8	70.4	70.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Edison Av.- Carpenter to Archibal
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	48,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,830 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	75.331
Medium Trucks:	75.213
Heavy Trucks:	75.225

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	4.43	-2.77	-1.20	*-1.02*	0.000	0.000
Medium Trucks:	78.79	-12.81	-2.76	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	83.02	-16.76	-2.76	-1.20	*-1.50*	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:	71.6	69.7	67.9	61.9	70.5	71.1
Medium Trucks:	62.0	60.5	54.2	52.6	61.1	61.3
Heavy Trucks:	62.3	60.9	51.8	53.1	61.4	61.6
Vehicle Noise:	72.5	70.7	68.2	62.8	71.4	71.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.6	69.7	67.9	61.9	70.5	71.1
Medium Trucks:	62.0	60.5	54.2	52.6	61.1	61.3
Heavy Trucks:	62.3	60.9	51.8	53.1	61.4	61.6
Vehicle Noise:	72.5	70.7	68.2	62.8	71.4	71.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Edison Av.- Archibald to Turner
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,540 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	75.331
Medium Trucks:	75.213
Heavy Trucks:	75.225

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	4.16	-2.77	-1.20	*-1.02*	0.000	0.000
Medium Trucks:	78.79	-13.08	-2.76	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	83.02	-17.03	-2.76	-1.20	*-1.50*	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:	71.3	69.4	67.6	61.6	70.2	70.8
Medium Trucks:	61.8	60.2	53.9	52.3	60.8	61.0
Heavy Trucks:	62.0	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	72.2	70.4	67.9	62.6	71.1	71.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.3	69.4	67.6	61.6	70.2	70.8
Medium Trucks:	61.8	60.2	53.9	52.3	60.8	61.0
Heavy Trucks:	62.0	60.6	51.6	52.8	61.2	61.3
Vehicle Noise:	72.2	70.4	67.9	62.6	71.1	71.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Edison Av.- Turner to Haven
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,840 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	75.331
Medium Trucks:	75.213
Heavy Trucks:	75.225

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	5.26	-2.77	-1.20	*-1.02*	0.000	0.000
Medium Trucks:	78.79	-11.98	-2.76	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	83.02	-15.94	-2.76	-1.20	*-1.50*	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:	72.4	70.5	68.7	62.7	71.3	71.9
Medium Trucks:	62.8	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	63.1	61.7	52.7	53.9	62.3	62.4
Vehicle Noise:	73.3	71.5	69.0	63.7	72.2	72.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.4	70.5	68.7	62.7	71.3	71.9
Medium Trucks:	62.8	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	63.1	61.7	52.7	53.9	62.3	62.4
Vehicle Noise:	73.3	71.5	69.0	63.7	72.2	72.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Schaefer Av.- Carpenter to Archib
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,090 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	68.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000	
Medium Trucks:	2.297	
Heavy Trucks:	8.006	*Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos:	60.982
Medium Trucks:	60.836
Heavy Trucks:	60.851

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-1.58	-1.40	-1.20	*-0.98*	0.000	0.000
Medium Trucks:	77.62	-18.82	-1.38	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	82.14	-22.77	-1.38	-1.20	*-1.63*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.2	63.3	61.5	55.5	64.1	64.7
Medium Trucks:	56.2	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	56.8	55.4	46.3	47.6	55.9	56.1
Vehicle Noise:	66.2	64.4	61.8	56.6	65.2	65.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.2	63.3	61.5	55.5	64.1	64.7
Medium Trucks:	56.2	54.7	48.4	46.8	55.3	55.5
Heavy Trucks:	56.8	55.4	46.3	47.6	55.9	56.1
Vehicle Noise:	66.2	64.4	61.8	56.6	65.2	65.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Schaefer Av.- Archibald to Turner
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	68.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	60.982
Medium Trucks:	60.836
Heavy Trucks:	60.851

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-2.97	-1.40	-1.20	*-0.98*	0.000	0.000
Medium Trucks:	77.62	-20.21	-1.38	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	82.14	-24.17	-1.38	-1.20	*-1.63*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.8	61.9	60.1	54.1	62.7	63.3
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.4	54.0	44.9	46.2	54.5	54.7
Vehicle Noise:	64.8	63.0	60.4	55.2	63.8	64.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.8	61.9	60.1	54.1	62.7	63.3
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.4	54.0	44.9	46.2	54.5	54.7
Vehicle Noise:	64.8	63.0	60.4	55.2	63.8	64.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Schaefer Av.- Turner to Haven
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	690 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	68.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	60.982
Medium Trucks:	60.836
Heavy Trucks:	60.851

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-3.56	-1.40	-1.20	*-0.98*	0.000	0.000
Medium Trucks:	77.62	-20.80	-1.38	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	82.14	-24.76	-1.38	-1.20	*-1.63*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.2	61.3	59.5	53.5	62.1	62.7
Medium Trucks:	54.2	52.7	46.4	44.8	53.3	53.5
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1
Vehicle Noise:	64.2	62.4	59.8	54.6	63.2	63.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.2	61.3	59.5	53.5	62.1	62.7
Medium Trucks:	54.2	52.7	46.4	44.8	53.3	53.5
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1
Vehicle Noise:	64.2	62.4	59.8	54.6	63.2	63.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Turner Av.- Shaefer to Avenue
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,170 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	43.0 feet
Centerline Dist. to Observer:	53.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	51.865
Medium Trucks:	51.694
Heavy Trucks:	51.711

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-0.76	-0.34	-1.20	*-0.92*	0.000	0.000
Medium Trucks:	76.31	-18.00	-0.32	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	81.16	-21.95	-0.32	-1.20	*-1.79*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.1	63.2	61.4	55.3	64.0	64.6
Medium Trucks:	56.8	55.3	48.9	47.4	55.8	56.1
Heavy Trucks:	57.7	56.3	47.2	48.5	56.8	57.0
Vehicle Noise:	66.3	64.5	61.8	56.7	65.3	65.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.1	63.2	61.4	55.3	64.0	64.6
Medium Trucks:	56.8	55.3	48.9	47.4	55.8	56.1
Heavy Trucks:	57.7	56.3	47.2	48.5	56.8	57.0
Vehicle Noise:	66.3	64.5	61.8	56.7	65.3	65.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Turner Av.- Avenue to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,400 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	43.0 feet
Centerline Dist. to Observer:	53.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	51.865
Medium Trucks:	51.694
Heavy Trucks:	51.711

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	0.02	-0.34	-1.20	*-0.92*	0.000	0.000
Medium Trucks:	76.31	-17.22	-0.32	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	81.16	-21.17	-0.32	-1.20	*-1.79*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.8	63.9	62.2	56.1	64.7	65.3
Medium Trucks:	57.6	56.1	49.7	48.2	56.6	56.9
Heavy Trucks:	58.5	57.0	48.0	49.3	57.6	57.7
Vehicle Noise:	67.1	65.3	62.6	57.5	66.0	66.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.8	63.9	62.2	56.1	64.7	65.3
Medium Trucks:	57.6	56.1	49.7	48.2	56.6	56.9
Heavy Trucks:	58.5	57.0	48.0	49.3	57.6	57.7
Vehicle Noise:	67.1	65.3	62.6	57.5	66.0	66.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Haven Av.- Shaefer to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,360 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	57 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	62.0 feet
Centerline Dist. to Observer:	72.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	66.308
Medium Trucks:	66.174
Heavy Trucks:	66.188

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	3.82	-1.94	-1.20	*-0.99*	0.000	0.000
Medium Trucks:	76.31	-13.41	-1.93	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	81.16	-17.37	-1.93	-1.20	*-1.60*	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	64.4	58.3	66.9	67.5
Medium Trucks:	59.8	58.3	51.9	50.4	58.8	59.0
Heavy Trucks:	60.7	59.2	50.2	51.5	59.8	59.9
Vehicle Noise:	69.3	67.5	64.8	59.7	68.2	68.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	68.0	66.1	64.4	58.3	66.9	67.5
Medium Trucks:	59.8	58.3	51.9	50.4	58.8	59.0
Heavy Trucks:	60.7	59.2	50.2	51.5	59.8	59.9
Vehicle Noise:	69.3	67.5	64.8	59.7	68.2	68.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard No Wall
Road Name: Haven Av.- s/o Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,490 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	57 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	62.0 feet
Centerline Dist. to Observer:	72.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	66.308
Medium Trucks:	66.174
Heavy Trucks:	66.188

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	2.52	-1.94	-1.20	*-0.99*	0.000	0.000
Medium Trucks:	76.31	-14.72	-1.93	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	81.16	-18.67	-1.93	-1.20	*-1.60*	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:	66.7	64.8	63.1	57.0	65.6	66.2
Medium Trucks:	58.5	57.0	50.6	49.1	57.5	57.7
Heavy Trucks:	59.4	57.9	48.9	50.1	58.5	58.6
Vehicle Noise:	68.0	66.2	63.5	58.4	66.9	67.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.7	64.8	63.1	57.0	65.6	66.2
Medium Trucks:	58.5	57.0	50.6	49.1	57.5	57.7
Heavy Trucks:	59.4	57.9	48.9	50.1	58.5	58.6
Vehicle Noise:	68.0	66.2	63.5	58.4	66.9	67.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Archibald Av.- Schaefer to Avenu
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,940 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	81 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	85.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	73.459
Medium Trucks:	73.283
Heavy Trucks:	73.207

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	3.55	-2.61	-1.20	*0.14*	-6.320	-9.320
Medium Trucks:	78.79	-13.69	-2.59	-1.20	*0.10*	-6.000	-9.000
Heavy Trucks:	83.02	-17.65	-2.59	-1.20	*0.02*	-5.200	-8.200

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.9	69.0	67.2	61.1	69.8	70.4
Medium Trucks:	61.3	59.8	53.4	51.9	60.4	60.6
Heavy Trucks:	61.6	60.2	51.1	52.4	60.7	60.9
Vehicle Noise:	71.8	69.9	67.5	62.1	70.7	71.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.5	62.6	60.9	54.8	63.4	64.0
Medium Trucks:	55.3	53.8	47.4	45.9	54.4	54.6
Heavy Trucks:	56.4	55.0	45.9	47.2	55.5	55.7
Vehicle Noise:	65.6	63.8	61.2	56.0	64.5	65.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Archibald Av.- Avenue to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,810 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	81 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	85.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	73.459
Medium Trucks:	73.283
Heavy Trucks:	73.207

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	3.40	-2.61	-1.20	*0.14*	-6.320	-9.320
Medium Trucks:	78.79	-13.84	-2.59	-1.20	*0.10*	-6.000	-9.000
Heavy Trucks:	83.02	-17.79	-2.59	-1.20	*0.02*	-5.200	-8.200

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.7	68.8	67.0	61.0	69.6	70.2
Medium Trucks:	61.2	59.7	53.3	51.7	60.2	60.4
Heavy Trucks:	61.4	60.0	51.0	52.2	60.6	60.7
Vehicle Noise:	71.6	69.8	67.3	62.0	70.5	71.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.4	62.5	60.7	54.7	63.3	63.9
Medium Trucks:	55.2	53.7	47.3	45.7	54.2	54.4
Heavy Trucks:	56.2	54.8	45.8	47.0	55.4	55.5
Vehicle Noise:	65.4	63.6	61.0	55.8	64.4	64.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Edison Av.- Carpenter to Archibal
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	48,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,830 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**7.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	73.434
Medium Trucks:	73.221
Heavy Trucks:	73.053

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	4.43	-2.61	-1.20	*0.36*	-7.800	-10.800
Medium Trucks:	78.79	-12.81	-2.59	-1.20	*0.29*	-7.430	-10.430
Heavy Trucks:	83.02	-16.76	-2.57	-1.20	*0.15*	-6.400	-9.400

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.7	69.8	68.1	62.0	70.6	71.3
Medium Trucks:	62.2	60.7	54.3	52.8	61.2	61.5
Heavy Trucks:	62.5	61.1	52.0	53.3	61.6	61.8
Vehicle Noise:	72.6	70.8	68.4	63.0	71.6	72.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.9	62.0	60.3	54.2	62.8	63.5
Medium Trucks:	54.8	53.3	46.9	45.4	53.8	54.0
Heavy Trucks:	56.1	54.7	45.6	46.9	55.2	55.4
Vehicle Noise:	65.0	63.2	60.6	55.4	64.0	64.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Edison Av.- Archibald to Turner
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,540 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**7.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	73.434
Medium Trucks:	73.221
Heavy Trucks:	73.053

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	4.16	-2.61	-1.20	*0.36*	-7.800	-10.800
Medium Trucks:	78.79	-13.08	-2.59	-1.20	*0.29*	-7.430	-10.430
Heavy Trucks:	83.02	-17.03	-2.57	-1.20	*0.15*	-6.400	-9.400

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.5	69.6	67.8	61.8	70.4	71.0
Medium Trucks:	61.9	60.4	54.1	52.5	61.0	61.2
Heavy Trucks:	62.2	60.8	51.8	53.0	61.4	61.5
Vehicle Noise:	72.4	70.6	68.1	62.7	71.3	71.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	55.8	54.4	45.4	46.6	55.0	55.1
Vehicle Noise:	64.8	63.0	60.3	55.1	63.7	64.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Edison Av.- Turner to Haven
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,840 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**7.5 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	73.601
Medium Trucks:	73.370
Heavy Trucks:	73.157

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	5.26	-2.62	-1.20	*0.51*	-8.550	-11.550
Medium Trucks:	78.79	-11.98	-2.60	-1.20	*0.43*	-8.150	-11.150
Heavy Trucks:	83.02	-15.94	-2.58	-1.20	*0.25*	-7.150	-10.150

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.6	70.7	68.9	62.8	71.5	72.1
Medium Trucks:	63.0	61.5	55.1	53.6	62.1	62.3
Heavy Trucks:	63.3	61.9	52.8	54.1	62.4	62.6
Vehicle Noise:	73.5	71.6	69.2	63.8	72.4	72.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.0	62.1	60.3	54.3	62.9	63.5
Medium Trucks:	54.9	53.4	47.0	45.4	53.9	54.1
Heavy Trucks:	56.1	54.7	45.7	46.9	55.3	55.4
Vehicle Noise:	65.1	63.3	60.7	55.5	64.0	64.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Schaefer Av.- Carpenter to Archib
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,090 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	68.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	59.586
Medium Trucks:	59.407
Heavy Trucks:	60.851

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-1.58	-1.25	-1.20	*0.03*	-5.300	-8.300
Medium Trucks:	77.62	-18.82	-1.23	-1.20	*0.01*	-5.100	-8.100
Heavy Trucks:	82.14	-22.77	-1.38	-1.20	*-0.01*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.3	63.4	61.7	55.6	64.2	64.8
Medium Trucks:	56.4	54.9	48.5	47.0	55.4	55.7
Heavy Trucks:	56.8	55.4	46.3	47.6	55.9	56.1
Vehicle Noise:	66.4	64.5	62.0	56.7	65.3	65.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.0	58.1	56.4	50.3	58.9	59.5
Medium Trucks:	51.3	49.8	43.4	41.9	50.3	50.6
Heavy Trucks:	56.8	55.4	46.3	47.6	55.9	56.1
Vehicle Noise:	62.1	60.4	57.0	52.5	61.1	61.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Schaefer Av.- Archibald to Turner
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	68.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	60.982
Medium Trucks:	60.836
Heavy Trucks:	60.851

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-2.97	-1.40	-1.20	*-0.98*	0.000	0.000
Medium Trucks:	77.62	-20.21	-1.38	-1.20	*-1.15*	0.000	0.000
Heavy Trucks:	82.14	-24.17	-1.38	-1.20	*-1.63*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.8	61.9	60.1	54.1	62.7	63.3
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.4	54.0	44.9	46.2	54.5	54.7
Vehicle Noise:	64.8	63.0	60.4	55.2	63.8	64.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.8	61.9	60.1	54.1	62.7	63.3
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	55.4	54.0	44.9	46.2	54.5	54.7
Vehicle Noise:	64.8	63.0	60.4	55.2	63.8	64.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Schaefer Av.- Turner to Haven
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	690 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	68.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	59.586
Medium Trucks:	59.407
Heavy Trucks:	60.851

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	69.34	-3.56	-1.25	-1.20	*0.03*	-5.300	-8.300
Medium Trucks:	77.62	-20.80	-1.23	-1.20	*0.01*	-5.100	-8.100
Heavy Trucks:	82.14	-24.76	-1.38	-1.20	*-0.01*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.3	61.4	59.7	53.6	62.2	62.8
Medium Trucks:	54.4	52.9	46.5	45.0	53.4	53.7
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1
Vehicle Noise:	64.4	62.6	60.0	54.7	63.3	63.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.0	56.1	54.4	48.3	56.9	57.5
Medium Trucks:	49.3	47.8	41.4	39.9	48.3	48.6
Heavy Trucks:	54.8	53.4	44.3	45.6	53.9	54.1
Vehicle Noise:	60.1	58.4	55.0	50.6	59.1	59.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Turner Av.- Shaefer to Avenue
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,170 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	43.0 feet
Centerline Dist. to Observer:	53.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	51.593
Medium Trucks:	51.380
Heavy Trucks:	51.711

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	67.36	-0.76	-0.31	-1.20	*0.05*	-5.500	-8.500
Medium Trucks:	76.31	-18.00	-0.28	-1.20	*0.02*	-5.200	-8.200
Heavy Trucks:	81.16	-21.95	-0.32	-1.20	*-0.02*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.1	63.2	61.4	55.4	64.0	64.6
Medium Trucks:	56.8	55.3	49.0	47.4	55.9	56.1
Heavy Trucks:	57.7	56.3	47.2	48.5	56.8	57.0
Vehicle Noise:	66.3	64.6	61.8	56.7	65.3	65.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	59.6	57.7	55.9	49.9	58.5	59.1
Medium Trucks:	51.6	50.1	43.8	42.2	50.7	50.9
Heavy Trucks:	57.7	56.3	47.2	48.5	56.8	57.0
Vehicle Noise:	62.2	60.5	56.7	52.7	61.2	61.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Turner Av.- Avenue to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,400 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	43.0 feet
Centerline Dist. to Observer:	53.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	51.593
Medium Trucks:	51.380
Heavy Trucks:	51.711

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	0.02	-0.31	-1.20	*0.05*	-5.500	-8.500
Medium Trucks:	76.31	-17.22	-0.28	-1.20	*0.02*	-5.200	-8.200
Heavy Trucks:	81.16	-21.17	-0.32	-1.20	*-0.02*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.9	64.0	62.2	56.2	64.8	65.4
Medium Trucks:	57.6	56.1	49.7	48.2	56.7	56.9
Heavy Trucks:	58.5	57.0	48.0	49.3	57.6	57.7
Vehicle Noise:	67.1	65.3	62.6	57.5	66.1	66.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.4	58.5	56.7	50.7	59.3	59.9
Medium Trucks:	52.4	50.9	44.5	43.0	51.5	51.7
Heavy Trucks:	58.5	57.0	48.0	49.3	57.6	57.7
Vehicle Noise:	62.9	61.2	57.5	53.4	61.9	62.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Haven Av.- Shaefer to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,360 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	57 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	62.0 feet
Centerline Dist. to Observer:	72.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	65.288
Medium Trucks:	65.128
Heavy Trucks:	66.188

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	3.82	-1.84	-1.20	*0.03*	-5.300	-8.300
Medium Trucks:	76.31	-13.41	-1.83	-1.20	*0.01*	-5.100	-8.100
Heavy Trucks:	81.16	-17.37	-1.93	-1.20	*-0.01*	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	64.5	58.4	67.0	67.7
Medium Trucks:	59.9	58.4	52.0	50.5	58.9	59.2
Heavy Trucks:	60.7	59.2	50.2	51.5	59.8	59.9
Vehicle Noise:	69.4	67.6	64.9	59.8	68.3	68.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.8	60.9	59.2	53.1	61.7	62.4
Medium Trucks:	54.8	53.3	46.9	45.4	53.8	54.1
Heavy Trucks:	60.7	59.2	50.2	51.5	59.8	59.9
Vehicle Noise:	65.3	63.6	59.9	55.8	64.3	64.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Backyard With Wall
Road Name: Haven Av.- s/o Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,490 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	57 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	62.0 feet
Centerline Dist. to Observer:	72.0 feet
Barrier Distance to Observer:	10.0 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	65.288
Medium Trucks:	65.128
Heavy Trucks:	66.188

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	2.52	-1.84	-1.20	*0.03*	-5.300	-8.300
Medium Trucks:	76.31	-14.72	-1.83	-1.20	*0.01*	-5.100	-8.100
Heavy Trucks:	81.16	-18.67	-1.93	-1.20	*-0.01*	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	63.2	57.1	65.7	66.3
Medium Trucks:	58.6	57.1	50.7	49.2	57.6	57.9
Heavy Trucks:	59.4	57.9	48.9	50.1	58.5	58.6
Vehicle Noise:	68.1	66.3	63.6	58.5	67.0	67.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.5	59.6	57.9	51.8	60.4	61.0
Medium Trucks:	53.5	52.0	45.6	44.1	52.5	52.8
Heavy Trucks:	59.4	57.9	48.9	50.1	58.5	58.6
Vehicle Noise:	64.0	62.3	58.6	54.5	63.0	63.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Archibald Av.- Schaefer to Avenu
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,940 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	81 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	95.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	83.484
Medium Trucks:	83.290
Heavy Trucks:	83.168

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	3.55	-3.44	-1.20	*0.14*	-6.320	-9.320
Medium Trucks:	78.79	-13.69	-3.43	-1.20	*0.09*	-5.900	-8.900
Heavy Trucks:	83.02	-17.65	-3.42	-1.20	*0.01*	-5.100	-8.100

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.0	68.1	66.4	60.3	68.9	69.5
Medium Trucks:	60.5	59.0	52.6	51.1	59.5	59.8
Heavy Trucks:	60.8	59.3	50.3	51.5	59.9	60.0
Vehicle Noise:	70.9	69.1	66.6	61.3	69.9	70.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	54.6	53.1	46.7	45.2	53.6	53.9
Heavy Trucks:	55.7	54.2	45.2	46.4	54.8	54.9
Vehicle Noise:	64.8	63.0	60.4	55.1	63.7	64.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Archibald Av.- Avenue to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,810 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	81 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	95.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	83.484
Medium Trucks:	83.290
Heavy Trucks:	83.168

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	3.40	-3.44	-1.20	*0.14*	-6.320	-9.320
Medium Trucks:	78.79	-13.84	-3.43	-1.20	*0.09*	-5.900	-8.900
Heavy Trucks:	83.02	-17.79	-3.42	-1.20	*0.01*	-5.100	-8.100

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	66.2	60.2	68.8	69.4
Medium Trucks:	60.3	58.8	52.5	50.9	59.4	59.6
Heavy Trucks:	60.6	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	70.8	69.0	66.5	61.1	69.7	70.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.6	61.7	59.9	53.8	62.5	63.1
Medium Trucks:	54.4	52.9	46.6	45.0	53.5	53.7
Heavy Trucks:	55.5	54.1	45.1	46.3	54.7	54.8
Vehicle Noise:	64.6	62.8	60.2	55.0	63.6	64.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Edison Av.- Carpenter to Archibal
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	48,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,830 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**7.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	83.393
Medium Trucks:	83.162
Heavy Trucks:	82.949

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	4.43	-3.44	-1.20	*0.29*	-7.430	-10.430
Medium Trucks:	78.79	-12.81	-3.42	-1.20	*0.21*	-6.870	-9.870
Heavy Trucks:	83.02	-16.76	-3.40	-1.20	*0.07*	-5.700	-8.700

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.9	69.0	67.2	61.2	69.8	70.4
Medium Trucks:	61.4	59.9	53.5	52.0	60.4	60.6
Heavy Trucks:	61.7	60.2	51.2	52.4	60.8	60.9
Vehicle Noise:	71.8	70.0	67.5	62.2	70.8	71.3

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.5	61.6	59.8	53.8	62.4	63.0
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	56.0	54.5	45.5	46.7	55.1	55.2
Vehicle Noise:	64.6	62.8	60.2	55.0	63.6	64.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Edison Av.- Archibald to Turner
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,540 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**7.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	83.393
Medium Trucks:	83.162
Heavy Trucks:	82.949

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	4.16	-3.44	-1.20	*0.29*	-7.430	-10.430
Medium Trucks:	78.79	-13.08	-3.42	-1.20	*0.21*	-6.870	-9.870
Heavy Trucks:	83.02	-17.03	-3.40	-1.20	*0.07*	-5.700	-8.700

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.6	68.7	67.0	60.9	69.5	70.2
Medium Trucks:	61.1	59.6	53.2	51.7	60.1	60.4
Heavy Trucks:	61.4	60.0	50.9	52.2	60.5	60.7
Vehicle Noise:	71.5	69.7	67.3	61.9	70.5	71.0

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.2	61.3	59.6	53.5	62.1	62.7
Medium Trucks:	54.2	52.7	46.4	44.8	53.3	53.5
Heavy Trucks:	55.7	54.3	45.2	46.5	54.8	55.0
Vehicle Noise:	64.4	62.6	59.9	54.7	63.3	63.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Edison Av.- Turner to Haven
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,840 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**7.5 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	83.510
Medium Trucks:	83.261
Heavy Trucks:	83.003

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	5.26	-3.44	-1.20	*0.39*	-7.950	-10.950
Medium Trucks:	78.79	-11.98	-3.43	-1.20	*0.30*	-7.500	-10.500
Heavy Trucks:	83.02	-15.94	-3.41	-1.20	*0.12*	-6.160	-9.160

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.7	69.8	68.1	62.0	70.6	71.2
Medium Trucks:	62.2	60.7	54.3	52.8	61.2	61.5
Heavy Trucks:	62.5	61.1	52.0	53.3	61.6	61.8
Vehicle Noise:	72.6	70.8	68.3	63.0	71.6	72.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.8	61.9	60.1	54.1	62.7	63.3
Medium Trucks:	54.7	53.2	46.8	45.3	53.7	54.0
Heavy Trucks:	56.3	54.9	45.9	47.1	55.5	55.6
Vehicle Noise:	64.9	63.1	60.5	55.3	63.9	64.4

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Schaefer Av.- Carpenter to Archib
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,090 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	78.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	69.639
Medium Trucks:	69.437
Heavy Trucks:	71.833

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-1.58	-2.26	-1.20	*0.07*	-5.700	-8.700
Medium Trucks:	77.62	-18.82	-2.24	-1.20	*0.02*	-5.200	-8.200
Heavy Trucks:	82.14	-22.77	-2.46	-1.20	*-0.01*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.3	62.4	60.6	54.6	63.2	63.8
Medium Trucks:	55.4	53.9	47.5	46.0	54.4	54.6
Heavy Trucks:	55.7	54.3	45.2	46.5	54.9	55.0
Vehicle Noise:	65.3	63.5	61.0	55.7	64.3	64.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.6	56.7	54.9	48.9	57.5	58.1
Medium Trucks:	50.2	48.7	42.3	40.8	49.2	49.4
Heavy Trucks:	55.7	54.3	45.2	46.5	54.9	55.0
Vehicle Noise:	60.8	59.1	55.6	51.3	59.8	60.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Schaefer Av.- Archibald to Turner
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	78.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000	
Medium Trucks:	2.297	
Heavy Trucks:	8.006	*Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos:	72.000
Medium Trucks:	71.861
Heavy Trucks:	71.833

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-2.97	-2.48	-1.20	*-0.41*	0.000	0.000
Medium Trucks:	77.62	-20.21	-2.47	-1.20	*-0.57*	0.000	0.000
Heavy Trucks:	82.14	-24.17	-2.46	-1.20	*-1.04*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.7	60.8	59.0	53.0	61.6	62.2
Medium Trucks:	53.7	52.2	45.9	44.3	52.8	53.0
Heavy Trucks:	54.3	52.9	43.9	45.1	53.5	53.6
Vehicle Noise:	63.7	61.9	59.4	54.1	62.7	63.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.7	60.8	59.0	53.0	61.6	62.2
Medium Trucks:	53.7	52.2	45.9	44.3	52.8	53.0
Heavy Trucks:	54.3	52.9	43.9	45.1	53.5	53.6
Vehicle Noise:	63.7	61.9	59.4	54.1	62.7	63.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Schaefer Av.- Turner to Haven
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	690 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	78.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	69.639
Medium Trucks:	69.437
Heavy Trucks:	71.833

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-3.56	-2.26	-1.20	*0.07*	-5.700	-8.700
Medium Trucks:	77.62	-20.80	-2.24	-1.20	*0.02*	-5.200	-8.200
Heavy Trucks:	82.14	-24.76	-2.46	-1.20	*-0.01*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.3	60.4	58.7	52.6	61.2	61.8
Medium Trucks:	53.4	51.9	45.5	44.0	52.4	52.7
Heavy Trucks:	53.7	52.3	43.3	44.5	52.9	53.0
Vehicle Noise:	63.3	61.5	59.0	53.7	62.3	62.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	56.6	54.7	53.0	46.9	55.5	56.1
Medium Trucks:	48.2	46.7	40.3	38.8	47.2	47.5
Heavy Trucks:	53.7	52.3	43.3	44.5	52.9	53.0
Vehicle Noise:	58.8	57.1	53.6	49.3	57.8	58.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Turner Av.- Shaefer to Avenue
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,170 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	43.0 feet
Centerline Dist. to Observer:	63.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	61.656
Medium Trucks:	61.416
Heavy Trucks:	61.897

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-0.76	-1.47	-1.20	*0.11*	-6.080	-9.080
Medium Trucks:	76.31	-18.00	-1.44	-1.20	*0.04*	-5.400	-8.400
Heavy Trucks:	81.16	-21.95	-1.49	-1.20	*-0.02*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.9	62.0	60.3	54.2	62.8	63.4
Medium Trucks:	55.7	54.2	47.8	46.3	54.7	55.0
Heavy Trucks:	56.5	55.1	46.1	47.3	55.7	55.8
Vehicle Noise:	65.2	63.4	60.7	55.6	64.1	64.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	57.9	56.0	54.2	48.1	56.8	57.4
Medium Trucks:	50.3	48.8	42.4	40.9	49.3	49.6
Heavy Trucks:	56.5	55.1	46.1	47.3	55.7	55.8
Vehicle Noise:	60.7	59.0	55.1	51.2	59.7	60.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Turner Av.- Avenue to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,400 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	43.0 feet
Centerline Dist. to Observer:	63.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	61.656
Medium Trucks:	61.416
Heavy Trucks:	61.897

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	0.02	-1.47	-1.20	*0.11*	-6.080	-9.080
Medium Trucks:	76.31	-17.22	-1.44	-1.20	*0.04*	-5.400	-8.400
Heavy Trucks:	81.16	-21.17	-1.49	-1.20	*-0.02*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.7	62.8	61.0	55.0	63.6	64.2
Medium Trucks:	56.5	54.9	48.6	47.0	55.5	55.7
Heavy Trucks:	57.3	55.9	46.8	48.1	56.4	56.6
Vehicle Noise:	66.0	64.2	61.4	56.3	64.9	65.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	58.6	56.7	55.0	48.9	57.5	58.1
Medium Trucks:	51.1	49.5	43.2	41.6	50.1	50.3
Heavy Trucks:	57.3	55.9	46.8	48.1	56.4	56.6
Vehicle Noise:	61.4	59.8	55.8	52.0	60.5	60.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Haven Av.- Shaefer to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,360 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	57 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	62.0 feet
Centerline Dist. to Observer:	82.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	75.335
Medium Trucks:	75.154
Heavy Trucks:	76.929

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	3.82	-2.77	-1.20	*0.06*	-5.600	-8.600
Medium Trucks:	76.31	-13.41	-2.76	-1.20	*0.02*	-5.200	-8.200
Heavy Trucks:	81.16	-17.37	-2.91	-1.20	*-0.01*	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:	67.2	65.3	63.5	57.5	66.1	66.7
Medium Trucks:	58.9	57.4	51.1	49.5	58.0	58.2
Heavy Trucks:	59.7	58.3	49.2	50.5	58.8	59.0
Vehicle Noise:	68.4	66.6	63.9	58.8	67.4	67.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	61.6	59.7	57.9	51.9	60.5	61.1
Medium Trucks:	53.7	52.2	45.9	44.3	52.8	53.0
Heavy Trucks:	59.7	58.3	49.2	50.5	58.8	59.0
Vehicle Noise:	64.2	62.5	58.7	54.7	63.2	63.6

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: First Floor With Wall
Road Name: Haven Av.- s/o Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,490 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	57 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	62.0 feet
Centerline Dist. to Observer:	82.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	75.335
Medium Trucks:	75.154
Heavy Trucks:	76.929

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	2.52	-2.77	-1.20	*0.06*	-5.600	-8.600
Medium Trucks:	76.31	-14.72	-2.76	-1.20	*0.02*	-5.200	-8.200
Heavy Trucks:	81.16	-18.67	-2.91	-1.20	*-0.01*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.9	64.0	62.2	56.2	64.8	65.4
Medium Trucks:	57.6	56.1	49.8	48.2	56.7	56.9
Heavy Trucks:	58.4	57.0	47.9	49.2	57.5	57.7
Vehicle Noise:	67.1	65.3	62.6	57.5	66.1	66.6

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	60.3	58.4	56.6	50.6	59.2	59.8
Medium Trucks:	52.4	50.9	44.6	43.0	51.5	51.7
Heavy Trucks:	58.4	57.0	47.9	49.2	57.5	57.7
Vehicle Noise:	62.9	61.2	57.4	53.4	61.9	62.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Archibald Av.- Schaefer to Avenu
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	39,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,940 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	81 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	95.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	87.149
Medium Trucks:	86.797
Heavy Trucks:	86.180

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	3.55	-3.72	-1.20	*-0.71*	0.000	0.000
Medium Trucks:	78.79	-13.69	-3.70	-1.20	*-0.86*	0.000	0.000
Heavy Trucks:	83.02	-17.65	-3.65	-1.20	*-1.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.7	67.8	66.1	60.0	68.6	69.3
Medium Trucks:	60.2	58.7	52.3	50.8	59.3	59.5
Heavy Trucks:	60.5	59.1	50.1	51.3	59.7	59.8
Vehicle Noise:	70.6	68.8	66.4	61.0	69.6	70.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.7	67.8	66.1	60.0	68.6	69.3
Medium Trucks:	60.2	58.7	52.3	50.8	59.3	59.5
Heavy Trucks:	60.5	59.1	50.1	51.3	59.7	59.8
Vehicle Noise:	70.6	68.8	66.4	61.0	69.6	70.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Archibald Av.- Avenue to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	38,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,810 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	81 feet

Site Data

Barrier Height:	**6.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	75.0 feet
Centerline Dist. to Observer:	95.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	87.149
Medium Trucks:	86.797
Heavy Trucks:	86.180

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	3.40	-3.72	-1.20	*-0.71*	0.000	0.000
Medium Trucks:	78.79	-13.84	-3.70	-1.20	*-0.86*	0.000	0.000
Heavy Trucks:	83.02	-17.79	-3.65	-1.20	*-1.31*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.6	67.7	65.9	59.9	68.5	69.1
Medium Trucks:	60.1	58.6	52.2	50.6	59.1	59.3
Heavy Trucks:	60.4	59.0	49.9	51.2	59.5	59.7
Vehicle Noise:	70.5	68.7	66.2	60.9	69.4	70.0

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	69.6	67.7	65.9	59.9	68.5	69.1
Medium Trucks:	60.1	58.6	52.2	50.6	59.1	59.3
Heavy Trucks:	60.4	59.0	49.9	51.2	59.5	59.7
Vehicle Noise:	70.5	68.7	66.2	60.9	69.4	70.0

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Edison Av.- Carpenter to Archibal
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	48,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,830 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**7.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	88.091
Medium Trucks:	87.742
Heavy Trucks:	87.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	4.43	-3.79	-1.20	*-0.48*	0.000	0.000
Medium Trucks:	78.79	-12.81	-3.77	-1.20	*-0.60*	0.000	0.000
Heavy Trucks:	83.02	-16.76	-3.72	-1.20	*-0.96*	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	68.7	66.9	60.8	69.5	70.1
Medium Trucks:	61.0	59.5	53.1	51.6	60.1	60.3
Heavy Trucks:	61.3	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	71.5	69.6	67.2	61.8	70.4	70.9

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.6	68.7	66.9	60.8	69.5	70.1
Medium Trucks:	61.0	59.5	53.1	51.6	60.1	60.3
Heavy Trucks:	61.3	59.9	50.9	52.1	60.5	60.6
Vehicle Noise:	71.5	69.6	67.2	61.8	70.4	70.9

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Edison Av.- Archibald to Turner
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	45,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	4,540 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**7.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	88.091
Medium Trucks:	87.742
Heavy Trucks:	87.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	4.16	-3.79	-1.20	*-0.48*	0.000	0.000
Medium Trucks:	78.79	-13.08	-3.77	-1.20	*-0.60*	0.000	0.000
Heavy Trucks:	83.02	-17.03	-3.72	-1.20	*-0.96*	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	68.4	66.6	60.6	69.2	69.8
Medium Trucks:	60.8	59.2	52.9	51.3	59.8	60.0
Heavy Trucks:	61.1	59.6	50.6	51.9	60.2	60.3
Vehicle Noise:	71.2	69.4	66.9	61.6	70.1	70.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	70.3	68.4	66.6	60.6	69.2	69.8
Medium Trucks:	60.8	59.2	52.9	51.3	59.8	60.0
Heavy Trucks:	61.1	59.6	50.6	51.9	60.2	60.3
Vehicle Noise:	71.2	69.4	66.9	61.6	70.1	70.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Edison Av.- Turner to Haven
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	58,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	5,840 vehicles
Vehicle Speed:	50 mph
Near/Far Lane Distance:	99 feet

Site Data

Barrier Height:	**7.5 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	100.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	88.091
Medium Trucks:	87.742
Heavy Trucks:	87.132

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	71.12	5.26	-3.79	-1.20	*-0.37*	0.000	0.000
Medium Trucks:	78.79	-11.98	-3.77	-1.20	*-0.48*	0.000	0.000
Heavy Trucks:	83.02	-15.94	-3.72	-1.20	*-0.80*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.4	69.5	67.7	61.7	70.3	70.9
Medium Trucks:	61.8	60.3	54.0	52.4	60.9	61.1
Heavy Trucks:	62.2	60.7	51.7	53.0	61.3	61.4
Vehicle Noise:	72.3	70.5	68.0	62.6	71.2	71.8

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	71.4	69.5	67.7	61.7	70.3	70.9
Medium Trucks:	61.8	60.3	54.0	52.4	60.9	61.1
Heavy Trucks:	62.2	60.7	51.7	53.0	61.3	61.4
Vehicle Noise:	72.3	70.5	68.0	62.6	71.2	71.8

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Schaefer Av.- Carpenter to Archib
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,090 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	78.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	73.239
Medium Trucks:	72.819
Heavy Trucks:	72.083

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-1.58	-2.59	-1.20	*-0.84*	0.000	0.000
Medium Trucks:	77.62	-18.82	-2.55	-1.20	*-1.05*	0.000	0.000
Heavy Trucks:	82.14	-22.77	-2.49	-1.20	*-1.68*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.0	62.1	60.3	54.3	62.9	63.5
Medium Trucks:	55.1	53.5	47.2	45.6	54.1	54.3
Heavy Trucks:	55.7	54.3	45.2	46.5	54.8	55.0
Vehicle Noise:	65.0	63.2	60.6	55.4	64.0	64.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.0	62.1	60.3	54.3	62.9	63.5
Medium Trucks:	55.1	53.5	47.2	45.6	54.1	54.3
Heavy Trucks:	55.7	54.3	45.2	46.5	54.8	55.0
Vehicle Noise:	65.0	63.2	60.6	55.4	64.0	64.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Schaefer Av.- Archibald to Turner
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	790 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	78.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	73.239
Medium Trucks:	72.819
Heavy Trucks:	72.083

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-2.97	-2.59	-1.20	*-3.01*	0.000	0.000
Medium Trucks:	77.62	-20.21	-2.55	-1.20	*-3.42*	0.000	0.000
Heavy Trucks:	82.14	-24.17	-2.49	-1.20	*-4.53*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.6	60.7	58.9	52.9	61.5	62.1
Medium Trucks:	53.7	52.1	45.8	44.2	52.7	52.9
Heavy Trucks:	54.3	52.9	43.8	45.1	53.4	53.6
Vehicle Noise:	63.6	61.8	59.2	54.0	62.6	63.1

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.6	60.7	58.9	52.9	61.5	62.1
Medium Trucks:	53.7	52.1	45.8	44.2	52.7	52.9
Heavy Trucks:	54.3	52.9	43.8	45.1	53.4	53.6
Vehicle Noise:	63.6	61.8	59.2	54.0	62.6	63.1

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Schaefer Av.- Turner to Haven
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	690 vehicles
Vehicle Speed:	45 mph
Near/Far Lane Distance:	61 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	58.0 feet
Centerline Dist. to Observer:	78.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	73.239
Medium Trucks:	72.819
Heavy Trucks:	72.083

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	69.34	-3.56	-2.59	-1.20	*-0.84*	0.000	0.000
Medium Trucks:	77.62	-20.80	-2.55	-1.20	*-1.05*	0.000	0.000
Heavy Trucks:	82.14	-24.76	-2.49	-1.20	*-1.68*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.0	60.1	58.3	52.3	60.9	61.5
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.3
Heavy Trucks:	53.7	52.3	43.2	44.5	52.8	53.0
Vehicle Noise:	63.1	61.3	58.7	53.4	62.0	62.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	62.0	60.1	58.3	52.3	60.9	61.5
Medium Trucks:	53.1	51.6	45.2	43.7	52.1	52.3
Heavy Trucks:	53.7	52.3	43.2	44.5	52.8	53.0
Vehicle Noise:	63.1	61.3	58.7	53.4	62.0	62.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Turner Av.- Shaefer to Avenue
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,170 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	43.0 feet
Centerline Dist. to Observer:	63.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.524
Medium Trucks:	63.039
Heavy Trucks:	62.187

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	-0.76	-1.66	-1.20	*-0.62*	0.000	0.000
Medium Trucks:	76.31	-18.00	-1.61	-1.20	*-0.86*	0.000	0.000
Heavy Trucks:	81.16	-21.95	-1.52	-1.20	*-1.63*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.7	61.8	60.1	54.0	62.6	63.2
Medium Trucks:	55.5	54.0	47.6	46.1	54.6	54.8
Heavy Trucks:	56.5	55.1	46.0	47.3	55.6	55.8
Vehicle Noise:	65.0	63.2	60.5	55.4	64.0	64.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.7	61.8	60.1	54.0	62.6	63.2
Medium Trucks:	55.5	54.0	47.6	46.1	54.6	54.8
Heavy Trucks:	56.5	55.1	46.0	47.3	55.6	55.8
Vehicle Noise:	65.0	63.2	60.5	55.4	64.0	64.5

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Turner Av.- Avenue to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,400 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	24 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	43.0 feet
Centerline Dist. to Observer:	63.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	63.524
Medium Trucks:	63.039
Heavy Trucks:	62.187

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	0.02	-1.66	-1.20	*-0.62*	0.000	0.000
Medium Trucks:	76.31	-17.22	-1.61	-1.20	*-0.86*	0.000	0.000
Heavy Trucks:	81.16	-21.17	-1.52	-1.20	*-1.63*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.5	62.6	60.9	54.8	63.4	64.0
Medium Trucks:	56.3	54.8	48.4	46.9	55.3	55.6
Heavy Trucks:	57.3	55.8	46.8	48.1	56.4	56.5
Vehicle Noise:	65.8	64.0	61.3	56.2	64.7	65.2

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.5	62.6	60.9	54.8	63.4	64.0
Medium Trucks:	56.3	54.8	48.4	46.9	55.3	55.6
Heavy Trucks:	57.3	55.8	46.8	48.1	56.4	56.5
Vehicle Noise:	65.8	64.0	61.3	56.2	64.7	65.2

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Haven Av.- Shaefer to Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	33,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,360 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	57 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	62.0 feet
Centerline Dist. to Observer:	82.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	78.243
Medium Trucks:	77.850
Heavy Trucks:	77.162

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	3.82	-3.02	-1.20	*-0.88*	0.000	0.000
Medium Trucks:	76.31	-13.41	-2.99	-1.20	*-1.09*	0.000	0.000
Heavy Trucks:	81.16	-17.37	-2.93	-1.20	*-1.69*	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:	67.0	65.1	63.3	57.2	65.9	66.5
Medium Trucks:	58.7	57.2	50.8	49.3	57.8	58.0
Heavy Trucks:	59.7	58.2	49.2	50.5	58.8	58.9
Vehicle Noise:	68.2	66.4	63.7	58.6	67.2	67.7

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	67.0	65.1	63.3	57.2	65.9	66.5
Medium Trucks:	58.7	57.2	50.8	49.3	57.8	58.0
Heavy Trucks:	59.7	58.2	49.2	50.5	58.8	58.9
Vehicle Noise:	68.2	66.4	63.7	58.6	67.2	67.7

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO)

Scenario: Second Floor With Wall
Road Name: Haven Av.- s/o Edison
Lot Number:

Project Name: The Avenue Specific Plan Noise
Job Number: 2718
Analyst: F.Sotelo

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,490 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	57 feet

Site Data

Barrier Height:	**5.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	62.0 feet
Centerline Dist. to Observer:	82.0 feet
Barrier Distance to Observer:	20.0 feet
Observer Height (Above Pad):	14.0 feet
Pad Elevation:	0.5 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:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	78.243
Medium Trucks:	77.850
Heavy Trucks:	77.162

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	67.36	2.52	-3.02	-1.20	*-0.88*	0.000	0.000
Medium Trucks:	76.31	-14.72	-2.99	-1.20	*-1.09*	0.000	0.000
Heavy Trucks:	81.16	-18.67	-2.93	-1.20	*-1.69*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.7	63.8	62.0	55.9	64.6	65.2
Medium Trucks:	57.4	55.9	49.5	48.0	56.5	56.7
Heavy Trucks:	58.4	56.9	47.9	49.1	57.5	57.6
Vehicle Noise:	66.9	65.1	62.4	57.3	65.9	66.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.7	63.8	62.0	55.9	64.6	65.2
Medium Trucks:	57.4	55.9	49.5	48.0	56.5	56.7
Heavy Trucks:	58.4	56.9	47.9	49.1	57.5	57.6
Vehicle Noise:	66.9	65.1	62.4	57.3	65.9	66.4